

## CEO Presentation at Noosa Mining Investor Conference

In accordance with the requirements of Listing Rule 3.1 we submit the attached material being presented at the Noosa Mining Investor Conference being held at the Peppers Noosa Resort QLD.

Mr Ian Levy, CEO is making the presentation at 1:00pm on Wednesday 10 November 2021.

Shareholders and the public are welcome to attend our presentation.

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ASX Release authorised by Ian Levy, CEO and MD

# ABx Group

## Exploration



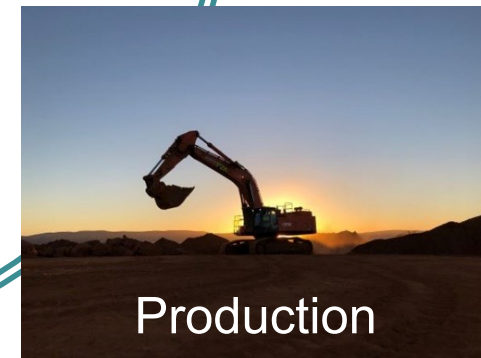
## Rare earth discovery



Technology  
**ALCORE**



$\text{AlF}_3$  essential  
for aluminium  
smelters



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# ABx Group Corporate Overview *“Australian strategic innovation”*

<b>ASX code</b>	<b>ABX</b>
Listed	24 Dec 2009 @ \$0.20
<b>Current Issued shares</b>	<b>223.6 million</b>
Options	38 million @ \$0.20
52 week range	\$0.09-\$0.15
Average daily volume	330,000
Market cap (@ \$0.10)	\$22.4 million
<b>Cash @ 1 Nov'21</b>	<b>\$6.7 million</b>
Shareholders	2,179

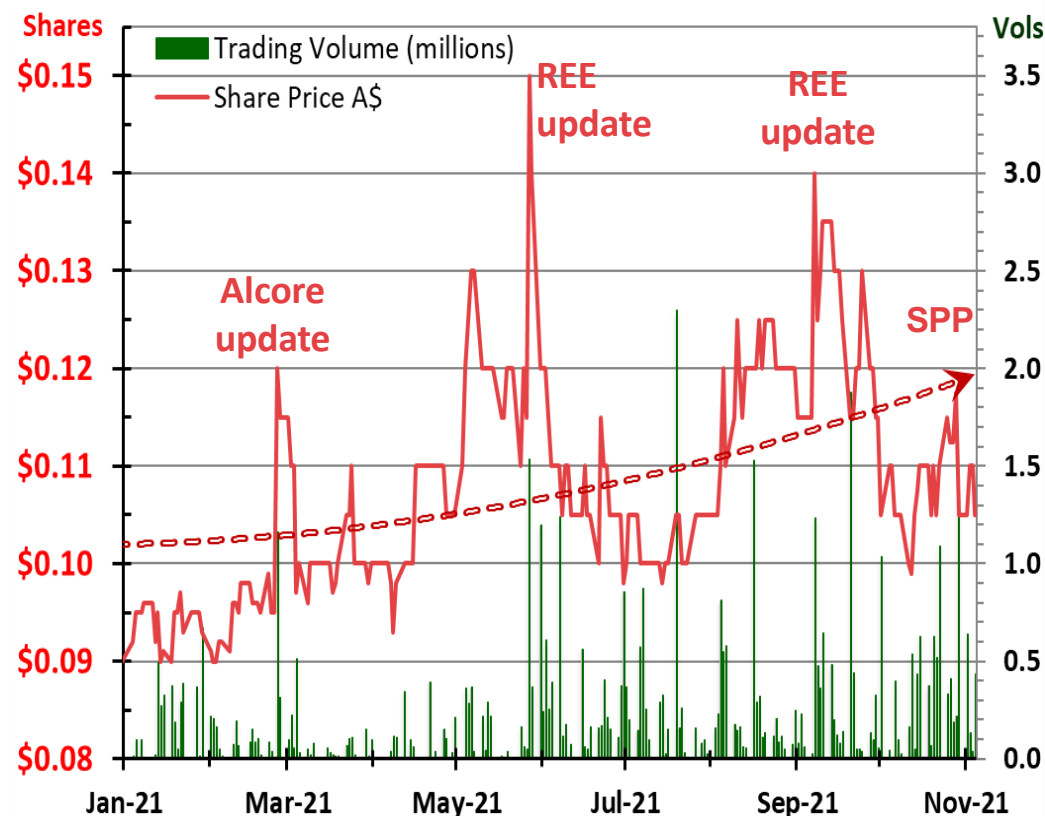
## Board of Directors & Management

Paul Lennon <sup>1</sup>	Chairman
Ian Levy	Managing Director & CEO
Ken Boundy <sup>2</sup>	Non-Executive Director
Henry Kinstlinger	Company Secretary
Leon Hawker	Chief Operating Officer
Paul Glover	Logistics & Exploration
Dr Mark Cooksey <sup>3</sup>	CEO Alcore Limited

