

ASX: ABX

Outstanding Heavy Rare Earth Extractions in Larger-scale Tests

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Excellent extraction results reported by ANSTO from larger-scale slurry tests on material from ABx's Deep Leads ionic adsorption clay rare earth project:

- 60-66% for dysprosium (Dy) and 55-62% for terbium (Tb)
- 65-72% for neodymium (Nd) and 63-70% for praseodymium (Pr)

Results indicate that the high extractions achieved in smaller-scale tests are reproduced in the larger-scale tests that are more representative of conditions in commercial production

ANSTO remains on schedule to deliver a mixed rare earth carbonate (MREC) sample in Q4 2025

ABx Group Limited (ASX: ABX) ("ABx" or "the Company") is pleased to report the latest results from the program to produce a mixed rare earth carbonate (MREC) sample. This involves a 100 kg bulk sample extracted from the Company's Deep Leads ionic adsorption clay rare earth project, located 45km west of Launceston in northern Tasmania.

In the latest work at ANSTO, outstanding rare earths extractions were achieved in tests conducted on larger-scale tests involving 300g samples (see Table 1 and Appendix A).

Table 1: Extraction of magnetic rare earths from bulk sample. Last two columns are results from two larger-scale tests reported here. Full results in Appendix A.

Lab	ABx	ANSTO				
рН	4.0	4.0	4.5	4.7	4.5	4.5
Solid (g)	20	80	80	80	300	300
%Solids	20%	4%	4%	4%	25%	35%
Pr ₆ O ₁₁	66%	74%	75%	73%	70%	63%
Nd_2O_3	69%	76%	77%	74%	72%	65%
Tb ₄ O ₇	60%	74%	73%	71%	62%	55%
Dy ₂ O ₃	65%	72%	72%	70%	66%	60%
MREO ²	68%	75%	76%	74%	71%	64%
TREO-Ce	66%	75%	76%	74%	73%	66%
TREO	60%	68%	69%	67%	66%	60%

 $^{^{2}}MREO = Pr_{6}O_{11} + Nd_{2}O_{3} + Tb_{4}O_{7} + Dy_{2}O_{3}$







Bulk Sample Material

The source of the material for these tests is a 100 kg bulk sample from trial pit DLP002 from the Deep Leads deposit (Figure 1).¹

Larger-scale Slurry Leach Tests

ABx has previously reported excellent diagnostic leach test results, involving 80 g samples, achieving greater than 70% extractions of dysprosium (Dy) and terbium (Tb).² These results were achieved using exceptionally benign conditions, including leaching at pH 4.7 and ambient temperatures and pressures, anticipated to significantly reduce rare earth extraction costs.

ANSTO has now conducted two tests on larger (300 g) sub-samples of the 100 kg bulk sample. Both tests were conducted at pH 4.5 for 30 minutes at ambient temperature and pressure, with other conditions as follows:

- 1. 300g sample in 900mL of 0.3M ammonium sulfate (25wt% solids loading)
- 2. 300g sample in 557mL of 0.3M ammonium sulfate (35wt% solids loading)

High extractions were achieved in both tests, and the results were broadly consistent with the previous diagnostic tests. The extractions were slightly lower for the higher solids loading (35 wt%), which is not unexpected.

In the production of an MREC from an ionic adsorption clay deposit, aluminium (Al) and iron (Fe) are removed in an impurity removal step between leaching and MREC precipitation. If the levels of Al and Fe are high the impurity removal step can also cause losses of rare earths. The levels of Al and Fe in the leached solution in these tests were extremely low.³ These results indicate that an MREC produced from the Deep Leads resource should have very low impurities and minimal losses of rare earths during impurity removal.

The larger-scale tests represent a key milestone in the production of an MREC, demonstrating that high heavy rare earth extractions can be achieved with larger samples of material. These results further increase the Company's confidence that high levels of rare earth extraction can be achieved using an environmentally friendly and cost-effective flow sheet in a commercial operation.

ABx Group Managing Director and CEO Mark Cooksey said:

"I am once again very pleased to see that high rare earth extractions, particularly of heavy rare earths, are achieved from our deposit using extremely benign conditions. Furthermore, the results were as predicted based on our earlier in-house and ANSTO testing.

