ASX code: ABX

Quarterly Activities Report – June 2019 .....Released 30 July 2019 Page 1

## QUARTERLY REPORT AND ACTIVITY STATEMENT FOR THREE MONTHS TO 30 JUNE 2019 Corporate

• Group available cash at the end of the quarter was \$1.3 million and currently is about \$1.18 million.

#### Sales & Operations

- 32,477 tonnes of cement-grade bauxite was loaded and shipped from Bell Bay in early June, having been
  produced and delivered to port 3 weeks ahead of schedule. Sales of fertiliser-grade bauxite from Bald Hill are
  growing as the superphosphate fertiliser made by acid-processing of ABx bauxite is gaining strong sales
- . Rehabilitation is nearing completion at Bald Hill in accordance with ABx's high standards
- · Bulk-sampling at the Binjour bauxite project in QLD confirmed grades and upgrading tests were successful

### ALEGE Bauxite Refining Technology

- ALCORE Limited is a wholly owned subsidiary of ABx to fund and manage the ALCORE Project, leading to the construction of an ALCORE Production Plant to produce Aluminium Fluoride (AIF<sub>3</sub>) and valuable co-products
- The ALCORE Research Centre at Berkeley Vale on the NSW Central Coast has produced mixed AIF<sub>3</sub>-TiF<sub>4</sub> samples from refining ABx bauxite and will commence separating pure AIF<sub>3</sub> for product-testing by potential customers in the current quarter assays are awaited (see Page 6)
- ALCORE patent (pending) technology is designed to beneficiate and refine raw bauxite that has a market price of \$50 into high-value products worth more than \$US 800 per tonne, including:
  - a. Aluminium Fluoride (AIF<sub>3</sub>) used by aluminium smelters. Global demand for AIF<sub>3</sub> & ALCORE co-products continues to increase as aluminium production increases & AIF<sub>3</sub> use in lithium ion batteries increases
  - b. Silica fume for cement industry customers and manufacturers of low-CO2 geopolymer eco-cement
  - c. The process can also produce Corethane which is an ultra-pure hydrocarbon for energy production and can also be used for lower-emissions metallurgical use and brickmaking
- ALCORE will be the first Australian supplier of AIF<sub>3</sub> to the Australasian Aluminium Smelters and for export. ALCORE technology is relatively low-risk because it operates at ambient temperatures and pressures
- New discovery: during this research, ALCORE discovered a method to completely dissolve bauxite within 60 seconds in what can only be described as an astoundingly powerful and complete reaction. It is called a HotMix Brew that has a specific formula with significant power and potential
- Ore Reserves: ABx has stockpiled and sampled ALCORE refinery-grade bauxite at Bald Hill mine in Tasmania and an initial ore-reserve estimation of some of these large refinery-grade stockpiles is nearing completion
- Once sufficient AIF<sub>3</sub> is produced, the pilot plant will test the production of Corethane, which will provide energy for the ALCORE Production Plant and demonstrate its use as a gas-substitute in gas turbine electrical generators and as sulphur-free diesel substitute for fuel security purposes
- The ALCORE business plan targets long-established, broad industrial markets with many potential buyers
- ALCORE is in discussions with governments, agencies & companies interested in AIF3, Corethane & silica fume



Figure 1
Prices and demand for aluminium fluoride AIF3

AIF<sub>3</sub> markets remain positive for the ALCORE project



#### Binjour Project, QLD - located 115kms inland from Bundaberg Port, Queensland

- Tripartite Memorandum of Understanding (MoU) between ABx and its joint venture partner, Rawmin Mining
  and Industries of India with Tianshan Aluminium Co Ltd of China is for the sale of 0.5 to 1.5 million tonnes
  of bauxite from the Binjour project and a similar tonnage from Rawmin's bauxite mines in India to
  Tianshan's new low temperature refinery in southern China which is due for completion in 2020
- ABx considers its Binjour Project located 115 kms southwest of Bundaberg port to be the best source of gibbsite-trihydrate (THA) bauxite in Queensland that is suitable for processing in low-temperature Bayertechnology alumina refineries and for sweetener circuits in some high-temperature refineries
- ABx's total Queensland bauxite resources are 40.5 million tonnes comprising 37 million tonnes of thick
  gibbsite trihydrate bauxite at Binjour plateau and 3.5 million tonnes in the granted mining lease at
  Toondoon, located 46 kms south of Binjour <sup>1</sup>
- Binjour bauxite is 3 to 15 metres thick and comprises 10.4 million tonnes suitable for simple bulk mining and shipping as "DSO Bauxite 1" and 26.6 million tonnes requiring processing by ABx's proprietary TasTech technology to achieve the long-term sales grade of 44% to 45% Al<sub>2</sub>O<sub>3</sub> & 5% SiO<sub>2</sub> which is ideal "metallurgical bauxite" for producing aluminium metal via the low-temperature Bayer alumina refineries
- Bulk sampling & processing testwork commenced late June to help ABx make a decision in late 2019 about committing to project development, commencing with a mining licence application. This sampling confirmed that Binjour bauxite screens and upgrades better than expected (ASX: 30 May 2019). It also discovered that a cream-coloured, extensive layer of bauxite exists at Binjour that grades more than 46% Al<sub>2</sub>O<sub>3</sub> and less than 3% SiO<sub>2</sub> and is the highest quality gibbsite-trihydrate bauxite in eastern Australia important new knowledge
- This new knowledge was obscured by an overlying red mud layer that conceals the true nature of the bauxite. ABx is searching its proprietary database from its 1,000 drillholes at Binjour to identify sites that:
  - a. Are on freehold land titles, with no strategic cropping or environmental issues
  - b. Are ideally located for transport, processing, environmental and community issues; and
  - c. Contain this very high quality layer of bauxite which could have high-value markets

