

## ABx Ideally Positioned to Benefit from Global Rare Earth Supply Risks

Engage with this announcement on our interactive [Investor Hub](#)

China imposes immediate export controls on key heavy rare earth elements – critical inputs for defence and clean energy technologies

ABx's Deep Leads REE project contains the highest levels of the key heavy rare earths in any ionic adsorption clay deposit in Australia and among the highest globally

ABx already has strong relationships with potential customers in the USA

Scout drilling of REE targets has commenced on the large, unexplored tenement EL27/2022 in northern Tasmania

ABx Group Limited (ASX: ABX) ("ABx" or "the Company") notes major developments in the global rare earth supply chain. In the last five weeks, the USA issued two Executive Orders to incentivise the processing of critical minerals, including rare earths, in the USA.<sup>1,2</sup>

During the same period, China's Ministry of Commerce and the General Administration of Customs jointly imposed immediate new restrictions on the export of certain medium to heavy rare earth elements, including dysprosium (Dy) and terbium (Tb) – both critical for high-performance magnets used in military technologies and offshore wind turbines.<sup>3</sup>

China currently dominates the global rare earth market, refining almost 100% of the world's Dy and Tb. The export controls have further highlighted the urgency for alternative, secure, and sustainable sources of these critical minerals.

ABx is uniquely positioned to meet this challenge and opportunity. The Company has an ionic absorption clay rare earth resource with high heavy rare earth content in Tasmania, and already has strong relationships with potential processing operations in the USA, such as Ucore.<sup>4</sup>

<sup>1</sup> <https://www.whitehouse.gov/presidential-actions/2025/03/immediate-measures-to-increase-american-mineral-production/>

<sup>2</sup> <https://www.whitehouse.gov/presidential-actions/2025/04/ensuring-national-security-and-economic-resilience-through-section-232-actions-on-processed-critical-minerals-and-derivative-products/>

<sup>3</sup> <https://www.hklaw.com/en/insights/publications/2025/04/china-imposes-export-controls-on-medium-and-heavy-rare-earth-materials>

<sup>4</sup> ASX Announcement, 4 September 2024

For more information, please join ABx Group's interactive Investor Hub: <https://abxgroup.com.au/s/965068>

**ABx Group Limited**

Level 4, 100 Albert Road, South Melbourne, VIC 3205

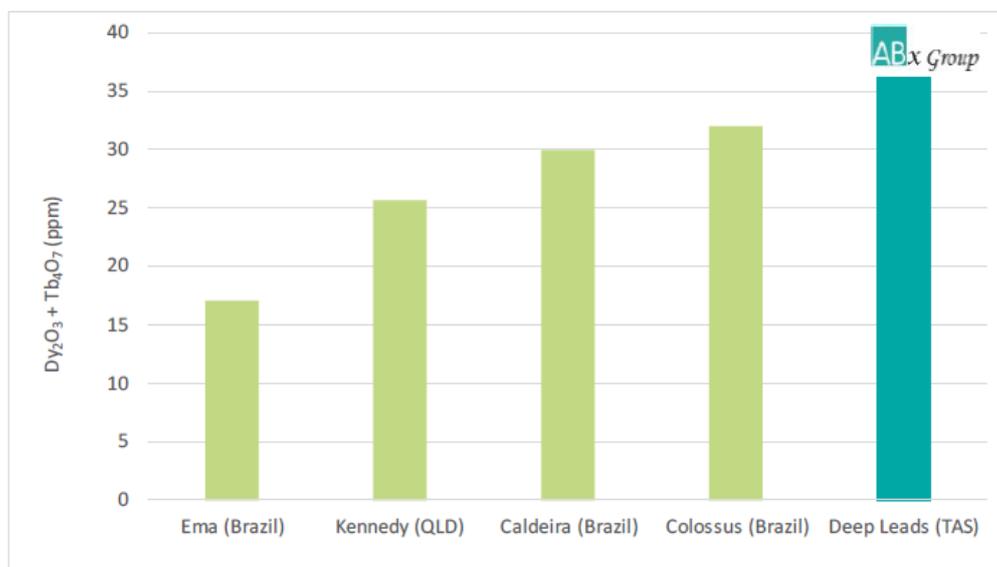
ABN 14 139 494 885

P: +61 3 9692 7222 | F: +61 2 9956 7355



**Key facts:** ABx's Deep Leads rare earth project in northern Tasmania contains an 89 Mt resource grading 844 ppm total rare earth oxides (TREO).<sup>5</sup> Notably, desorption tests conducted by ANSTO found the highest extractions under relatively neutral conditions reported from any clay-hosted resource in Australia,<sup>6,7</sup> which means that the ABx resource has the highest ionic proportion of any clay-hosted rare earths resource in Australia. Furthermore, the deposit contains 36 ppm Dy + Tb, the highest grade of any ionic clay REE deposit in Australia and among the highest globally (Figure 1).

