

## 68% Increase in Mineralised Drilled Area Confirms Continuity and Scale of Thick, High Grade REE at Caladão

## **HIGHLIGHTS:**

- Mineralised drilled area increased 68% to cover ~60km<sup>2</sup>, representing only ~15% of the Caladão Project area
- REE mineralisation extending to Area B demonstrates the remarkable scale of the flagship Caladão Project, supported by fourth batch of Phase One diamond and auger drilling results from Area A and Area B
- High grade REE assays (1,000ppm cutoff) include:

CLD-AUG-124 (Area A):	14m @ 3,921ppm TREO (20% MREO) from 1m
CLD-DDH-018 (Area A):	37.37m @ 2,774ppm TREO (23% MREO) from 7m
CLD-AUG-142 (Area B):	3m @ 1,880ppm TREO (28% MREO) from surface
CLD-AUG-143 (Area B):	2m @ 1,968ppm TREO (20% MREO) from 14m

• Significant Gallium results (using a high grade cutoff of 50g/t) continue to occur <u>from</u> <u>surface</u> associated with the upper layer of saprolite, including:

CLD-DDH-024:	20m @ 78.57 g/t Ga2O3 from surface
CLD-DDH-019:	30.33m @ 61.85 g/t Ga2O3 from surface
CLD-AUG-166:	5m @ 90.87 g/t Ga2O3 from surface

# • Consistency of high grade REE with Gallium mineralisation at surface sets Axel up to progress Caladão to a maiden JORC-compliant Resource definition in 2025

Axel REE Limited (**ASX: AXL**, **Axel** or **the Company**) is pleased to announce that the fourth batch of assays from the Phase One diamond and auger drill program at the flagship Caladão Project in the Lithium Valley, Minas Gerais in Brazil has again returned consistent high grade and thick rare earth elements (**REE**) intercepts in the saprolite profile from surface to depths of up to 49m. Additionally, significant high value gallium mineralisation has also consistenly been returned at surface in the upper proportion of the saprolite profile, providing a potential value-boosting by-product at the Caladão Project.

### Managing Director, Dr Fernando Tallarico, said:

"The consistency of high-grade REE mineralisation returning from every batch with almost 4,000 assays received so far is highly encouraging. Not only are the grades high, but they are also associated with thick REE horizons in the weathering profile.

Significant gallium concentrations, found in the upper portions of the regolith, are also consistent and widespread at Caladão. This shapes our project as a unique critical



minerals opportunity as the value of gallium continues to increase. Gallium is a crucial component in high tech semi-conducter materials for military defence and global supply is currently controlled by China. Recent news of China banning gallium exports has made it a key strategic metal.

We are preparing to initiate the first Mineral Resource Estimate and metallurgical testing at the Caladão Project. Not often do exploration programs go from grassroots to Resource definition in such a short period. We are pleased that we set out on IPO to aggressively drill Caladão and we have continued to achieve exploration success here in a short period of time, with an additional discovery of gallium."

The best Total Rare Earth (**TREO**) intercepts at Area A feature thick mineralised intercepts including **37.37m @ 2,774ppm TREO from 7m** (CLD-DDH-018). The REE mineralisation at Area A is laterally consistent over an area of ~35km<sup>2</sup>, hosted by a clay-rich weathering profile.



Figure 1 – Distribution of TREO intercepts at Area A over Digital Elevation Model





### Figure 2 - Cross section A-B highlighting auger hole CLD-AUG-151 and diamond hole CLD-DDH-018. Note that REE mineralisation remains open at depth in auger hole CLD-AUG-151 that ended at 11.5 metres

Auger drilling at Area B has also demonstrated widespread REE mineralization over a drilled area of 25km<sup>2</sup>, with relatively thick intercepts such as hole CLD-AUG-029 that sampled **10m @ 2,872ppm TREO** (Figure 3). Auger drilling will continue in Area B and is planned to be followed up with diamond drilling to sample the entire weathering profile down to the bedrock.