<sup>1</sup> Ex-Premier of Tasmania

<sup>2</sup> Investor in Tasmania tourism industry. Holds senior public positions

<sup>3</sup> Ex-Rio Tinto Alcan & Ex-CSIRO Minerals



Major Shareholders	Shares	%
Justevian Pty Limited	6.3 m	2.8
Yarraandoo Pty Ltd	5.6 m	2.5
WSF Pty Ltd	5.2 m	2.3
Aftron	5.0 m	2.2
<b>Top 20 shareholders</b>	<b>57.8 m</b>	<b>25.9</b>
Remainder	165.8 m	74.1

Resources = 136 million tonnes bauxite



## Forward Looking Statement

Whilst based on information from sources considered reliable, Australian Bauxite Limited t/a ABx Group (**ABx**), its directors, employees and consultants do not represent, warrant or guarantee, expressly or impliedly, that the information in this document and presentation is complete or accurate. To the maximum extent permitted by law, ABx disclaims any responsibility to inform any recipient of this document and presentation of any matter that subsequently comes to its notice, which may affect any of the information contained in this document and presentation.

## Competent Person Statement

Information herein relating to Exploration Results, Mineral Resources and Exploration Targets is based on information compiled by Ian Levy BSc, MSc, who is a Fellow of the Australasian Institute of Mining and Metallurgy and a Fellow of the Australian Institute of Geoscientists. Mr Levy is employed by ABx as Chief Executive Officer. Mr Levy has more than five years experience relevant to the style of mineralisation and type of deposit being reported and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the JORC Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. This report is issued with the prior written consent of the Competent Person as to the form and context in which it appears.

The information in this report relating to Mineral Resources was prepared and first disclosed under the JORC Code 2004. It has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported.

## Direct Shipping Ore

In this presentation all references to direct shipping ore (DSO) refers to the company's exploration objective of defining DSO grade mineralisation. The potential quantity and grade of exploration targets is conceptual in nature, there has been insufficient exploration to define a Mineral Resource and it is uncertain if further exploration will result in the determination of a Mineral Resource.

# Business Focus & Information Flow

## ALCORE Australian technology to make Aluminium Fluoride “AlF<sub>3</sub>”

- ABx’s 87% owned refining technology subsidiary
- \$1.5 million Pilot Plant & design 2021-22. Start construct main plant late 2022
- Australia’s first producer of aluminium fluoride AlF<sub>3</sub> which is essential for Aluminium Smelters. There are no substitutes
- Australia is the only significant Aluminium producer without an AlF<sub>3</sub> plant
- AlF<sub>3</sub> imports from China to Australasia fell by more than 60% in 2021
- **Announcements:** 1. Progress 2. Milestones 3. Deals 4. Feasibility

## ABx Rare Earth Elements Discovery (“REE”)

- \$300,000 drilling campaign to confirm ABx’s large REE province, Tasmania
- Exploration budget now **increased to \$1 million** due to positive results
- Super Magnet REEs for electric vehicles, wind turbines, phones & military
- Water soluble REE (“ionic clay REE”) can be mined cheaply, quickly
- ABx is 1 of 3 traded stocks globally with “ionic adsorption clay REE” which was once China’s monopoly. Peers (eg. IXR) market caps exceed \$100 million
- **Announcements:** 1. Results (2-3 wks) 2. Extensions 3. Resource 4. Deals

# Aluminium fluoride (AlF<sub>3</sub>)

## Essential ingredient in aluminium smelting

- There is no substitute for AlF<sub>3</sub> in aluminium production. Australia has imported 100% of its AlF<sub>3</sub>, mostly from China
- Chinese sales to Australasia suddenly fell in 2021
- Alcore will be Australia's first producer: for **security of supply & recycling benefits**

## High value

- US\$1,000-1,800 per tonne
- Traditionally produced from high-cost aluminium hydroxide & fluorspar