This positions ABx extremely well to supply a mixed rare earth carbonate containing high heavy rare earth content to customers seeking to diversify their supply sources.



**Figure 1: Deep Leads REE Project compared to global ionic adsorption clay projects in terms of Dy+Tb content**

### Drilling Commences at Unexplored Tenement

ABx has commenced a scout drilling campaign for new rare earth element (REE) mineralisation on exploration license EL27/2022 in northern Tasmania (see Figures 2, 3 & 4).<sup>8</sup>

The tenement is unexplored for rare earth elements and is immediately south of ABx's Portrush REE discovery in EL18/2014, where hole PR033 returned an exceptionally high-grade assay result of 4,812ppm total rare earth oxides (TREO)<sup>9</sup>.

This is a highly prospective area along strike of promising REE intercepts and is ~52 km east of ABx's REE resource at Deep Leads – Rubble Mound & Windbreak. The area has excellent infrastructure and is about 40 km from the city of Launceston.

Drilling targets have been identified by ABx's latest exploration technology as explained below.

<sup>5</sup> Refer to Table 1, Mineral resources at Deep Leads

<sup>6</sup> ASX Announcement, 31 May 2022

<sup>7</sup> ASX Announcement, 2 February 2023

<sup>8</sup> ASX Announcement, 26 September 2023

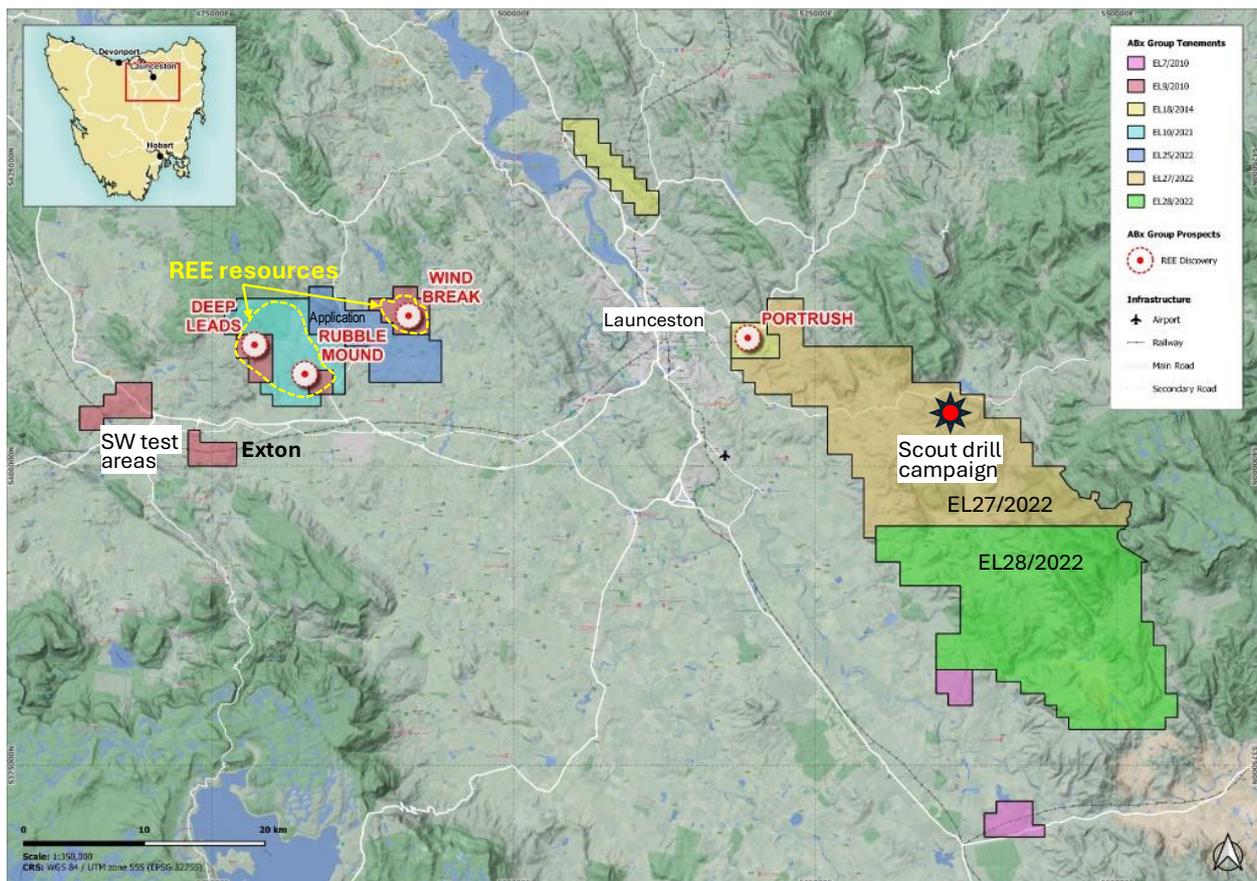
<sup>9</sup> ASX Announcement, 10 February 2022