Figure 3 - Distribution of TREO intercepts at Area B over the Digital Elevation Model

Significant gallium concentrations was also identified in Area A at Caladão (Figure 4 and Table 2). Gallium mineralisation is typically occuring in the uppermost portions of the weathering profile from surface as shown in the cross-section in Figure 5. CLD-AUG-070 ilustrates this where mineralisation starts from surface intercepting 8m @ 58.3g/t Ga<sub>2</sub>O<sub>3</sub>, with gallium crossing the determined cutoff grade of 50g/t Ga<sub>2</sub>O<sub>3</sub> at 19m depth. This is significant as gallium mineralisation in this upper and oxidized layer opens the possibility of utilising what was previously known as the REE overburden layer into a potentially economic source of gallium by-product at surface.

On December 3, 2024, China placed an export ban on gallium and other critical minerals. Gallium is an essential component for semiconductors, renewable energy and defense application. Gallium is currently trading at US\$249,010/t<sup>1</sup>.

<sup>&</sup>lt;sup>1</sup> Gallium spot price in USD per tonne as at 17 January 2025, source: Daily Metal Prices





Figure 4 – Geological map of Caladão Area A, highlighting the distribution of Gallium intersections, using a 50g/t Ga<sub>2</sub>O<sub>3</sub> cutoff.





## Figure 5 - Cross section from CLD-DDH-019 and CLD-DDH-016 showing Gallium best intercepts on the lateritic soil profile.

The Caladão Project is located in the northeast portion of the State of Minas Gerais, within a geolgical setting characterised by a sequence of Neoproterozoic sedimentary sequences that were intruded by late-tectonic alkaline granites. These granites have undergone intense tropical weathering, resulting in the development of a thick regolith profile that can reach up to 60 metres and contains abundant clay minerals.

The clay horizon at the Caladão Project includes abundant kaolinite, a mineral known for its ability of adsorbing the REE and typically produces regolith-hosted ionic-adsorption REE mineralisation.

#### **Ongoing Activity**

The Phase One drill campaign at the Caladão Project in the Lithium Valley, Minas Gerais, continues with 233 drill holes for 3,952 metres completed across key target areas. Drill samples have been sent to SGS and continue to return in batches progressively. The data collected from these drillholes will be used to support a potential REE Resource within the Caladão Project area.



