



STOCKS
DOWN UNDER

3 NOV 2022

Resources Stocks Down Under

📖 *You don't make money when you buy or sell stocks. You make money by waiting.* 📖

- Mohnish Pabrai (b. 1964), CEO of Dhandho Funds

ABX GROUP

Get your teeth into this fluoride

ABX GROUP

Get your teeth into this fluoride

Stocks Down Under rating: ★★☆☆

ASX: ABx
Market cap: A\$34.7M

52-week range: A\$0.097 / A\$0.21
Share price: A\$0.15

Once upon a time ABx Group, when it was called Australian Bauxite, was set to be the next big bauxite player Down Under, with a suite of bauxite fields in the eastern half of the country. Over the last five years, the company has evolved into more of an aluminium technology play. On top of this, those old bauxite fields might still be valuable. It turns out a few of them are potentially rich in rare earths.

Share price chart



Source: Tradingview

Reinvigorating a lousy market

Back in 2017 Australian Bauxite had a problem. It had assembled a nice suite of bauxite fields, such as Binjour in Queensland with a resource of 24.5 million tonnes at 44.1% Al₂O₃, and Taralga in NSW with 37.9 million tonnes at 39.2%, but the market for bauxite was lousy, having trended down for most of the previous six years.

Australian Bauxite had a plan, however. It was exploring new technologies to process its bauxite, with the intention of supplying a key downstream chemical, aluminium fluoride, that would add a lot more value than simply digging up the red dirt. Five years later, ABx is now in a strong position to commercialise its technology.

Standing on the shoulders of giants

The world needs a lot of aluminium fluoride, chemical symbol AlF₃, because without it you can't make aluminium metal. It comes into play during the smelting process. The legendary Charles Martin Hall figured out way back in 1886 that if you put aluminium oxide, better known as alumina, into a molten bath of sodium-aluminium-fluoride and then run an electric current through it, pure aluminium will drop out of solution. That's the so-called Hall-Héroult process used to this day. Hall got rich off his discovery because he became a co-founder of what became Alcoa. ABx wants to get rich off a technology called Alcore.

ABx's technology originated as a way to make aluminium fluoride from low grade bauxite that didn't involve alumina trihydrate, an intermediate form of alumina from an alumina refinery. Around 2017 ABx started telling the world that it had a process that would work at a benchtop scale.

By 2020 the company and its research associates had gone one better – recognising that an even bigger opportunity was to find a new source of fluorine to replace fluorspar, a mineral that the world is in danger of running short of when it comes to the qualities needed. This source is fluorine-rich waste streams from aluminium smelters. ABx found that they didn't need bauxite at all as a starter material. The evidence to date has come from a laboratory ABx has been operating at Berkeley Vale on the NSW Central Coast, where the news has consistently been good in terms of process optimisation. Once the Alcore technology has been perfected, ABx believes that it can start producing aluminium fluoride at commercial scale to supply the Australian domestic market as an import-replacement product.

A billion-dollar market ready for the taking

Australia has four aluminium smelters that produced 1.56 million tonnes in 2021 - Bell Bay in Tasmania, Boyne Island in Queensland, Portland in Victoria and Tomago in NSW. The Tiwai Point smelter in New Zealand has an uncertain future given high energy costs, but it's usually good for another 300,000 tonnes or so. Bell Bay, Boyne Island, Tomago and Tiwai Point are all Rio Tinto managed while Portland is Alcoa's. All five Australasian smelters would likely welcome a non-Chinese aluminium fluoride supplier, and the same would likely apply to other smelters outside China's aegis.

And the price would likely be good. Not long ago, it was US\$1,800 a tonne, making for a US\$1.5bn global market. ABx has estimated that its production cost could be only A\$800 a tonne (i.e. US\$500) thanks to its waste-based inputs. The company is now talking about a commercial plant next to the Bell Bay smelter to access waste streams from that smelter and has received a \$7.5m grant from the Federal Government's Modern Manufacturing Initiative to support this project. Obviously, there's some way to go before Alcore goes commercial, but any announcement on a relationship with Rio would likely be well received by the market.

A surprise rare earths angle

Meanwhile, some of ABx's bauxite deposits may actually be useful for rare earths, that group of 15 elements known as the Lanthanide series, plus yttrium. Rare earths have a habit of showing up in bauxite and recent sampling and drilling work by ABx around a place called Deep Leads, between Devonport and Launceston in Tasmania, has them showing up here, in the so-called ionic adsorption clays that are easy to work. Rare earths have been quite attractive to resources investors lately. China has historically had a hammerlock on 21st century commodities, like neodymium and praseodymium, and the race is on to find supplies outside of Chinese control given their important uses in things like electric vehicles and wind turbines. And the prices have been strong lately. If planned drilling work for ABx is able to come up with a resource, we think a lot of investors will sit up and take notice.

ABx stock jumped a little bit when it disclosed some drill results related to the rare earths project in early September. We think there's relatively little in the currently small market cap for the potential of the Alcore technology, which has potential to move forward in 2023 given the progress that has been made over the last couple of years. For investors with the appropriate risk appetite, this one is four stars.

Pitt Street Research Pty Ltd

3 Spring Street, Sydney, NSW 2000, Australia

Stocks Down Under gives you an information advantage to better invest and trade in ASX-listed stocks!

Stocks Down Under (Pitt Street Research AFSL 1265112) provides actionable investment ideas on ASX-listed stocks. The Content is financial advice but is not (and cannot be construed or relied upon as) personal financial advice. No investment objectives, financial circumstances or needs of any individual have been taken into consideration in the preparation of the Content. Please make sure that investing in such products is suitable for your circumstances, and ensure you obtain, read and understand any applicable offer document.

Financial products are complex, entail risk of loss, may rise and fall, and are impacted by a range of unpredictable market and economic factors.

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior written permission from Pitt Street Research Ltd Pty. All intellectual property relating to the Content vests with Pitt Street Research/ Stocks Down Under unless otherwise noted.

Stocks Down Under/Pitt Street Research directors and staff may own shares in the companies mentioned in our articles, videos, reports and analyses.

You are receiving this email because you subscribed to our newsletter.