## ABx advanced exploration technology for regional targets

ABx has developed a bespoke remote sensing technology to accelerate exploration for REE. It was initially tested on the existing REE resource at Deep Leads and Rubble Mound, and then on the Portrush REE discovery located near St Leonards, 52 km east of Deep Leads (see Figure 2). The technology gave a positive response in all three cases.

Portrush REE intercepts are all deep, including 4,812ppm total rare earth oxides (TREO) at 12 metres depth in hole PR033. Because ABx's new method unexpectedly detected deep REE mineralisation, it is being tested further afield and pushed well beyond its original design.

In October-November 2024, ABx tested this method for the first time on an area where it was not known if REE were present. These were scout bauxite drillholes drilled in 2012 southwest of Exton (see Figure 2) in an area that is not a target for REE production because it is valuable cropping land. These bauxite holes are not ideally located for REE-mineralisation, but reassaying of samples confirmed that the ABx exploration method had again identified concealed REE mineralisation, including 1,623 and 927ppm TREO at 5 metres depth in holes DL028 and DL027 respectively – see full results in Appendix 1.



**Figure 2: Location of REE Resources and SW Test Area near Exton, the Portrush REE discovery and the new scout drilling campaign on EL27/2022 located 52 km east of original Deep Leads discovery**

### Scout Drilling Campaign Underway

As a further test of the ABx exploration technology, scout drilling commenced on Tuesday 15 April at a target area within the large eastern tenement EL27/2022 named Temple Bar.

Because this tenement is large, an easily transported trailer-mounted lightweight geotechnical auger rig is being used. This rig will not always penetrate the full depth of the REE clay horizon because of rocks within the soil and clay horizon.

Nevertheless, should the auger samples show evidence of potentially economic REE mineralisation, a more powerful rig will be deployed, subject, as always, to landholder approval.



**Figure 3: REE scout drilling in EL27/2022 Temple Bar**



**Figure 4: auger sample from scout drilling campaign on Rare Earth Element (REE) targets in EL27/2022 Temple Bar in northern Tasmania**

**Dr Mark Cooksey, Managing Director and CEO of ABx Group, commented:**

*"China's latest move to restrict exports of critical heavy rare earths sends a clear message to the global market. ABx is in a fortunate position with a high-grade, clay-hosted rare earth deposit in a stable jurisdiction, with particularly high concentrations of dysprosium and terbium which are vital for the production of military technologies and offshore wind turbines.*

*"Meanwhile, our current drilling campaign will explore new ground with strong geological potential and advance our strategy to become a long-term supplier of rare earths. These developments put ABx at the forefront of Australia's rare earths sector at a time of escalating global demand."*

ABx looks forward to updating shareholders on the progress of the drilling program and ongoing development of its rare earths business.

See the ABx [Investor Hub](#) to watch a video of this announcement and ask any questions of management.

This announcement is approved for release by the board of directors.

**- ENDS -**

**For further information please contact:**

Dr Mark Cooksey

MD & CEO

ABx Group

+61 447 201 536

[mcooksey@abxgroup.com.au](mailto:mcooksey@abxgroup.com.au)

[www.abxgroup.com.au](http://www.abxgroup.com.au)

**Media**

Chapter One Advisors

David Tasker / Alex Baker

+61 433 112 936 / +61 432 801 745

[dtasker@chapteroneadvisors.com.au](mailto:dtasker@chapteroneadvisors.com.au) /

[abaker@chapteroneadvisors.com.au](mailto:abaker@chapteroneadvisors.com.au)

**About ABx Group Limited**

ABx Group Limited (ABx) is a uniquely positioned Australian company delivering materials for a cleaner future.

The three priority projects are:

- Creation of an ionic adsorption clay rare earth project in northern Tasmania
- Establishment of a plant to produce hydrogen fluoride and aluminium fluoride from recycled industrial waste, to replace imports (ALCORE)
- Mining and enhancing bauxite resources for alumina, cement and fertiliser production

ABx endorses best practices on agricultural land and strives to leave land and environment better than we find it. We only operate where welcomed.