## Achievable specifications

- Product purity risk is low

## Mature Market

- Dozens of customers globally



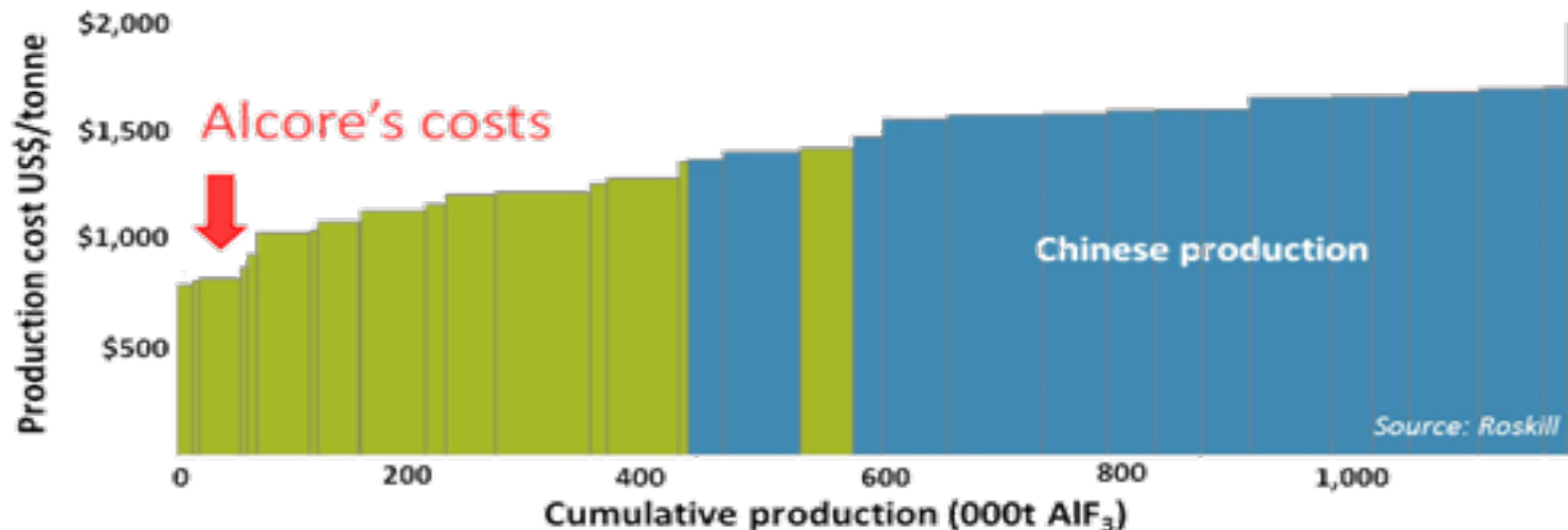


# Aluminium fluoride ( $AlF_3$ ): Strategic & essential for aluminium smelting



# Alcore Process Economics

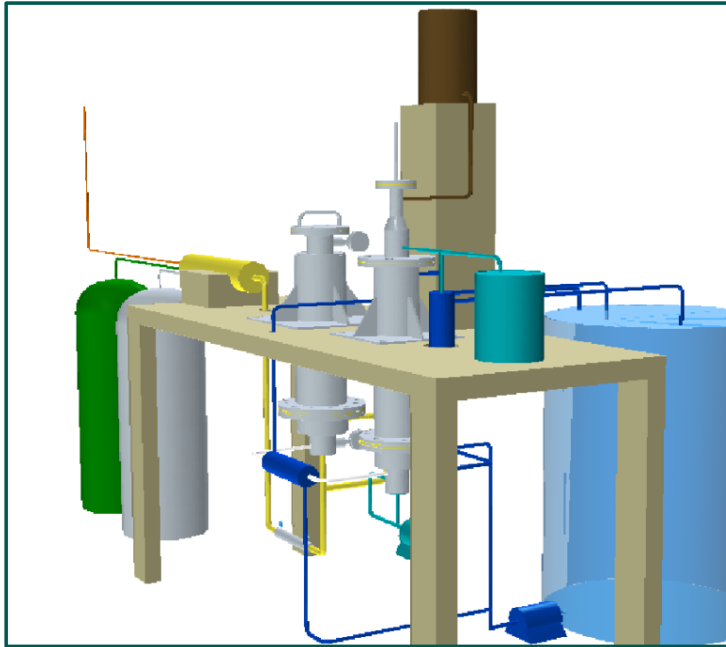
- Traditional  $\text{AlF}_3$  production costs are US\$1,000/t to US\$1,700/t
- Alcore costs US\$650/t to US\$900/t  $\text{AlF}_3^*$  due to low-cost raw materials
- First plant at Bell Bay, Tasmania, near hydro-powered Al-smelter
- Alcore's engineers design & costing 1<sup>st</sup> production module & later modules up to 60,000 t/year  $\text{AlF}_3$  estimated to make ~A\$50 million EBITDA pa\*
- Alcore can expand into other commodity markets including fluorine chemicals and advanced lithium-ion batteries