¹ ASX Announcement, 6 August 2025

² ASX Announcement, 3 September 2025

³ AI:TREE ratio <0.03, Fe:TREE ratio <0.003



We are eagerly looking forward to the production of the MREC sample. Because of high DyTb content, high extractions, low impurities and a significant resource, ABx Group continues to receive strong interest from potential customers.

ABx has high-grade REE discoveries 52km east of Deep Leads, confirming that Tasmania's REE deposits are extensive and can be an important source of Dy and Tb, potentially rivalling Dy and Tb production from southern China."

Next Steps

Based on these results, ABx and ANSTO have further optimised the process conditions and ANSTO will now conduct impurity removal tests using progressive additions of ammonium bicarbonate.

The overall program is on schedule, with ANSTO's production of a MREC sample expected in Q4 2025. Results and samples will be provided to prospective customers, who are keenly anticipating these outcomes.

Strategic Importance of MREC Production

Producing a high-purity MREC from a bulk sample represents a critical milestone for ABx in the development of the Deep Leads project. Existing and prospective rare earth refineries are seeking high quality MRECs produced at low cost. MRECs with high proportions of Dy and Tb are in particular demand, because these elements have the most acute supply risk.⁴ ABx has excellent prospects of meeting these requirements because:

- Achieving high extractions at ambient temperatures and pressures with minimal acid
 in a short time is likely to lead to lower cost and lower impurities in the MREC product.
 For most clay-hosted rare earth deposits globally, minimal rare earth extraction is
 achieved using these process conditions.
- 2. The ABx resource has a higher proportion of Dy and Tb, which is likely to lead to an MREC with a higher proportion of Dy and Tb compared to peers, and hence an MREC of higher value.

Magnet rare earth prices remain high, with Benchmark⁵ reporting Tb oxide (DDP China) at almost US\$1,000/kg. Furthermore, CIF Europe prices for Dy and Tb are over three times higher than Chinese domestic prices, illustrating the potential premium for non-China sources of rare earths.

ABx has already executed a Memorandum of Understanding with Ucore Rare Metals Inc. (TSXV: UCU) (OTCQX: UURAF)⁶, which is focussed on rare-earth processing facilities in North America, and ABx is also in discussions with additional potential offtake partners.

⁴ ASX Announcement, 23 April 2025

⁵ www.benchmarkminerals.com

⁶ ASX Announcement, 4 September 2024



ABx Rare Earth Resource

The Deep Leads – Rubble Mound and Wind Break discoveries contain a resource estimate of 89 million tonnes⁷ averaging 844 ppm total rare earth oxides (TREO). The resource contains 36 ppm Dy+Tb (Dy+Tb is 4.4% of TREO), the highest of any ionic clay deposit in Australia and among the highest globally.⁸

This resource estimate has been defined from only 29% of the project's mineralised outline.

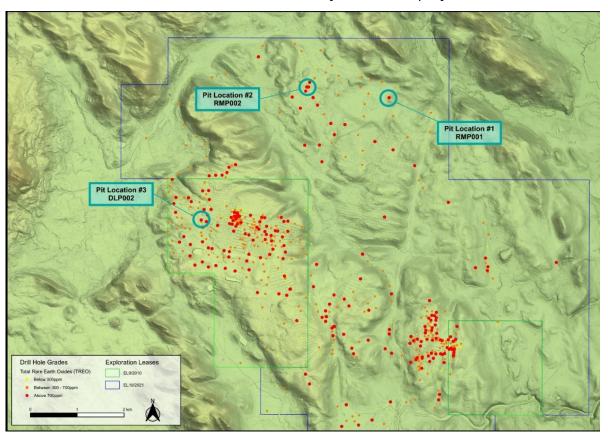


Figure 1: Trial pit locations at Deep Leads

This announcement is approved for release by the board of ABx Group Limited.

Go to the ABx <u>Investor Hub</u> to watch a video of this announcement and ask any questions of management.