# Table 1 - Summary of significant diamond (DDH) and auger (AUG) REE intercepts (1,000ppm TREOcutoff)

HoleID	From	То	Interval	TREO	MREO	MREO	NdPr	DyTb
	(m)	(m)	(m)	ppm	ppm	%	ppm	ppm
CLD-AUG-121	6	15	9	3,348	996	25	945	51
CLD-AUG-122	0	15	15	2,268	283	13	268	15
CLD-AUG-123	1	15	14	1,299	28	2	23	5
CLD-AUG-124	1	15	14	3,921	893	20	853	40
CLD-AUG-125	2	4	2	1,184	278	24	261	16
CLD-AUG-127	3	11	8	1,403	83	6	78	5
CLD-AUG-128	2	6	4	1,186	280	24	265	15
CLD-AUG-129	3	9	6	2,618	438	14	410	27
CLD-AUG-130	11	13	2	1,228	58	5	56	2
CLD-AUG-132	4	9	5	1,511	24	2	20	3
CLD-AUG-132	10	11	1	1,099	12	1	10	2
CLD-AUG-132	13	14	1	1,317	21	2	19	2
CLD-AUG-133	2	15	13	1,471	178	12	166	13
CLD-AUG-137	10	15	5	1,855	178	10	169	10
CLD-AUG-139	2	9	7	3,452	483	13	467	16
CLD-AUG-140	11	12	1	2,402	56	2	51	5
CLD-AUG-142	0	3	3	1,880	540	28	485	55
CLD-AUG-142	4	5	1	1,838	496	27	446	50
CLD-AUG-142	10	11	1	1,171	236	20	216	20
CLD-AUG-142	12	15	3	1,787	377	21	350	26
CLD-AUG-143	14	16	2	1,968	400	20	386	14
CLD-AUG-148	7	10	3	1,278	85	7	79	7
CLD-AUG-148	11	13	2	1,124	174	16	162	12
CLD-AUG-149	9	10	1	1,486	228	15	220	8
CLD-AUG-150	0	1	1	1,180	235	20	222	14
CLD-AUG-150	3	7	4	1,368	277	20	259	18
CLD-AUG-151	1	11.5	10.5	1,778	311	17	295	17
CLD-AUG-152	4	5	1	1,382	153	11	147	6
CLD-AUG-152	7	13	6	2,196	359	17	344	15
CLD-AUG-153	0	12	12	3,543	974	24	932	42
CLD-AUG-155	0	6	6	1,354	293	22	280	14
CLD-AUG-155	8	11	3	1,808	307	18	294	13
CLD-AUG-158	5	6	1	1,069	190	18	182	8
CLD-AUG-158	9	11	2	1,266	222	18	214	8
CLD-AUG-159	12	13	1	1,641	307	19	283	24
CLD-AUG-162	0	2	2	1,150	234	20	222	12
CLD-AUG-162	5	15	10	1,313	220	17	212	9
CLD-DDH-013	33	48.7	15.7	2,736	733	24	702	30
CLD-DDH-014	10	20	10	1.776	48	3	46	3
CLD-DDH-014	21	33	12	1,935	429	21	416	13
CLD-DDH-015	19	47.1	28.1	2,148	472	21	447	25
CLD-DDH-015	47.8	49	1.2	1,421	335	24	313	21
CLD-DDH-015	50	52	2	1,671	370	22	352	19
CLD-DDH-016	18	19	1	1,040	215	21	206	9
CLD-DDH-016	20	30	10	1,383	281	20	271	11
CLD-DDH-016	31	32	1	1.060	206	19	195	12



HoleID	From	То	Interval	TREO	MREO	MREO	NdPr	DyTb
noterb	(m)	(m)	(m)	ppm	ppm	%	ppm	ppm
CLD-DDH-016	34	36	2	1,244	276	22	261	14
CLD-DDH-016	38	41	3	1,216	325	27	308	17
CLD-DDH-018	7	44.37	37.37	2,774	658	23	626	32
CLD-DDH-019	21	22	1	1,002	229	23	218	11
CLD-DDH-019	23	24	1	1,220	290	24	273	17
CLD-DDH-020	20	22.06	2.06	1,277	144	11	138	7
CLD-DDH-021	20	25	5	2,273	172	10	163	9
CLD-DDH-022	23	24	1	1,454	294	20	275	19
CLD-DDH-022	25	26	1	1,655	276	17	258	18
CLD-DDH-022	33	34	1	1,095	73	7	68	5
CLD-DDH-022	40	44.15	4.15	2,303	299	14	288	11
CLD-DDH-023	26	29.57	3.57	1,739	194	12	187	8
CLD-DDH-024	20	30.41	10.41	2,959	273	10	262	11

# Table 2 - Summary of significant Gallium intercepts from diamond (DDH) and auger drilling (AUG)samples (50g/t Ga2O3 and min. 5m composite length cutoff)

HoleID	From	То	Interval	
	(m)	(m)	(m)	<b>Ga₂O</b> ₃ g/t
CLD-AUG-121	0	7	7	58.38
CLD-AUG-123	0	9	9	56.61
CLD-AUG-124	0	5	5	60.22
CLD-AUG-125	0	7	7	54.34
CLD-AUG-126	0	5	5	63.72
CLD-AUG-127	0	11	11	58.53
CLD-AUG-129	0	9	9	62.28
CLD-AUG-130	0	10	10	58.2
CLD-AUG-131	0	13	13	68.45
CLD-AUG-132	0	8	8	68.55
CLD-AUG-133	0	15	15	64.16
CLD-AUG-134	0	7	7	75.47
CLD-AUG-134	10	15	5	55.11
CLD-AUG-135	0	14	14	63.47
CLD-AUG-136	0	13	13	74.45
CLD-AUG-137	0	15	15	74.02
CLD-AUG-138	0	15	15	71.42
CLD-AUG-139	0	7	7	67.21
CLD-AUG-140	0	13	13	57.59
CLD-AUG-142	0	14	14	74.51
CLD-AUG-143	0	16	16	70.06
CLD-AUG-145	0	16	16	74.6
CLD-AUG-148	0	13	13	64.31
CLD-AUG-149	0	15	15	68.38
CLD-AUG-150	0	7	7	60.3
CLD-AUG-151	4	11.5	7.5	57.53
CLD-AUG-152	0	5	5	62.91
CLD-AUG-153	0	5	5	54.04