\* Refer to ASX announcement dated 14 October 2021 & ASX announcement dated 12 April 2021



# Fabrication commenced mid-October



**1<sup>st</sup> component** being fabricated  
Design of 2<sup>nd</sup> component underway

- Computer-designs provided by Alcore's international process engineers
- Fabrication in Australia commenced with laser cutting in mid-October
- Alcore's international process engineers completed process flowsheet modelling for a commercial 10,000 t/y  $\text{AlF}_3$  plant using dross waste as the feedstock
- Results increase confidence in the Alcore process and support Alcore's approach to process development



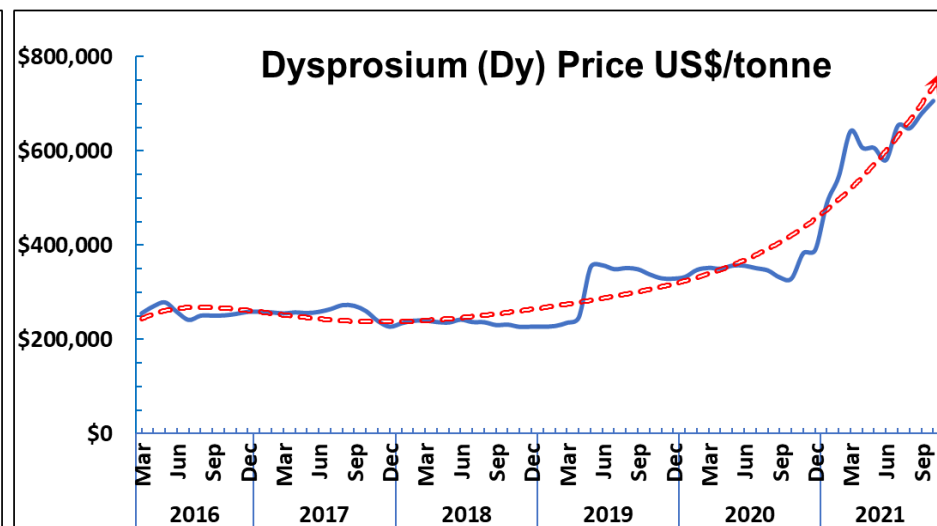
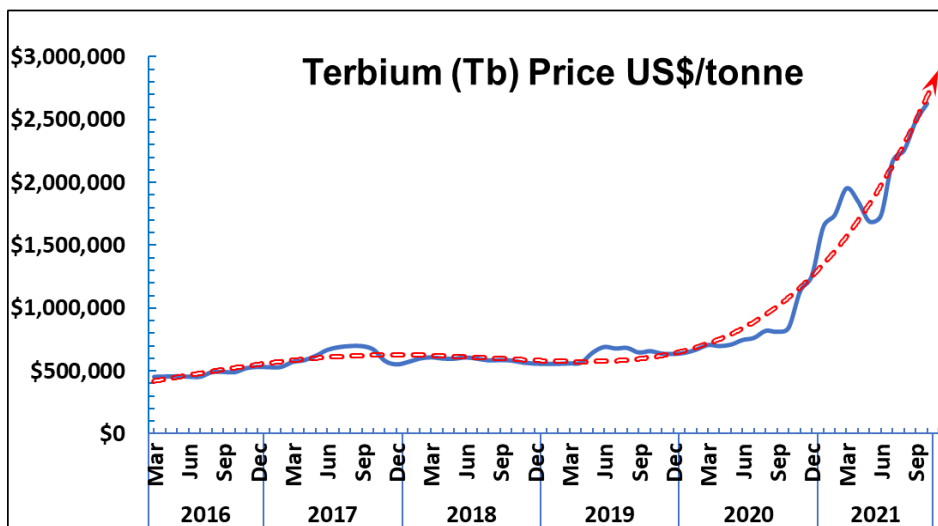
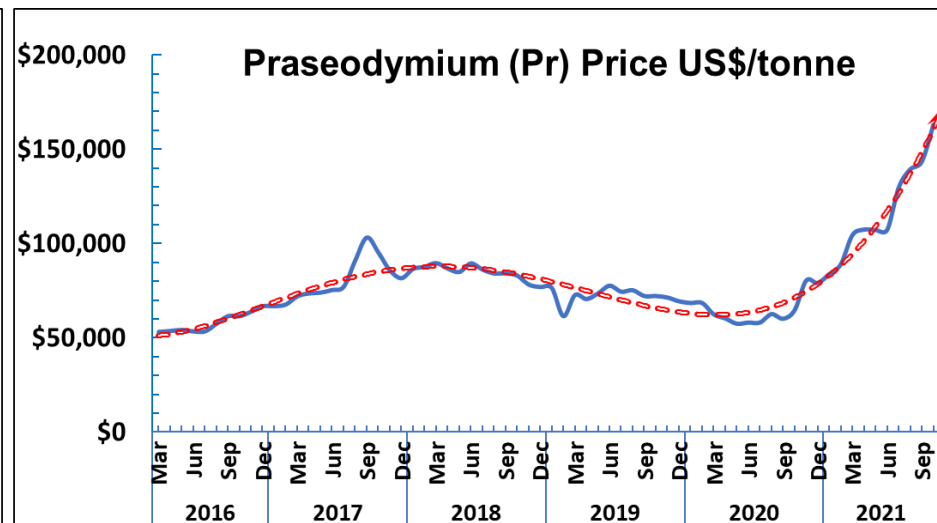
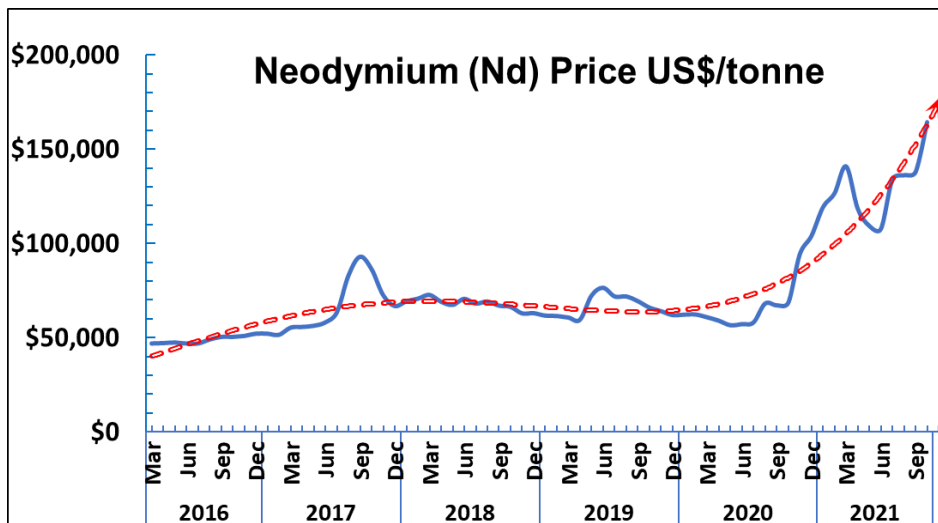
**Research lab** in Central Coast NSW is now conducting engineering validation testwork to guide the design specifications