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⁷ 41 Mt inferred, 42 Mt indicated and 6 Mt measured

⁸ ASX Announcement, 2 May 2024



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:

- **Heavy rare earths**: Supplying light and heavy rare earths from Tasmania into Western supply chains
 - Processing Options Analysis conducted in partnership with external experts
- Clean fluorine chemical production: Producing industrial chemicals from aluminium smelter waste (ALCORE)
 - Continuous pilot plant under construction in Bell Bay, Tasmania
- Near-term bauxite production: Mining bauxite resources for the aluminium, cement and fertiliser industries
 - Agreements executed with Good Importing International for bauxite projects in Queensland and New South Wales
 - o Approvals well advanced for DL130 bauxite project in northern Tasmania

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

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 is 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.

The sub-sample preparation was conducted by Operations Manager Nathan Towns in the ABx Research Lab in accordance with the increment division method in ISO Standard 6140.

ABx's leach tests on four 20g representative sub-samples were conducted at the ABx Research Lab by ex-CSIRO Senior Research Engineer, Dr Daniel Jewell, to the highest standards.

Table 2 - Summary of sampling information referred to above, in accordance with LR 5.8.1

Geology and geological interpretation	REE mineralisation occurs in clay layers that overlie a Jurassic age dolerite basement in a district with some residual weathered Tertiary age alkali basalt.
Sampling and sub-sampling techniques	Pit sampling was done at 1 metre intervals using a large excavator with an 8 metre boom.
	Subsampling of ~180kg was done by fractional shovelling. This sample was dried, crushed to 25mm and ground to minus 5mm.
	Further subsampling to collect the 100kg samples for ANSTO processing was done by increment division on disk-ground powder in accordance ISO Standard 6140. See Figures 5 & 6 below.
Drilling techniques	Not applicable (N.A.). Bulk pit sampling by excavator
Criteria used for resource classification, drill & data spacing & distribution.	N.A.
Sample analytical method	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). Interlab comparisons were satisfactory.
Estimation methodology, cut off grade, mining, metallurgy & other modifying factors	All N.A.









Figure 2 (left): handling the bulk sample from the pit, Preparations for drying the 183.7kg bulk sample in 42 trays

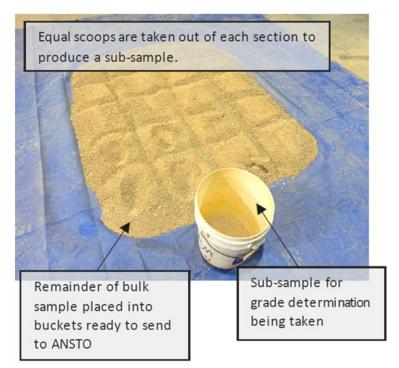


Figure 3 (above): Increment subsampling of the 100kg ANSTO sample crush and ground to less than 5mm.

Subsampling done in accordance with International Standard ISO 6140 at the ABX Research Laboratory at Western Junction, Launceston, Tasmania.



APPENDIX A: Extraction of rare earths from sub-samples of 100 kg bulk sample. Last two columns are results from two larger-scale tests reported here.

Test	1 ⁹	2 ¹⁰	3 ¹⁰	410	5	6
Lab	ABx	ANSTO				
рН	4.0	4.0	4.5	4.7	4.5	4.5
Solid (g)	20	80	80	80	300	300
%Solids	20%	4%	4%	4%	25%	35%
La ₂ O ₃	56%	72%	73%	72%	69%	63%
CeO ₂	6%	8%	8%	7%	6%	6%
Pr ₆ O ₁₁	66%	74%	75%	73%	70%	63%
Nd ₂ O ₃	69%	76%	77%	75%	72%	65%
Sm ₂ O ₃	59%	71%	72%	70%	69%	62%
Eu ₂ O ₃	65%	80%	80%	77%	71%	64%
Gd ₂ O ₃	68%	76%	77%	75%	73%	66%
Tb ₄ O ₇	60%	73%	73%	71%	62%	55%
Dy ₂ O ₃	65%	72%	72%	70%	66%	60%
Ho ₂ O ₃	62%	70%	71%	69%	66%	55%
Er ₂ O ₃	65%	70%	68%	67%	65%	59%
Tm ₂ O ₃	59%	69%	69%	69%	55%	50%
Yb ₂ O ₃	57%	67%	68%	65%	57%	52%
Lu ₂ O ₃	53%	65%	64%	64%	54%	48%
Y ₂ O ₃	72%	79%	80%	79%	83%	74%
TREO	60%	68%	69%	67%	66%	60%
TREO-Ce	66%	75%	76%	74%	73%	66%
LREO	52%	61%	62%	60%	58%	52%
HREO	68%	76%	76%	75%	75%	68%
MREO	68%	75%	76%	74%	71%	64%