**Table 1: Mineral resources at Deep Leads – Rubble Mound – Wind Break (US\$30/t ~350 ppm cut-off grade)**

Resources at Deep Leads-Rubble Mound & Wind Break @ US\$30/t cog								Permanent Magnet REOs				Key Ratios	
Resource Category	Million Tonnes	Avg depth (m)	Avg base (m)	Avg thickness (m)	TREO ppm	TREO-CeO <sub>2</sub> ppm	Perm Mag ppm	Nd <sub>2</sub> O <sub>3</sub> ppm	Pr <sub>6</sub> O <sub>11</sub> ppm	Tb <sub>4</sub> O <sub>7</sub> ppm	Dy <sub>2</sub> O <sub>3</sub> ppm	PermMag TREO %	Tb+Dy TREO %
Inferred	41.4	4.2	12.3	8.0	811	629	212	141	36	5.0	30	26%	4.3%
Indicated	41.6	4.2	11.8	7.7	856	656	225	150	38	5.2	31	26%	4.2%
Measured	5.6	4.1	11.4	7.3	998	790	263	174	43	6.6	39	26%	4.6%
<b>Totals</b>	<b>89</b>	<b>4.2</b>	<b>12.0</b>	<b>7.8</b>	<b>844</b>	<b>652</b>	<b>221</b>	<b>147</b>	<b>37</b>	<b>5.2</b>	<b>31</b>	<b>26%</b>	<b>4.3%</b>

Other Rare Earth oxides												Low radioactivity	
Resource Category	CeO <sub>2</sub> ppm	Er <sub>2</sub> O <sub>3</sub> ppm	Eu <sub>2</sub> O <sub>3</sub> ppm	Gd <sub>2</sub> O <sub>3</sub> ppm	Ho <sub>2</sub> O <sub>3</sub> ppm	La <sub>2</sub> O <sub>3</sub> ppm	Lu <sub>2</sub> O <sub>3</sub> ppm	Sm <sub>2</sub> O <sub>3</sub> ppm	Tm <sub>2</sub> O <sub>3</sub> ppm	Yb <sub>2</sub> O <sub>3</sub> ppm	Y <sub>2</sub> O <sub>3</sub> ppm	ThO ppm	U <sub>3</sub> O <sub>8</sub> ppm
Inferred	182	17	8.3	31	6.0	124	2.2	31	2.4	15	180	6.6	1.8
Indicated	200	18	9.0	33	6.2	131	2.3	34	2.5	15	181	6.4	1.8
Measured	209	22	11.3	41	7.8	150	2.8	40	3.0	19	229	6.2	1.7
<b>Totals</b>	<b>192</b>	<b>18</b>	<b>8.8</b>	<b>33</b>	<b>6.2</b>	<b>129</b>	<b>2.3</b>	<b>33</b>	<b>2.5</b>	<b>15</b>	<b>183</b>	<b>6.5</b>	<b>1.8</b>

Parameters: Note 1 ppm= 1 gram/t: Block cut-off grade (cog) = US\$30/t (~350ppm TREO-CeO<sub>2</sub>) Min thickness = 2 metres Density = 1.9 t/metre<sup>3</sup>  
 Search ellipse = 120 x 150m (Meas & Ind), 250 x 250m (Inf). TREO = total rare earth elements as oxides. TREO-CeO<sub>2</sub> = TREO minus cerium oxide.

### Disclaimer Regarding Forward Looking Statements

This ASX announcement (Announcement) contains various forward-looking statements. All statements other than statements of historical fact are forward-looking statements. Forward-looking statements are inherently subject to uncertainties in that they may be affected by a variety of known and unknown risks, variables and factors which could cause actual values or results, performance, or achievements to differ materially from the expectations described in such forward-looking statements.

ABx does not give any assurance that the anticipated results, performance, or achievements expressed or implied in those forward-looking statements will be achieved.

### Competent Persons Statement

The information in this report that relate to Exploration Information and Mineral Resources are based on information compiled by Ian Levy who is a member of The Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. Mr Levy is a qualified geologist and a director of ABx Group Limited.

Mr Levy has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity, which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of exploration Results, Mineral Resources and Ore Reserves. Mr Levy has consented in writing to the inclusion in this report of the Exploration Information in the form and context in which it appears.