# RARE EARTHS

## Super-Magnet REE markets very strong

ASX Code **ABX**

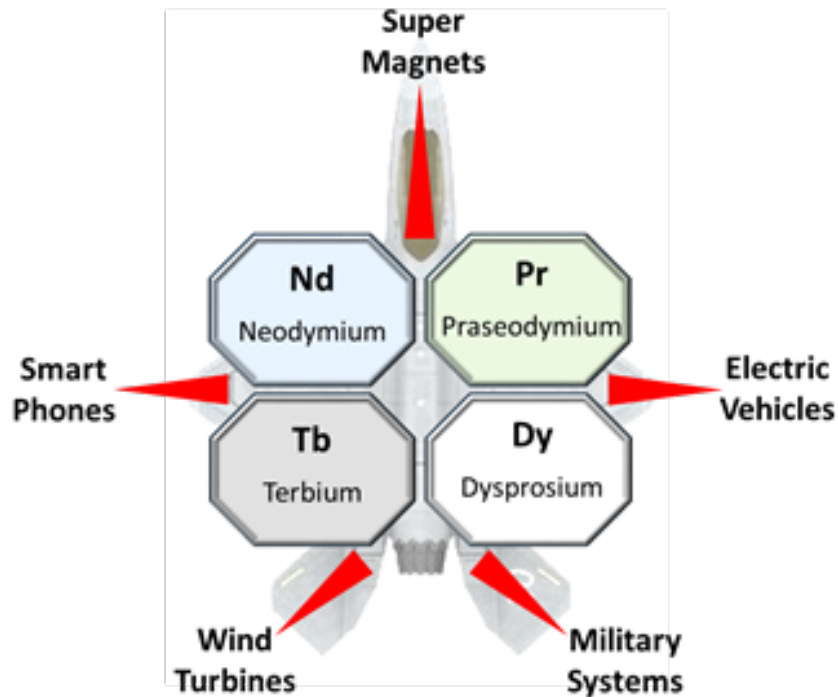
**ABX Group**



Sources: Chinese exports, cross-referenced with Kitco data

This is a boom situation, like the nickel boom. **A race to production**

# ABx's Super-Magnets REE Discovery



## Key market issues

Super-magnet REE: essential for electric vehicles, wind turbines, smart phones & military

