

ASX ANNOUNCEMENT

13 January 2021

Alcore Permanent CEO Appointment Alcore Delivering Excellent Results

Australian Bauxite Limited (ASX: ABX) is pleased to advise that Dr Mark Cooksey has permanently joined ABx's technology subsidiary ALCORE Limited (**Alcore**). Dr Cooksey was first appointed General Manager of Alcore (ASX: 24 January 2020) and then CEO (ASX: 24 August 2020), on a leave arrangement from Australia's national science agency, CSIRO. This appointment is now permanent, and he will lead Alcore's development and commercialisation of a new process for aluminium fluoride (AlF₃) production.

Dr Cooksey brings to Alcore an impressive history in research, development and commercialisation of new processes in the minerals and metals industry. He commenced his career as a Research Engineer in aluminium smelting with Comalco (now Rio Tinto Alcan) in 1997 and became a Senior Research Engineer in 2000. Mark joined CSIRO in 2004 as a Senior Research Engineer and became a Senior Principal Research Leader in 2016.

Dr Cooksey holds a PhD (Chemical & Materials Engineering), Bachelor of Engineering (Materials – First Class Honours) and Bachelor of Science (Information Technology and Applied Mathematics). He has worked closely with aluminium and other metal industries, and his significant experience in commercialising new technologies and processes will enable Alcore to transition into the next phase of development.

Welcoming Dr Cooksey, Ian Levy, ABx's CEO, commented:

"In the last 12 months Mark has been instrumental in accelerating Alcore's technical and commercial development, and we deeply appreciate CSIRO for facilitating this arrangement. Alcore is now beginning to scale-up the technology to larger scale production and needs the highly skilled and experienced leadership that Mark can provide. This is an important step in the delivery of value from the Alcore initiative to all shareholders."

Dr Mark Cooksey
CEO Alcore Limited



RESULTS KEEP IMPROVING

Under Mark's guidance over recent months, Alcore has demonstrated:

- Repeated recovery of fluorine from aluminium smelter waste provided by multiple suppliers
- Consistent production of AlF₃ with composition meeting commercial chemical and physical specifications (see Table 1). The chemical analysis was performed by CSIRO
- Prevention of key impurities in bauxite from reacting with fluorine acids, allowing the impurities to remain as solids that can be separated from the AlF₃ solution during processing

Table 1: Recent Alcore AIF₃ products (chemical analyses by CSIRO).

Product Properties	AlF ₃	Fe ₂ O ₃	SiO ₂	Na ₂ O	CaO	P ₂ O ₅	Bulk density
Commercial specifications	>90%	<0.05%	<0.28%	<0.60%	<0.09%	<0.04%	>0.7
Alcore Sample 1	96%	0.032%	0.005%	0.291%	0.081%	<0.005%	0.79
Alcore Sample 2	96%	0.035%	0.005%	0.223%	0.089%	<0.005%	0.77
Alcore Sample 3*	91%	0.029%	0.024%	0.185%	0.080%	<0.005%	0.85
Alcore Sample 4*	88%	0.037%	0.005%	0.137%	0.075%	<0.005%	0.79
Alcore's average	93%	0.033%	0.010%	0.209%	0.081%	<0.005%	0.80

* Produced using fluorine that was recovered from wastes from two aluminium smelters

Current Alcore activities

- Conducting engineering validation, which is likely to include a pilot plant for critical process steps, to:
 - Confirm process and product performance at a larger scale
 - Produce larger samples for evaluation by aluminium smelters
- Conducting process verification experiments in the laboratory to:
 - Produce AlF₃ from bauxite and aluminium smelter waste of equivalent quality to that produced from aluminium hydroxide
 - Optimise the recovery of fluorine from aluminium smelter waste, including the separation and recovery of by-products with potential commercial value

Government & Industry

Discussions continue with governments, agencies, engineering experts and major companies in the aluminium industry. Alcore considers AlF₃ to be a strategically important mineral product.