	From	То	Interval	
HOLEID	(m)	(m)	(m)	<b>Ga₂O</b> ₃ g/t
CLD-AUG-156	0	10	10	69.22
CLD-AUG-157	0	15	15	72.5
CLD-AUG-158	0	15	15	77.51
CLD-AUG-159	0	13	13	65.14
CLD-AUG-160	0	12	12	77.96
CLD-AUG-162	0	13	13	60.59
CLD-AUG-163	0	10	10	59.01
CLD-AUG-164	0	9	9	59.29
CLD-AUG-165	5	15	10	55.25
CLD-AUG-166	0	5	5	90.87
CLD-AUG-166	7	15	8	74.27
CLD-DDH-013	0	19	19	70.89
CLD-DDH-013	24	37	13	59.14
CLD-DDH-014	4	24	20	61.7
CLD-DDH-014	25	30	5	56.46
CLD-DDH-015	0	6	6	73.48
CLD-DDH-015	9	19	10	60.89
CLD-DDH-015	20	34	14	56.17
CLD-DDH-015	35	40	5	55.92
CLD-DDH-015	42	47.8	5.8	56.54
CLD-DDH-016	0	10	10	59.95
CLD-DDH-016	13	38	25	55.76
CLD-DDH-017	0	6	6	63.18
CLD-DDH-017	8	22	14	56.55
CLD-DDH-018	5	25	20	58.74
CLD-DDH-018	27	35	8	53.94
CLD-DDH-019	0	30.33	30.33	61.85
CLD-DDH-020	7	17	10	61.7
CLD-DDH-021	6	20	14	57.8
CLD-DDH-022	0	7	7	61.06
CLD-DDH-022	14	22	8	57.3
CLD-DDH-023	0	7	7	73.93
CLD-DDH-023	9	26	17	70.06
CLD-DDH-024	0	20	20	78.57
CLD-DDH-025	0	8	8	60.82
CLD-DDH-025	9	22.66	13.66	55.99
CLD-DDH-026	0	14	14	58.57

This announcement was authorised by the Board of Directors.

#### For enquiries regarding this release please contact:

Fernando Tallarico Managing Director fernando@axelreelimited.com.au Investor & Media Relations Andrew Willis awillis@nwrcommunications.com.au



#### About Axel REE

**Axel REE** is a critical minerals exploration company which is primarily focused on exploring the Caladão, Caldas, Itiquira, and Corrente rare earth elements (**REE**) projects in Brazil. Together, the project portfolio covers over 1,105km<sup>2</sup> of exploration tenure in Brazil, the third largest country globally in terms of REE Reserves.

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.

#### **Competent Persons Statement**

The information in this report that relates to Exploration Targets, Exploration Results, Mineral Resources, or Ore Reserves is based on information compiled by Dr. Fernando Tallarico, who is a member of the Association of Professional Geoscientists of Ontario, and Dr. Paul Woolrich, who is a Competent Person and a Member of the Australian Institute of Mining and Metallurgy (AusIMM). Dr Woolrich is a consultant to the Company and Dr Tallarico is a full-time employee of the Company. Dr. Tallarico and Dr. Woolrich have sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources, and Ore Reserves. Dr. Tallarico and Dr. Woolrich consent to the inclusion in the report of the matters based on their 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 18 December 2024 "Significant Gallium Mineralisation at Caladao Project"
- AXL ASX release 11 December 2024 "28,321 ppm TREO and 7,606 ppm MREO Make Record Grades at Caladão"
- AXL ASX release 3 December 2024 "Widespread High Grade REE Confirmed From Caladão Channelling"
- AXL ASX release 27 November 2024 "Exceptional TREO and MREO Intercepts Continue at Caladão"

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.