China controls REE markets

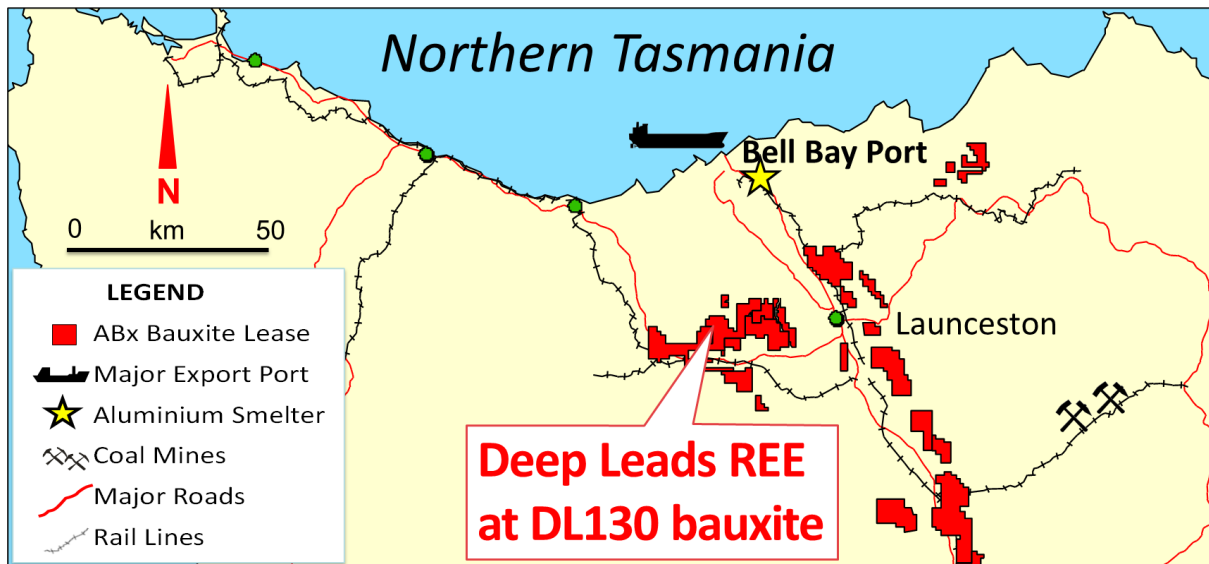
Australia emerging fast

## ABx discovery

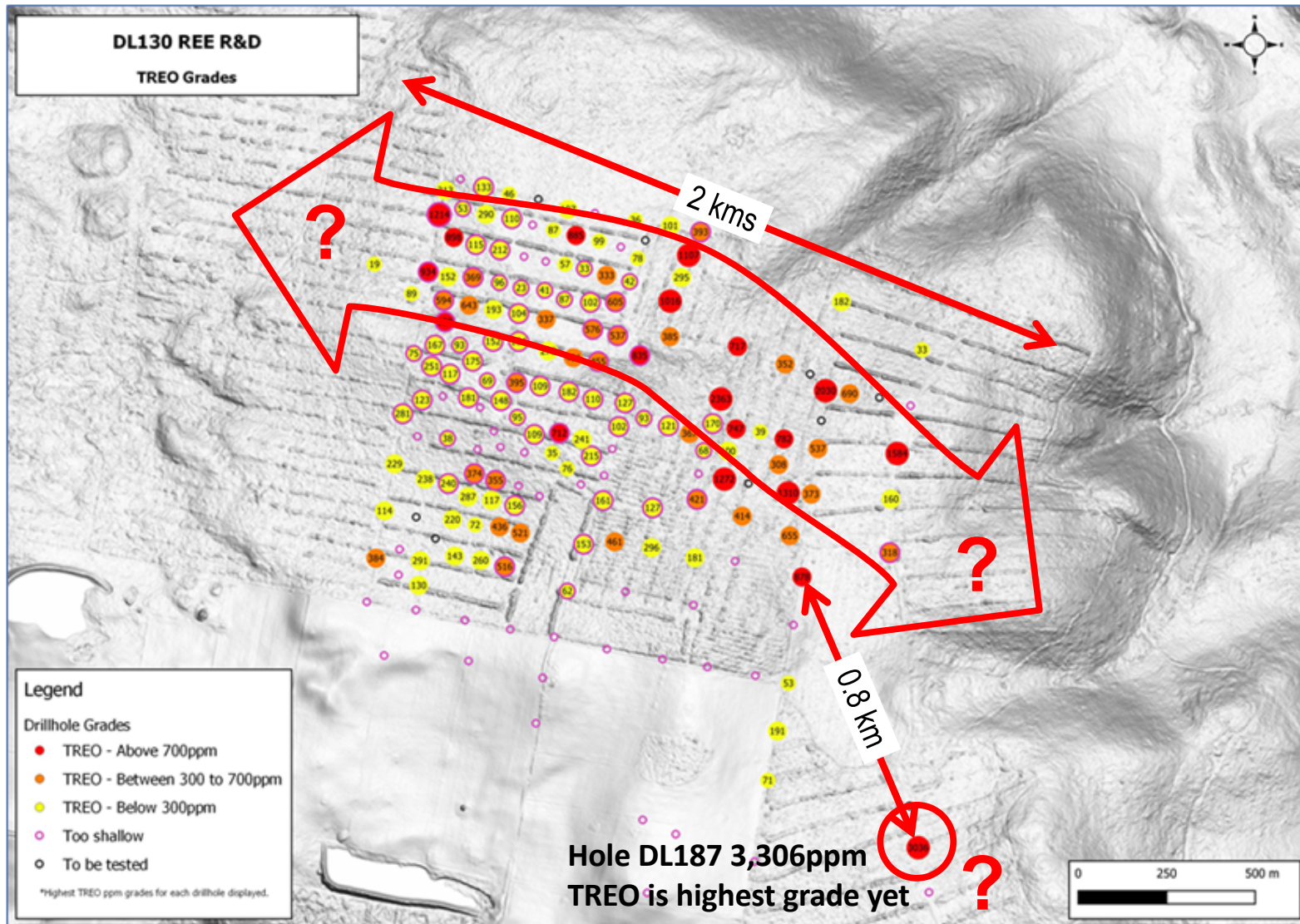
ABx discovered super-magnet REEs in Northern Tasmania