ABx leach conditions:

- 20g sample and 80mL of 4wt% (0.3M) ammonium sulfate (i.e. 20wt% slurry solids loading)
- pH maintained at pH 4 by continuous monitoring and manual addition of small quantities of dilute (3.45wt%) sulfuric acid
- Ambient temperature and pressure
- Overhead stirring at moderate speed
- 15 min

Compositions of sample and leached solution measured at ALS

Leach results are the average of tests on four sub-samples from the bulk sample

ANSTO leach conditions:

- Diagnostic: 80g sample and 1920mL of 4wt% (0.3M) ammonium sulfate (i.e. 4wt% slurry solids loading)
- Slurry: 300g sample and ((300 / solids loading%) 300)g of 4wt% (0.3M) ammonium sulfate

⁹ ASX Announcement, 6 August 2025

¹⁰ ASX Announcement, 3 September 2025



- Maintained at pH 4 by continuous monitoring and automated addition of small quantities of 1M sulfuric acid
- Ambient temperature and pressure
- Overhead stirring
- 30 min

$$\label{eq:eq:energy} \begin{split} & \text{LREO (Light REO)} = \text{La}_2\text{O}_3 + \text{CeO}_2 + \text{Pr}_6\text{O}_{11} + \text{Nd}_2\text{O}_3 \\ & \text{HREO (Heavy REO)} = \text{Sm}_2\text{O}_3 + \text{Eu}_2\text{O}_3 + \text{Gd}_2\text{O}_3 + \text{Tb}_4\text{O}_7 + \text{Dy}_2\text{O}_3 + \text{Ho}_2\text{O}_3 + \text{Er}_2\text{O}_3 + \text{Tm}_2\text{O}_3 + \text{Yb}_2\text{O}_3 + \text{Lu}_2\text{O}_3 + \text{Y}_2\text{O}_3 \\ & \text{MREO (Magnet REO)} = \text{Pr}_6\text{O}_{11} + \text{Nd}_2\text{O}_3 + \text{Tb}_4\text{O}_7 + \text{Dy}_2\text{O}_3 \end{split}$$



JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	 Nature and quality of sampling Include reference to measures taken to ensure sample representivity Aspects of the determination of mineralisation that are Material to the Public Report. Industry standard work: 	 Bulk pit dug by excavator Samples taken at 1 metre intervals by cleaning pit at the metre interval, then taking full 1 metre slice for the samples. Subsampling the metre samples done as per ISO bauxite sampling processes
Drilling techniques	Drill type	 Not applicable to bulk pits excavated by excavator with 8 metre boom
Drill sample recovery	 Method of recording and assessing core and chip sample recoveries and results assessed. 	Not applicable to bulk pits
Logging	 Whether samples have been geologically and geotechnically logged to an appropriate level for metallurgical studies. Whether sampling is qualitative or quantitative. Total length & percentage of the relevant intersections logged. 	 Pits sampled, assayed, logged, photographed & stored to ISO standards. See below All 8 metres was logged and sampled Depth 5m to 6m selected – see below
Sub- sampling techniques and sample preparation	 If core, whether cut or sawn, quarter, half or all core. If non-core, sample method, whether sampled wet or dry. Nature, quality & appropriateness of the sample preparation. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. 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. Whether sample sizes are appropriate to the grain size of the material being sampled. 	 Depth 5m to 6m selected for the sample to be used to produce a mixed carbonate rare earth carbonate (MREC) 100kg samples produced by drying 600kg, comminution, subsampling by increment division in accordance ISO Standard 6140 at ABx Research Lab, Launceston that is a recognised sampling lab for bulk products including shipping of bauxite. Separate subsamples assayed the same
Quality of assay data and laboratory tests	 The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. Geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis Nature of quality control procedures adopted . 	 Assaying done by NATA-registered ALS laboratories, Brisbane N.A. Assays are by ALS which is a major mineral laboratory ALS is industry-standard and publishes its QA/QC protocols and results on its website
Verification of sampling and assaying	 The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data. 	 Pit sampling supervised by 4 ABx senior staff see Competent Person & Expert Statement for details. Repeated subsampling assayed the same. Metal assays from ALS converted to oxides as per industry standards for reporting
Location of data points	 Accuracy & quality of surveys used to locate drill holes & pits. Specification of the grid system used. Quality and adequacy of topographic control. 	 Location by GPS Pit DLP002 location: 477720E, 5410126N (WGS 84 56S grid). RL 287.675m by LiDAR.
Data spacing and distribution	 Data spacing for reporting of Exploration Results. Whether the data spacing and distribution is sufficient. Whether sample compositing has been applied. 	 Bulk pit sampling at 1m intervals considered appropriate and sufficient
Orientation of data in relation to geological structure	, , ,	 Vertical bulk pit sampling is appropriate for the horizontal layers of REE mineralisation
Sample security	The measures taken to ensure sample security.	 Chain of custody protocols were applied to secure the bulk bag samples.
Audits or reviews	 The results of any audits or reviews of sampling techniques and data. 	 Two bulk samples taken simultaneously assayed the same