**Table 2 - Summary of resource estimation information of 20 November 2023 referred to above, in accordance with LR 5.8.1**

<b>Geology and geological interpretation</b>	REE mineralisation occurs in clay layers that overlie a Jurassic age dolerite basement in a district with some residual weathered Tertiary age alkali basalt. Jurassic age tholeiitic dolerite and Tertiary age bauxite-laterite are the main bedrock geological units. Paleochannels host thicker clay zones which host the rare earth element mineralisation.
<b>Sampling and sub-sampling techniques</b>	Sampling was at 1 metre intervals. Subsampling for assaying is by quartering the clay samples twice and each time, mixing diagonally opposite quarters. Assay results from resampling correspond satisfactorily.
<b>Drilling techniques</b>	RC aircore used, targeting bauxite areas rather than REE clays
<b>Criteria used for classification, including drill and data spacing and distribution.</b>	Not applicable for this report on a test of exploration technology.
<b>Sample analytical method</b>	Assay samples are analysed by standard NATA-approved induction coupled plasma analytical methods for rare earth elements at ALS labs in Brisbane (method ME-MS81) and LabWest in Perth (method MMA04). Interlab comparisons proved satisfactory.
<b>Estimation methodology</b>	Not applicable for this report. on a test of exploration technology
<b>Cut-off grade</b>	Not applicable for this report on a test of exploration technology
<b>Mining and metallurgical methods and parameters, and other modifying factors</b>	Not applicable at this technology test stage. This area is not targeted for production because of its agricultural status which ABx respects.