Table 3 – Caladão auger and diamond drill hole collars.

HoleID	Hole Type	Easting	Northing	RL (m)	EOH	Azimuth	Dip	Target
CLD-AUG-121	Auger	232,739.69	8,110,186.53	808.72	15.00	0	-90	Area A
CLD-AUG-122	Auger	228,975.80	8,108,559.29	817.51	15.00	0	-90	Area A
CLD-AUG-123	Auger	228,895.36	8,110,110.53	773.30	15.00	0	-90	Area A
CLD-AUG-124	Auger	234,501.40	8,112,272.40	802.16	15.00	0	-90	Area A
CLD-AUG-125	Auger	229,877.72	8,112,455.31	840.90	9.00	0	-90	Area A
CLD-AUG-126	Auger	231,973.56	8,110,488.25	847.34	6.00	0	-90	Area A
CLD-AUG-127	Auger	236,339.14	8,113,313.63	865.62	11.00	0	-90	Area A
CLD-AUG-128	Auger	235,982.20	8,113,196.38	780.24	7.00	0	-90	Area A
CLD-AUG-129	Auger	235,541.22	8,113,347.68	865.22	9.00	0	-90	Area A
CLD-AUG-130	Auger	241,994.56	8,090,838.05	619.96	13.00	0	-90	Area B
CLD-AUG-131	Auger	241,921.85	8,091,180.28	633.72	13.00	0	-90	Area B
CLD-AUG-132	Auger	241,662.46	8,092,406.09	637.11	15.00	0	-90	Area B
CLD-AUG-133	Auger	241,635.54	8,090,884.13	609.23	15.00	0	-90	Area B
CLD-AUG-134	Auger	230,863.99	8,091,485.23	740.08	15.00	0	-90	Area B
CLD-AUG-135	Auger	231,000.83	8,090,811.65	707.75	14.00	0	-90	Area B
CLD-AUG-136	Auger	241,542.81	8,092,173.39	651.28	13.00	0	-90	Area B
CLD-AUG-137	Auger	241,439.67	8,091,779.12	661.38	15.00	0	-90	Area B
CLD-AUG-138	Auger	241,109.16	8,091,561.69	713.49	15.00	0	-90	Area B
CLD-AUG-139	Auger	241,105.44	8,091,097.58	760.21	9.00	0	-90	Area B
CLD-AUG-140	Auger	235,363.84	8,084,617.80	692.67	13.00	0	-90	Area B
CLD-AUG-141	Auger	230,676.86	8,090,987.34	760.29	9.00	0	-90	Area B
CLD-AUG-142	Auger	236,013.05	8,084,985.85	470.61	15.00	0	-90	Area B
CLD-AUG-143	Auger	234,667.19	8,084,571.79	651.42	16.00	0	-90	Area B
CLD-AUG-145	Auger	236,779.27	8,084,568.85	692.68	16.00	0	-90	Area B
CLD-AUG-148	Auger	237,915.98	8,085,393.66	661.70	15.00	0	-90	Area B
CLD-AUG-149	Auger	235,827.43	8,085,785.16	745.75	15.00	0	-90	Area B
CLD-AUG-150	Auger	229,311.25	8,092,941.29	699.40	15.00	0	-90	Area B
CLD-AUG-151	Auger	231,220.17	8,111,843.31	720.37	11.50	0	-90	Area A
CLD-AUG-152	Auger	232,350.82	8,110,693.00	836.25	13.00	0	-90	Area A
CLD-AUG-153	Auger	231,916.69	8,110,933.11	777.08	12.00	0	-90	Area A
CLD-AUG-155	Auger	242,862.15	8,081,349.40	566.72	11.00	0	-90	Area B
CLD-AUG-156	Auger	240,691.20	8,083,317.96	546.69	10.00	0	-90	Area B
CLD-AUG-157	Auger	235,518.04	8,087,337.63	810.87	15.00	0	-90	Area B
CLD-AUG-158	Auger	235,646.56	8,086,727.16	794.19	15.00	0	-90	Area B
CLD-AUG-159	Auger	239,430.80	8,085,167.63	747.21	13.00	0	-90	Area B
CLD-AUG-160	Auger	234,912.69	8,086,617.35	677.72	12.00	0	-90	Area B
CLD-AUG-161	Auger	227,516.56	8,112,186.39	882.24	16.00	0	-90	Area A
CLD-AUG-162	Auger	238,976.33	8,085,406.00	681.73	15.00	0	-90	Area B
CLD-AUG-163	Auger	227,686.18	8,111,110.60	855.83	12.00	0	-90	Area A
CLD-AUG-164	Auger	227,620.83	8,112,528.28	863.07	15.00	0	-90	Area A
CLD-AUG-165	Auger	227,009.36	8,112,207.86	875.40	15.00	0	-90	Area A
CLD-AUG-166	Auger	235,028.00	8,087,269.00	783.00	15.00	0	-90	Area B
CLD-AUG-167	Auger	228,009.30	8,110,585.18	880.08	10.00	0	-90	Area A
CLD-DDH-013	DDH	232,071.00	8,113,265.00	871.74	52.00	0	-90	Area A
CLD-DDH-014	DDH	231,990.00	8,113,088.00	8/5.48	37.00	0	-90	Area A
CLD-DDH-015	DDH	230,245.00	8,109,685.00	928.60	54.35	0	-90	Area A
CLD-DDH-016	DDH	230,686.00	8,113,334.00	907.90	47.75	0	-90	Area A