ABx's REE is water-soluble, recoverable by leaching if eco-friendly

ABx has the environmental expertise



# ABx's REE exploration potential is expanding



Deep Leads REE discovery  
Drilling programs are accelerating



# ABx's Deep Leads REE Project

## ABx has:

1. Discovered Neodymium (Nd) rich REE mineralisation
2. Water-soluble ionic adsorption clay REE for quick, low cost development
3. In suitable land settings for early development

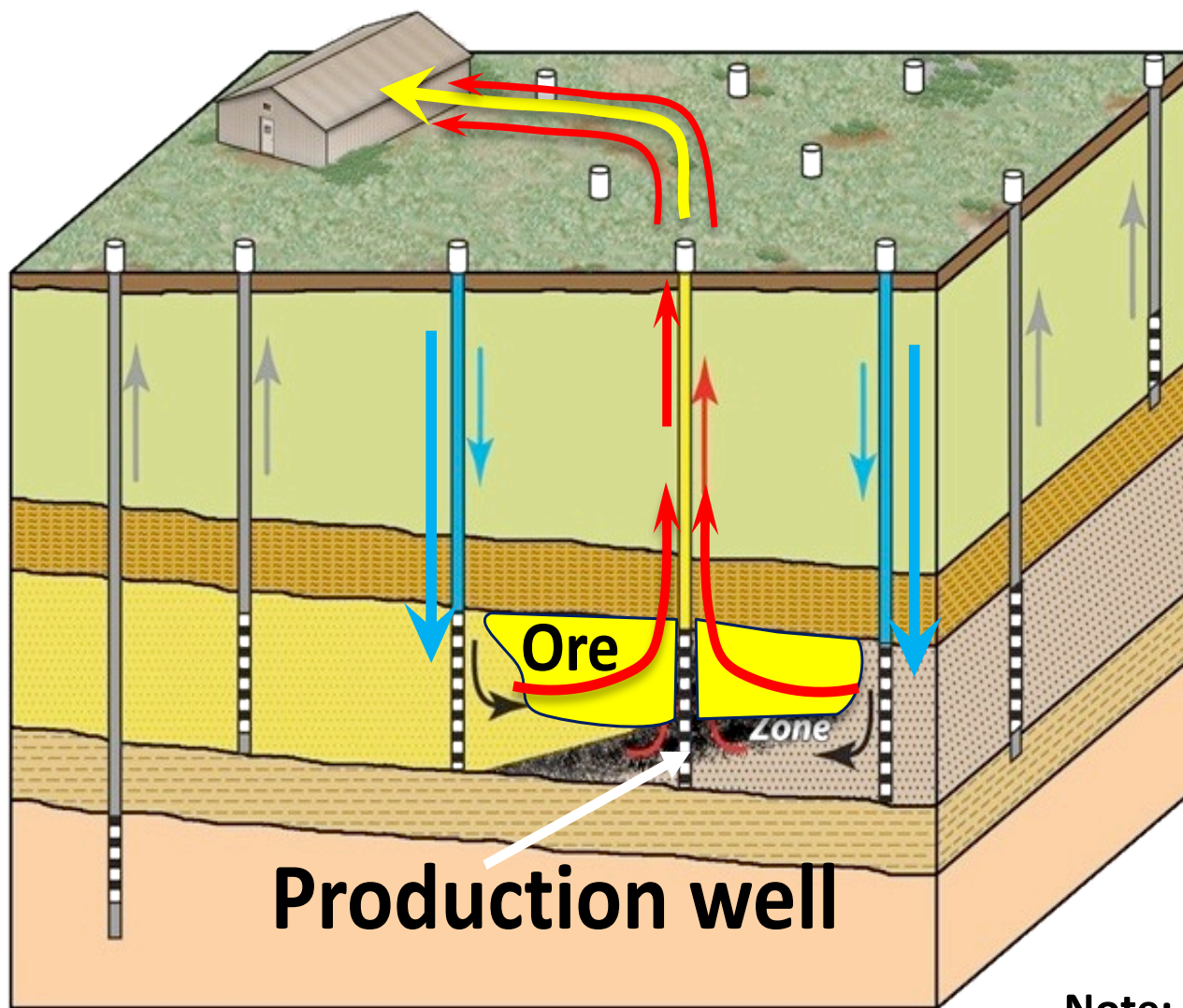


## ABx will:

1. Honour ABx's paramount policy to leave land better & only operate where welcome
2. Maintain our strong environmental record




# In-situ leaching the Deep Leads REE project



Concept diagram

**Production well**

-  Injection Well
-  Production Well
-  Monitor Well
-  Perforations