## Appendix 1

### Rare Earth Element results from resampling old bauxite holes in SW Test Area near Exton, northern Tasmania

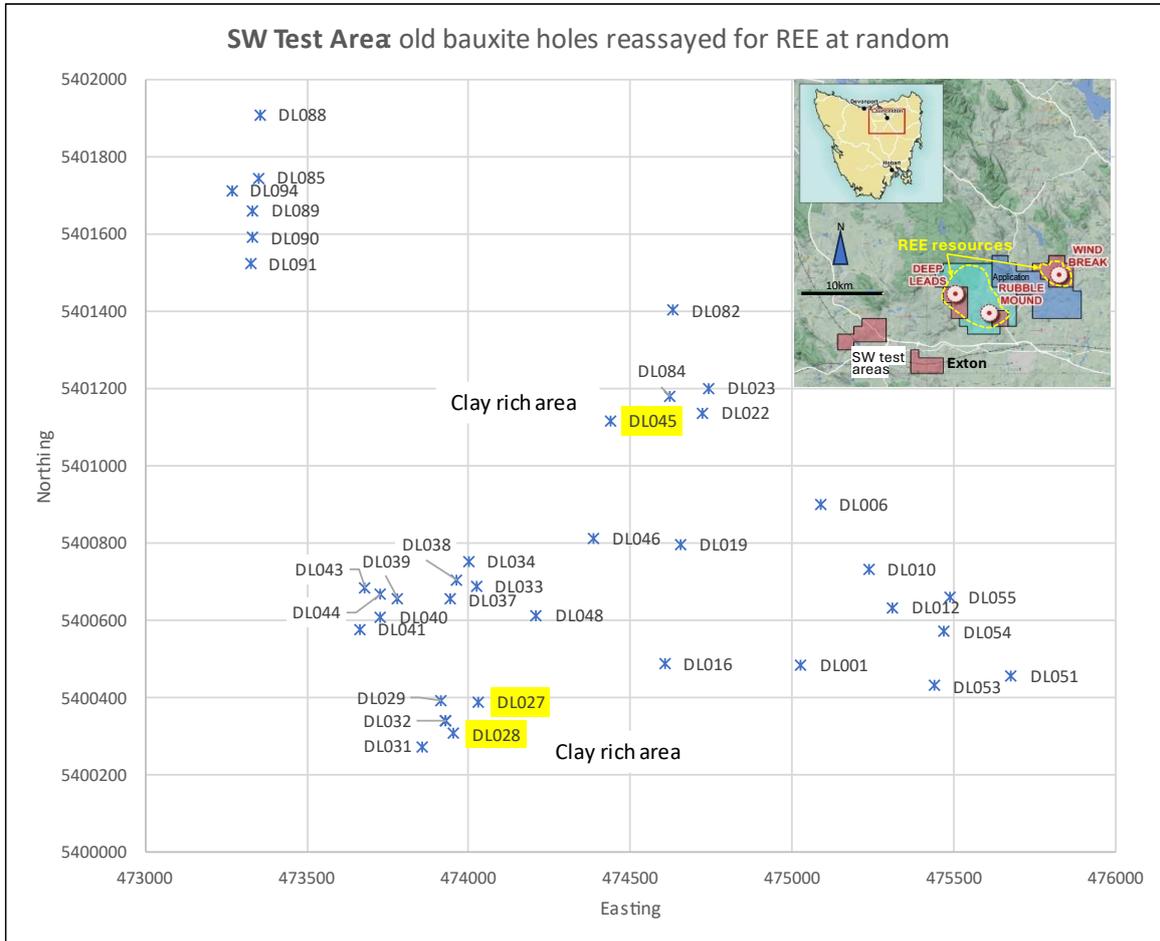


Figure 5: Location of old bauxite holes selected for re-assaying for rare earth elements (REE) as a test of the ABx REE exploration technology. One 1 metre long clay-rich sample selected from each hole. Holes highlighted in yellow were the most clay-rich holes and returned higher REE values.

## ASSAY RESULTS

Hole ID	From (m)	To (m)	Max depth (m)	WGS84 55S			TREO ppm	TREO - CeO <sub>2</sub> ppm	Perm Mag ppm	Dy+Tb TREO %	Permanent Magnet REE						
				East	North	RL LIDAR (m)					Nd <sub>2</sub> O <sub>3</sub> ppm	Pr <sub>6</sub> O <sub>11</sub> ppm	Tb <sub>4</sub> O <sub>7</sub> ppm	Dy <sub>2</sub> O <sub>3</sub> ppm	CeO <sub>2</sub> ppm	ThO <sub>2</sub> ppm	U <sub>3</sub> O <sub>8</sub> ppm
DL001	5	6	6	475030	5400487	295	205	91	32	1.0%	23	7	0.4	1.7	114	6.1	2.1
DL006	5	6	7	475090	5400900	296	63	23	7	3.1%	4	1	0.3	1.7	40	5.1	1.1
DL012	9	10	10	475314	5400634	298	252	151	58	1.5%	42	12	0.6	3.3	101	6.3	1.7
DL016	7	8	8	474609	5400491	301	256	43	17	0.9%	11	3	0.3	1.9	213	4.9	1.3
DL022	5	6	6	474726	5401137	298	88	14	4	1.2%	3	1	0.2	0.9	74	5.6	1.7
DL023	4	5	5	474744	5401201	300	32	8	2	1.7%	1	0	0.1	0.5	24	6.3	2.1
DL027	4	5	5	474032	5400390	290	927	719	330	1.8%	247	66	3.2	13.9	208	6.2	1.8
DL028	4	5	6	473956	5400308	294	1,623	1,053	461	2.4%	342	79	7.2	32.1	570	10.4	4.5
DL029	2	3	5	473916	5400393	293	330	218	81	2.9%	57	14	1.4	8.1	112	9.8	3.1
DL031	3	4	5	473859	5400273	291	410	214	85	1.1%	62	19	0.8	3.8	196	8.5	3.9
DL032	4	5	7	473929	5400343	294	734	553	231	1.9%	171	47	2.4	11.3	182	8.7	1.8