CLD-DDH-0	17 D	DH	230,831.00	8,112,788.00	913.68	40.00	0	-90	Area A
CLD-DDH-0	18 D	DH	231,513.00	8,112,378.00	778.03	48.15	0	-90	Area A
CLD-DDH-0	19 D	DH	230,093.00	8,113,389.00	887.89	34.00	0	-90	Area A
CLD-DDH-0	20 D	DH	231,277.00	8,109,275.00	946.92	27.20	0	-90	Area A
CLD-DDH-0	21 D	DH	229,884.00	8,110,096.00	945.90	31.15	0	-90	Area A
CLD-DDH-0	<b>22</b> D	DH	231,157.00	8,109,053.00	966.16	49.15	0	-90	Area A
CLD-DDH-0	<b>23</b> D	DH	231,484.00	8,109,541.00	920.99	33.35	0	-90	Area A
CLD-DDH-0	24 D	DH	231,235.00	8,109,969.00	883.26	34.00	0	-90	Area A
CLD-DDH-0	<b>25</b> D	DH	230,173.00	8,110,371.00	944.02	26.40	0	-90	Area A
CLD-DDH-0	26 D	DH	230,431.00	8,110,765.00	920.12	19.30	0	-90	Area A



## 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
Sampling techniques	<ul> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</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 pulverized to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>Diamond drill holes</li> <li>The drilling utilizes a conventional wireline diamond drill rig Mach 320-03, with HQ diameter.</li> <li>The core is collected in core trays with depth markers at the end of each drill run (blocks).</li> <li>In the saprolite zone, the core is halved with a metal spatula and bagged in plastic bags; the fresh rock was halved by a powered saw and bagged</li> <li>Auger holes</li> <li>At each drill site, the surface was thoroughly cleared. Soil and saprolite samples were gathered every 1 meter with precision, carefully logged and photographed. Each sample was then sealed in plastic bags and clearly labelled for identification.</li> </ul>
Drilling techniques	<ul> <li>Drill type (eg core, reverse circulation, openhole 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).</li> </ul>	<ul> <li>Diamond drilling</li> <li>The drilling technique is a diamond drill rig Mach 320-03 with HQ diameter using the wireline technique.</li> <li>Each drill site was cleaned and leveled with a backhoe loader.</li> <li>All holes are vertical.</li> <li>Drilling is stopped once the intersection with unweathered basement intrusives is confirmed = +3 to 5m of fresh rock.</li> <li>Auger drilling</li> <li>A motorized 2.5HP soil auger with a 4" drill bit, reaching depths of up to 20 meters, was used to drill. The drilling is an open hole, meaning there is a significant chance of contamination from the surface and other parts of the auger hole. Holes are vertical and not oriented.</li> </ul>