**Note:** This technology has operated successfully in South Australia for 20 years

# ABx bauxite operations

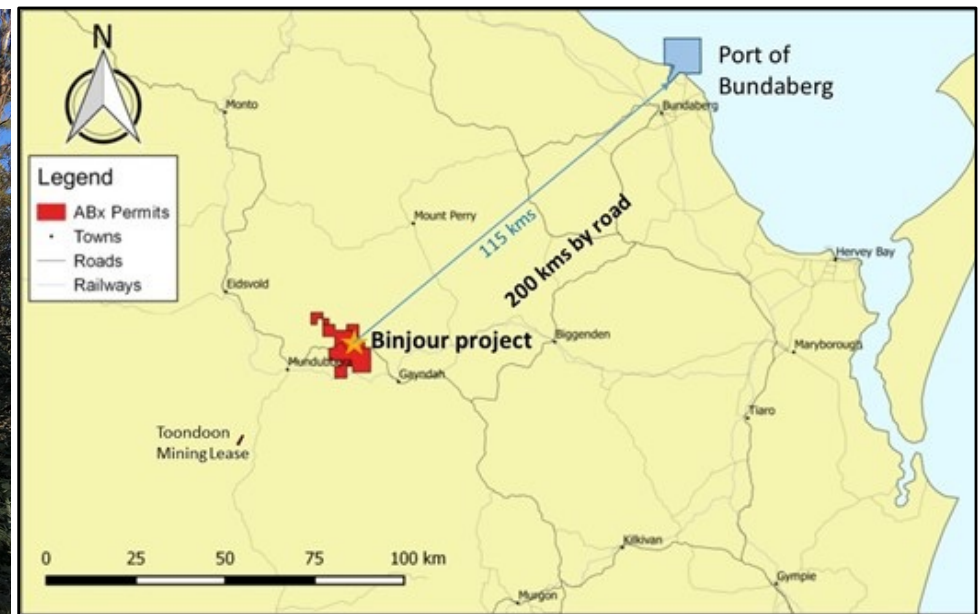
1. Mining lease application for Fingal Rail project, northern Tasmania for cement and fertiliser bauxite for 15 years
2. Trial bulk sample is being delivered to customers now
3. Bauxite production at DL130 Project may accelerate development of the Deep Leads REE discovery
4. Sunrise bauxite project at Binjour in QLD will be advanced in 2022 post-Covid

## Tasmania



Fingal Rail bauxite operations November 2021

## Queensland



Sunrise bauxite at Binjour in QLD



# ABx rehabilitates to high standards



**Bald Hill  
Mine  
Workings**



**Bald Hill  
mined out  
area 2 years  
later**

# Good Landholder Relations

**PARAMOUNT POLICY: ABx endorses best practices on agricultural land to leave land and environment better than we find it. We only operate where we are welcomed**