## Assay results concluded:

Hole ID	From (m)	To (m)	Max depth (m)	WGS84 55S			TREO ppm	TREO - CeO <sub>2</sub> ppm	Perm Mag ppm	Dy+Tb TREO %	Permanent Magnet REE						
				East	North	RL LIDAR (m)					Nd <sub>2</sub> O <sub>3</sub> ppm	Pr <sub>6</sub> O <sub>11</sub> ppm	Tb <sub>4</sub> O <sub>7</sub> ppm	Dy <sub>2</sub> O <sub>3</sub> ppm	CeO <sub>2</sub> ppm	ThO <sub>2</sub> ppm	U <sub>3</sub> O <sub>8</sub> ppm
DL032	5	6	7	473929	5400343	294	503	357	163	2.5%	121	30	2.2	10.5	146	7.1	1.8
DL033	4	5	5	474026	5400689	296	529	325	128	1.0%	92	31	0.9	4.3	204	11.4	2.4
DL034	12	13	14	474002	5400755	297	734	398	177	0.8%	133	38	1.0	4.9	336	5.0	1.7
DL037	6	7	8	473945	5400656	298	306	20	8	0.3%	6	1	0.1	0.9	286	5.1	1.0
DL038	11	12	15	473966	5400707	302	245	174	60	1.4%	43	14	0.6	3.0	72	6.9	2.3
DL039	4	5	5	473784	5400659	298	427	290	106	1.6%	77	22	1.2	5.6	137	9.5	2.7
DL040	4	5	5	473731	5400611	301	162	78	24	1.8%	17	5	0.4	2.5	85	8.3	1.6
DL041	2	3	5	473664	5400578	299	677	392	179	1.8%	136	31	2.2	9.8	285	8.7	3.1
DL043	6	7	8	473680	5400685	300	384	214	96	1.5%	72	19	1.0	4.8	171	5.3	2.3
DL044	10	11	14	473729	5400669	302	29	18	6	3.1%	4	1	0.1	0.8	11	8.6	1.9
DL045	4	5	5	474439	5401116	291	953	669	239	2.5%	167	48	3.8	20.4	284	5.1	1.7
DL046	2	3	5	474388	5400815	295	182	128	45	4.2%	31	7	1.1	6.6	55	3.8	0.8
DL048	4	5	5	474212	5400615	293	430	168	51	2.3%	33	7	1.4	8.7	262	9.4	2.8
DL051	4	5	6	475680	5400457	297	105	20	7	1.5%	4	1	0.2	1.3	84	4.9	1.1
DL053	4	5	5	475441	5400432	292	621	324	132	1.1%	97	28	1.1	5.8	297	8.0	3.0
DL054	4	5	5	475473	5400572	299	61	45	10	4.1%	6	2	0.3	2.2	17	11.7	2.3
DL055	7	8	8	475489	5400662	296	40	16	5	2.4%	4	1	0.1	0.8	24	5.0	1.5
DL058	6	7	8	468613	5406015	315	59	16	5	1.7%	3	1	0.1	0.9	42	5.8	1.6
DL062	2	3	5	468402	5406162	316	17	7	2	2.8%	1	0	0.1	0.4	10	6.5	2.5
DL069	5	6	8	468562	5406426	316	52	13	4	1.7%	3	1	0.1	0.8	39	5.2	1.7
DL070	3	4	5	468623	5406504	313	34	20	6	4.7%	4	1	0.2	1.4	15	6.3	1.5
DL071	3	4	5	468558	5406501	314	25	9	3	2.8%	2	1	0.1	0.6	16	7.4	1.8
DL074	4	5	5	468703	5406444	308	103	32	11	2.3%	7	2	0.4	2.1	72	3.6	1.4
DL082	4	5	5	474634	5401403	299	36	14	4	3.4%	3	1	0.2	1.1	22	6.1	1.5
DL084	4	5	5	474622	5401181	297	102	21	7	1.7%	4	1	0.2	1.5	80	5.4	1.1
DL085	4	5	5	473353	5401746	294	294	163	62	1.8%	44	12	0.8	4.4	131	7.0	3.6
DL088	4	5	5	473357	5401910	287	269	172	70	1.8%	52	14	0.9	4.0	97	8.5	3.0
DL089	4	5	5	473336	5401661	296	188	135	54	1.5%	39	12	0.5	2.3	53	6.8	2.9
DL090	3	4	7	473334	5401591	300	491	370	136	1.1%	99	32	1.0	4.6	121	8.7	2.1
DL091	3	4	5	473327	5401523	296	456	309	150	1.5%	112	32	1.2	5.8	148	7.4	2.8
DL094	2	3	5	473269	5401711	292	354	220	92	2.7%	66	16	1.6	8.1	134	8.1	2.8
DL095	5	6	8	467150	5405077	324	121	50	18	1.3%	13	4	0.2	1.3	71	6.6	1.9
DL096	9	10	11	467246	5405077	327	37	9	3	1.9%	2	1	0.1	0.6	29	4.8	1.5
DL100	9	10	11	467294	5404871	329	72	18	6	2.1%	4	1	0.2	1.3	54	5.3	1.6
DL104	5	6	6	464547	5403798	338	526	377	137	3.5%	96	24	2.9	15.4	149	5.6	2.0
DL105	5	6	10	469337	5405752	315	139	79	17	2.9%	10	3	0.5	3.6	60	5.3	2.0
DL108	6	7	8	469438	5405662	313	154	37	12	2.0%	7	2	0.5	2.6	117	5.5	1.5
DL110	3	4	10	469586	5405723	320	24	13	4	3.6%	2	1	0.1	0.8	11	5.3	1.2
DL115	6	7	8	469137	5405880	322	22	7	2	3.9%	1	0	0.1	0.7	14	6.1	1.2
DL120	5	6	7	469110	5405766	314	70	18	6	1.9%	3	1	0.2	1.1	53	5.7	1.4
DL123	7	8	10	469023	5405896	318	170	28	7	1.2%	4	1	0.3	1.7	142	6.1	1.5
DL127	5	6	7	469527	5405735	319	58	15	5	2.7%	3	1	0.2	1.4	43	4.8	1.2
DL128	8	9	10	469173	5405850	321	85	10	3	1.1%	2	1	0.2	0.8	75	4.5	1.4