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

	10	200 1 1				
Criteria	JO	RC Code explanati	ion		Со	mmentary
Mineral tenement and land tenure status	•	agreements or me partnerships, over wilderness or nati	rriding royalties, native i	parties such as joint ventures, title interests, historical sites,	•	EL7/2010 100% owned and unencumbered. Pit located in a pine plantation with approvals from owner and government agencies.
Exploration by other parties	•	Acknowledgment	t and appraisal of explor	ation by other parties.	•	ABx sole discoverer and first to explore this area.
Geology	•	Deposit type, geo	ological setting and style	of mineralisation.	•	REE mineralisation occurs in clay layers that overlie a Jurassic age dolerite basement in a district with some residual weathered Tertiary age alkali basalt.
Drill hole Information	•	tabulation of the oeasting and not elevation or RL dip and azimuth down hole leng hole length.	following information for rthing of the drill hole collai (Reduced Level – elevation th of the hole of the distribution depth is information is justified,		•	Pit DLP002 location: 477720E , 5410126N (WGS 84 56S grid). RL 287.675m by LiDAR.
Data aggregation methods	•	and/or minimum grades are usually Where aggregate and longer length aggregation shou aggregations sho	grade truncations (eg co y Material and should be e intercepts incorporate his of low grade results, to ald be stated and some to buld be shown in detail.	short lengths of high grade results he procedure used for such	•	No aggregation or any cutting of assays done Metal assays from ALS converted to oxides as per industry standards for reporting
Relationship between mineralisation widths & intercept lengths	•	These relationship If the geometry of known, its nature If it is not known o	should be reported. and only the down hole	tant. n respect to the drill hole angle is lengths are reported, there should be hole length, true width not known').		Vertical bulk pit sampling is appropriate for the horizontal layers of REE mineralisation
Diagrams	•	should be include	ed for any significant disc ne limited to a plan view	es) and tabulations of intercepts covery being reported These should of drill hole collar locations and	•	See report
Balanced reporting	•	representative rep		oloration Results is not practicable, high grades and/or widths should g of Exploration Results.	•	All data to date is reported in this report
Other substantive exploration data	•	Other exploration including (but not results; geochemitreatment; metal	n data, if meaningful and t limited to): geological c ical survey results; bulk s llurgical test results; bulk l rock characteristics; pot	d material, should be reported observations; geophysical survey samples – size and method of density, groundwater,	•	All data to date is reported in this report
Further work	•	The nature and so or depth extension Diagrams clearly main geological in	cale of planned further v ons or large-scale step-ou highlighting the areas o	f possible extensions, including the e drilling areas, provided this	•	ANSTO labs are engaged to undertake the processing on the 100kg sample to produce a mixed rare earth carbonate concentrate (MREC)