

Australian Bauxite Ltd: ALCORE 4th Milestone Production of Aluminium Fluoride

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Sydney, Australia - [Australian Bauxite Ltd.](#)'s (ASX:ABX) wholly-owned subsidiary, ALCORE Limited has conducted experimental reactions for the chemical refining of ABx bauxite and its components into aluminium fluoride (AlF₃) and several valuable co-products.

- ALCORE has proven it can:

1. Make aluminium fluoride from aluminium oxides, which is the principle component of bauxite and other aluminium-rich material that is amenable to treatment by ALCORE
2. Extract valuable silicon oxides by adjusting the reagent mix and processing conditions
3. Extract valuable titanium oxide from samples tested to date by controlled drying and heating
4. Manufacture of saleable Corethane gas-substitute by reducing ash content in coal from 28% to less than 4%, thus making an ideal, ultra-clean substitute for metallurgical coal. The ash can be converted into saleable AlF₃ and co-products

- ALCORE's task list includes the following:

1. Determine the optimum reaction conditions for the complete extraction of iron oxides
2. Prove that ALCORE can make commercial-grade AlF₃ which involves both chemical and physical parameters
3. Make commercial-grade AlF₃ from economically attractive waste materials
4. Make ultra-pure AlF₃ from pure gibbsite (Al₂O₃ · 3H₂O, the main ore mineral in ABx's bauxite) that can be used in special batteries
5. Create fully-crystallised AlF₃ for testing by prospective customers that are interested in the ALCORE project
6. Recycling acids recovered from the production of the co-products
7. Reduce ash content in Corethane to below 1% (and eventually below 0.5%) so that it can be used for heat and power generation (within emission guidelines) in the production of AlF₃ and in nearby industries, thus reducing gas consumption and possibly providing energy security in an emergency

- AlF₃ is an essential electrolyte ingredient in aluminium smelters. Global demand for AlF₃ increases as aluminium smelter production increases and the use of AlF₃ in lithium-ion batteries increases

- Co-products include Corethane gas-substitute, which is pure hydrocarbon powder refined from low value coals that can be used as a gas or diesel substitute (for fuel security in emergencies) and has emissions-reducing industrial applications. It is ideally suited for use as a sulphur-free bunker fuel for shipping under new strict emissions laws

- Discussions continue with governments, agencies and major companies in the aluminium industry

ABx CEO, Ian Levy commented: "The ALCORE Research Centre has created a leading-edge laboratory with the highest standards of safety, equipment and technology. Exciting enhancements of the technology have already been achieved. The mini-production plant at the ALCORE Research Centre will supply test samples to our three prospective aluminium-producing customers.

"ALCORE's work can lead to Australia's first production of AlF₃ products to provide security of supply for Australasian aluminium smelters. ALCORE's production of Corethane gas-substitute hydrocarbon can change the energy supply and fuel security outlook. Its short-term focus is on supplying a cleaner form of

metallurgical reductants for reducing costs and emissions in manufacturing in eastern Australia.

"ABx is also progressing its 3 core bauxite projects; the Tasmanian mine, the large Binjour Project in central QLD and the Penrose refractory bauxite project 90km inland of Port Kembla NSW. Bulk sampling and processing testwork at the Binjour Project that was interrupted by rain is being completed in coming weeks."

To view tables and figures, please visit:
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About Australian Bauxite Ltd:

[Australian Bauxite Ltd.](#) (ABx) (ASX:ABX) has its first bauxite mine in Tasmania and holds the core of the Eastern Australian Bauxite Province. ABx's 22 bauxite tenements in Queensland, New South Wales & Tasmania exceed 1,975 km² and were selected for (1) good quality bauxite; (2) near infrastructure connected to export ports; & (3) free of socio-environmental constraints. All tenements are 100% owned, unencumbered & free of third-party royalties. ABx's discovery rate is increasing as knowledge, technology & expertise grows.

The Company's bauxite is high quality gibbsite trihydrate (THA) bauxite that can be processed into alumina at low temperature.

ABx has declared large Mineral Resources at Inverell & Guyra in northern NSW, Taralga in southern NSW, Binjour in central QLD & in Tasmania, confirming that ABx has discovered significant bauxite deposits including some of outstandingly high quality.

At Bald Hill near Campbell Town, Tasmania, the Company's first bauxite mine commenced operations in December 2014 – the first new Australian bauxite mine for more than 35 years. ABx has created significant bauxite developments in 3 states - Queensland, New South Wales and Tasmania. Its bauxite deposits are favourably located for direct shipping of bauxite to both local and export customers.

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

Source:

[Australian Bauxite Ltd.](#)

Contact:

Ian Levy CEO and MD [Australian Bauxite Ltd.](#) Telephone: +61-2-9251-7177 Mobile: +61-407-189-122

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