-----O0000-----

## JORC Code Appendix 1

### Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <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 (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>Drill hole samples from reverse circulation aircore drilling to 20 metres maximum depth but typically 6 to 12 metres depth. Several holes did not reach bedrock.</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>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).</li> </ul>	<ul style="list-style-type: none"> <li>Reverse circulation aircore chip sampling. Duplicated holes corresponded well.</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>Method of recording &amp; assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery &amp; 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 style="list-style-type: none"> <li>Weight tests indicated reliable sample recovery except for first metre in soils (not used in resource estimates)</li> <li>No relationship between sample recovery and grade has been observed to date.</li> </ul>
Logging	<ul style="list-style-type: none"> <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. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>Geologically logged by senior geologists. Every sample photographed, with photos, logs and assays entered into ABx's proprietary ABacus database.</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Chips are subsampled using bauxite shovel and quartering method in accordance with ISO standards for fine damp clay material. Reassaying corresponds well</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <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> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external lab checks) &amp; whether acceptable levels of accuracy (ie lack of bias) &amp; precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>Assaying done at NATA-registered commercial labs of ALS Brisbane Australia and Labwest Minerals Analysis in Western Australia. Duplicate interlab assays and different lab assaying procedures corresponded well.</li> </ul>

Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>All assaying done at NATA-registered commercial laboratories of ALS Brisbane Australia and Labwest Minerals Analysis Pty Ltd in Western Australia.</li> <li>Duplicated and redrilled holes correlated closely</li> <li>Duplicate interlab assays corresponded well.</li> <li>No adjustment of assay data done.</li> </ul>
Location of data points	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>GPS hole locations have been tested for accuracy on many prospects, all satisfactorily – usually within 1m.</li> <li>Grid Coordinates are GDA94</li> <li>Topographic control by Lidar topography</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>Drilling typically at approximately 50 to 75 metre spacing on mineralised prospects</li> <li>Geological continuity is established by drill pattern</li> <li>Grade continuity is not yet established beyond 50m</li> <li>Sample compositing not applied</li> </ul>
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>Vertical holes through horizontal bauxite and clay layers is appropriate</li> <li>Clay layer drapes over topography and accumulates in gullies. Vertical holes is the appropriate orientation.</li> </ul>
Sample security	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>Samples collected and bagged at every hole site and assembled onto pallets daily, shipped to lab weekly.</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>Several audits confirmed reliability</li> </ul>

## Section 2 Reporting of Exploration Results *(Criteria listed in the preceding section also apply to this section.)*

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Satisfactory to excellent. All tenements are in force, unencumbered and securely held by ABx</li> <li>All drilling is on freehold land with access approvals by landholders</li> </ul>
Exploration done by other parties	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>ABx is the first company to explore for Rare Earth Elements in northern Tasmania. No prior work has been done by other parties</li> </ul>
Geology	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>Bauxite deposit formed on Lower Tertiary basalts overlying Jurassic dolerite</li> <li>REE of interest are all in clays</li> </ul>

Criteria	JORC Code explanation	Commentary
Drill hole Information	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <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 style="list-style-type: none"> <li>GPS location.</li> <li>Airborne Radar RL and LiDAR topography</li> <li>Lidar topography contoured at 1m height intervals</li> <li>All holes are short straight vertical holes</li> </ul>
Data aggregation methods	<ul style="list-style-type: none"> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</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>	<ul style="list-style-type: none"> <li>All data are presented as received from labs</li> <li>Intercept summaries, if and when presented, are length-weighted arithmetic averages</li> <li>Total Rare Earth Oxides (TREO) are an aggregate of all rare earth oxides. TREO-CeO<sub>2</sub> is TREO minus Cerium oxide values.</li> </ul>
Relationship between mineralisation widths & intercept lengths	<ul style="list-style-type: none"> <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 down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>Mineralisation typically 3 to 6 metres thick and Drillholes are sampled at 1 metre intervals</li> <li>Horizontal layers drilled by vertical holes means intercept thickness is true thickness</li> </ul>
Diagrams	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>Diagrams presented give appropriate information</li> </ul>
Balanced reporting	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>All new results are reported in this report and reference made to previous tabulation of data</li> </ul>
Other substantive exploration data	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>N.A. Information provided is appropriate.</li> </ul>
Further work	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (eg 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 style="list-style-type: none"> <li>No further drilling planned for this SW Test Area because it is valuable agricultural land which ABx respects. ABx used this area as a test of ABx's exploration technology and is focussed on pine plantation areas, with approval and support of the forestry companies concerned.</li> </ul>