Criteria	JORC Code explanation	Commentary		
Drill sample 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>Diamond drilling</li> <li>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.</li> <li>Auger drilling</li> <li>No recoveries are recorded.</li> <li>No relationship is believed to exist between recovery and grade.</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>	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. Other important parameters for collecting data include grain size, texture, and color, which can help identify the parent rock before weathering. 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.		
Sub- sampling techniques and 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 sub-sampling 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/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>Sample preparation (drying, crushing, splitting and pulverising) is carried out by SGS laboratory, in Vespasiano MG, using industry-standard protocols: <ul> <li>dried at 60°C</li> <li>the fresh rock is 75% crushed to sub 3mm</li> <li>the saprolite is just disaggregated with hammers</li> <li>Riffle split sub-sample</li> <li>250 g pulverized to 95% passing 150 mesh, monitored by sieving.</li> <li>Aliquot selection from pulp packet</li> </ul> </li> </ul>		
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <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> </ul>	1 blank sample, 1 certified reference material (standard) sample and 1 field duplicate sample were inserted by company into each 25 sample sequence. Standard laboratory QA/QC procedures were followed, including inclusion of standard, duplicate and blank samples. The assay technique used was Sodium Peroxide Fusion ICP OES / ICP MS (SGS code ICM90A). Elements analyzed at ppm levels:		



Criteria	JORC Code explanation	Commentary				
	Nature of quality control procedures	Al 100 – 250,000 Dy 0.05 – 1,000				
	adopted (eg standards, blanks, duplicates, external laboratory checks) and whether	Ce 0.1 – 10,000 Eu 0.05 – 1,000				
	acceptable levels of accuracy (ie lack of	Er 0.05 – 1,000 Gd 0.05 – 1,000				
	bias) and precision have been established.	Ga 1 – 1,000 Ho 0.05 – 1,000				
		La 0.1 – 10,000 Li 10 – 15,000				
		Nd 0.1 – 10.000 Pr 0.05 – 1.000				
		Sm 0.1 - 1.000 Th 0.05 - 1.000				
		Th $0.1 - 1.000$ Tm $0.05 - 1.000$				
		Yb 0,1 – 1,000				
		The sample preparation and assay techniques used are industry standard and provide total analysis.				
		The SGS laboratory used for assays is ISO 9001 and 14001 and 17025 accredited.				
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	14001 and 17025 accredited.         Apart from the routine QA/QC procedures by the Company and the laboratory, there was no other independent or alternative verification of sampling and assaying procedures.         No twinned holes were used.         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.         The adjustments to the data were made transforming the element values into the oxide values. The conversion factors used are included in the table below. (source: https://www.jcu.edu.au/advanced-analytical-centre/resources/element-to-stoichiometric-oxide-				
		Element ppm Conversion Factor Oxide Form				
		Al 1.8895 Al2O3				
		Ga 1.3442 Ga2O3				
		Dy 1.1477 Dv203				
		Er 1.1435 Er2O3				
		Eu 1.1579 Eu2O3				
		Ga 1.3442 Ga2O3				
		Gd 1.1526 Gd2O3				
		La 1.1728 La203				
		Lu 1.1371 Lu2O3				
		Nd 1.1664 Nd2O3				
		Pr 1.2082 Pr6O11				
		Sm 1.1596 Sm2O3				
		Tm 1.1/62 1040/				