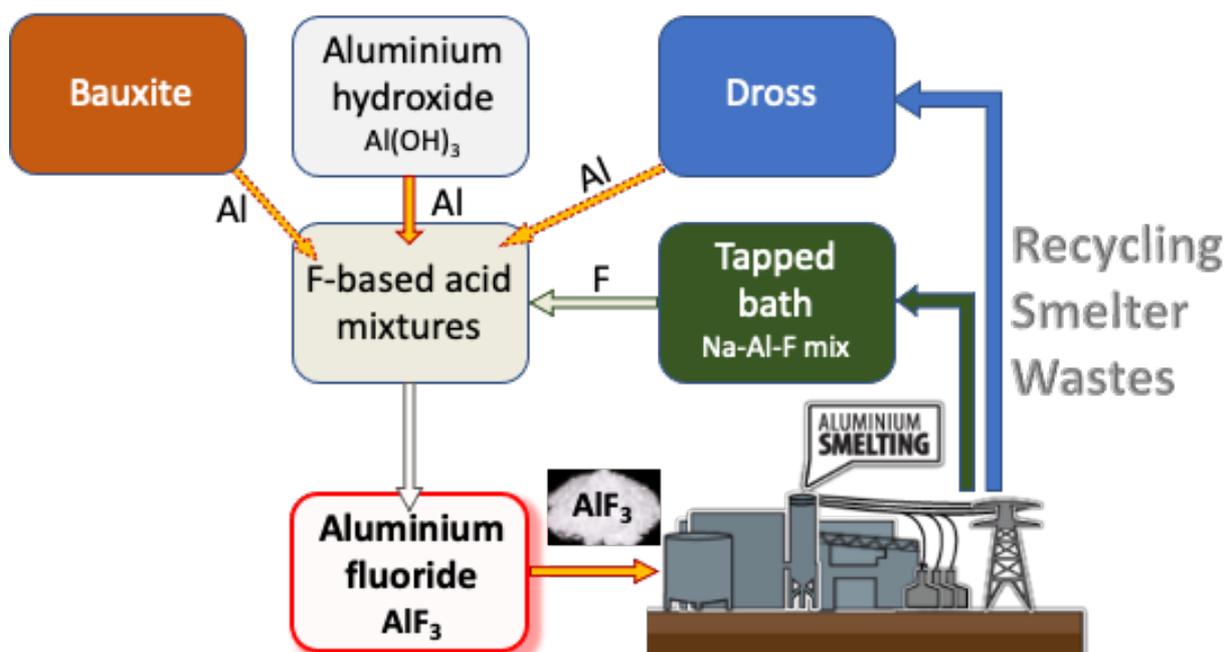

Figure 1: Summary of the Alcore strategy.



Figure 2
The \$2.5 million Alcore laboratory constructed inside the Alcore Research Centre.

The Alcore Lab is a climate-controlled laboratory constructed inside the Alcore Research Centre to produce test samples of AlF_3 and co-products. It will become a research centre for testing the technology on many ores.

This announcement has been approved for release by the Board of Australian Bauxite Limited.

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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.

About Australian Bauxite Limited

ASX Code **ABX** Web: www.australianbauxite.com.au

Australian Bauxite Limited (ABx) has its first bauxite mine in Tasmania & controls the Eastern Australian Bauxite Province. ABx's 11 bauxite tenements in Queensland, New South Wales & Tasmania totalling 662 km² are all 100% owned, unencumbered & free of third-party royalties. ABx's bauxite is gibbsite trihydrate (THA) bauxite that can be processed into alumina at low temperature.

ABx has committed a large proportion of its expenditure into Research and Development to find ways to capitalise on the main strengths of its bauxite type which is very clean, free of all deleterious elements and partitioned into layers, nodules, particles and grains of different qualities that can be separated into different product streams using physical, chemical and geophysical methods.

ABx has declared large Mineral Resources in northern NSW, southern NSW, Binjour in central QLD & in northern Tasmania. ABx's first mine commenced at Bald Hill near Campbell Town, Tasmania in December 2014 – the first new Australian bauxite mine for more than 35 years.

ABx aspires to identify large bauxite resources in the Eastern Australian Bauxite Province and has created significant bauxite development projects 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.

About ALCORE Limited:



Australian Bauxite Limited (ABx)'s 89%-owned technology subsidiary ALCORE Limited was created to fund and manage the AIF₃ Project, involving the construction of a production plant to produce aluminium fluoride (AIF₃) and valuable co-products using new Australian technology. Alcore intends to convert aluminium smelter waste (and low grade bauxite) worth less than \$50 per tonne into a suite of valuable products worth more than \$800 per tonne. Alcore's testwork commenced on 1 July 2019 at its high-technology Research Centre in Berkeley Vale, Central Coast NSW and is currently focussed on producing AIF₃ test samples for pre-qualified aluminium smelter customers. Its processes can also produce Corethane, which is pure hydrocarbon powder to provide thermal and electrical power with low CO₂ emissions when used as a gas-substitute or as a diesel substitute for fuel security purposes and is ideally suited for use as a sulphur-free bunker fuel. Corethane is also useable as a chemical reductant instead of imported coke and coals.

AIF₃ is an essential ingredient in aluminium smelters and is currently 100% imported. Alcore will be the first Australian producer of this strategically important mineral product and will provide security of supply to the large aluminium smelting industry in Australia. Alcore will produce AIF₃ from smelter waste materials and thereby maximise the recycling by Australian aluminium smelters.

Directors of ABx

Paul Lennon	Chairman
Ian Levy	CEO & MD
Ken Boundy	Director
Henry Kinstlinger	Company Secretary

Officers

Leon Hawker	Chief Operating Officer
Jacob Rebek	Chief Geologist
Paul Glover	Marketing, Exploration & Relationships
Nathan Towns	Operations Manager
Dr Mark Cooksey	CEO Alcore Limited