Criteria	JORC Code explanation	Commentary					
		Y	1.2699	Y2O3			
		Yb	1.1387	Yb2O3			
		Rare earth oxide is the industry accepted form for reporting rare earths. The following calculations ar used for compiling REO into their reporting an evaluation groups:					
		TREO (Total Rare Earth Oxide) = La2O3 + CeO2 + P + Nd2O3 + Sm2O3 + Eu2O3 + Gd2O3 + Tb4O7 + Dy Ho2O3 + Er2O3 + Tm2O3 + Yb2O3 + Y2O3 + Lu2O3 LREO (Light Rare Earth Oxide) = La2O3 + CeO2 + P + Nd2O3					
		HREO (Heavy Ra Gd2O3 + Tb4O7 + Yb2O3 + Y2O3 + L	re Earth Oxide) = Sm · Dy2O3 + Ho2O3 + E u2O3	n2O3 + Eu2O3 + r2O3 + Tm2O3 +			
		CREO (Critical Rare Earth Oxide) = Nd2O3 + Eu2 Tb4O7 + Dy2O3 + Y2O3					
		(From U.S. Department of Energy, Critical Mate Strategy, December 2011)					
		MREO (Magnetic Rare Earth Oxide) = Nd2O3 + Pr6O11 Tb4O7 + Dy2O3					
		NdPr = Nd2O3 + Pr6O11					
		DyTb = Dy2O3 + Tb4O7					
		In elemental from	n the classifications a	re:			
		TREE:					
		La+Ce+Pr+Nd+Sn	n+Eu+Gd+Tb+Dy+Ho+	Er+Tm+Tb+Lu+Y			
		HREE: Sm+Eu+Gd	l+Tb+Dy+Ho+Er+Tm+	Tb+Lu+Y			
		CREE: Nd+Eu+Tb-	+Dy+Y				
		LREE: La+Ce+Pr+	Nd				
Location of data points	<ul> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	The UTM SIRGAS: current reporting. for the holes repo held GPS.	2000 zone 24S grid d The auger and DDH c irted are currently cor	atum is used for ollar coordinates htrolled by hand-			
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 degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	Collar plan displ No resources are	ayed in the body of th e reported.	e release.			



Criteria	JORC Code explanation	Commentary
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	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.
Sample security	• The measures taken to ensure sample security.	All samples were collected by field personnel and securely sealed in labeled plastic bags to ensure proper identification and prevent contamination.All samples for submission to the lab are packed in plastic bags (in batches) and sent to the lab where it is processed as reported above. The transport from the Caladao Project to the SGS laboratory in Vespasiano MG was undertaken by a competent, independent contractor.
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	No independent audit has been completed.

## Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure 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>	All samples were sourced from tenements fully owned by Axel REE Ltd.
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration</li> <li>by other parties.</li> </ul>	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.



Geology	• Deposit type, geological setting and style of mineralisation.	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 Neoproteroic granites on the eastern flank of the Sao 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.
Drill hole 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>	Reported in the body of the announcement.
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	Data has been aggregated according to downhole intercept lengths above the lower cut-off grade. A lower cut-off grade of 50 g/t Ga2O3 has been applied using a minimum composite length of 5 meters and maximum 1 meter internal diluition. Data acquisition for this project encompasses results from auger and diamond drilling. The dataset was compiled in its entirety, with no selective exclusion of information. All analytical techniques and data aggregation were conducted in strict accordance with industry best practices, as outlined in prior technical discussions.
Relationship between mineralisation	<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</li> </ul>	All holes are vertical, and mineralisation is developed in a flat-lying clay and transition zone within the regolith in both Pro



widths and	known, its nature should be reported.	
intercept lengths	<ul> <li>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').</li> </ul>	
Diagrams	<ul> <li>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.</li> </ul>	Reported in the body of the text.
Balanced reporting	• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	The data presented in this report aims to provide a transparent and comprehensive overview of the exploration activities and findings. All relevant information, including sampling techniques, geological context, prior exploration work, and assay results, has been thoroughly documented. Cross-references to previous announcements have been included where applicable to ensure continuity and clarity. The use of diagrams, such as geological maps and tables, is intended to enhance understanding of the data. This report accurately reflects the exploration activities and findings without bias or omission.
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 additional substantive exploration data to report currently.
Further work	• The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).	As described in the text, there is a significant number of samples currently in the lab and results are expected to return in early 2025.