so that several potential mining lease locations can be identified and assessed for decisions in late 2019.

- Coordinated production: The Binjour Project will maximise production during the Queensland dry season
  from April to November and ABx's Tasmanian mines will maximise production in summer from December
  to May. Rawmin's mines in north western India will maximise production in the Indian dry season from
  November to May but cease shipments in monsoon months June to September. Coordinated production
  and shipments will achieve all-year delivery to the customer of bauxite at a consistent specification
- Memorandum of Understanding Agreement for access to the preferred stockpile site at the Port of Bundaberg was finalised in June 2019

#### Penrose bauxite types in strong demand

ABx's Penrose bauxite deposit located in a pine plantation 90km inland of Port Kembla NSW (see Figures 7 & 8) contains a layer grading 55% Al<sub>2</sub>O<sub>3</sub> and very low iron content which has potential to make special chemical products, as well as refractory bauxite – see page 7 below. The strategy for Penrose is to sell each layer to separate customers but a primary partner is needed to design an environmentally optimised project development.

Penrose bauxite may be ideal feedstock for the ALCORE bauxite refining technology or for the production of high-value refractory-grade bauxite and potentially for manufacture of an Australia building product.

#### Search of other low-iron grey-white bauxite deposits

Prior to making an offer to the "primary partner" for ABx's grey-white bauxite, ABx is searching its large database for other deposits of this type of bauxite. Already, deposits have been found in Tasmania, Binjour in QLD and in the Taralga project area located north of Goulburn NSW. ABx will prepare a business proposal to build a reliable supply of grey-white bauxite in the current quarter.

1. See Resource Statement



#### Locations



Figure 2 Locations of ABx bauxite mines, projects and transport infrastructure in Tasmania

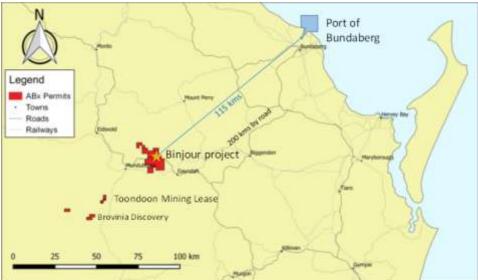


Figure 3 Locations of Binjour & Toondoon bauxite projects and transport infrastructure in Queensland



Figure 4 Locations of Penrose bauxite project, 90kms inland from Port Kembla, New South Wales



#### Sales & Operations: Bald Hill Bauxite Project, Campbell Town, Northern Tasmania

Dispatch Date	Sale Tonnes	
20/01/2016	446	
8/04/2016	5,557	
7/08/2016	35,913	
9/09/2016	89	
19/09/2017	30,000	
28/09/2017	5,000	
30/10/2017	669	
30/04/2019	32,477	
Cement Sub Total	110,152	
24/11/2015	195	
16/03/2016	390	
14/09/2016	1,500	
31/01/2017	351	
28/02/2017	429	
31/03/2017	430	
30/04/2017	78	
3/10/2017	468	
13/11/2017	857	
6/12/2017	704	
23/03/2018	1,412	
30/09/2018	978	
5/02/2019	347	
7/03/2019	586	
3/04/2019	310	
12/06/2019	540	
12/07/2019	019 154	
Fertiliser Sub Total	9,730	
Total all sales	119,882	

Minesite screened stockpiles (grade controlled, ready to blend/sell)						
Metallurgical grade	150	tonnes				
Cement-grade	350	tonnes				
Fertiliser grade	7,585	tonnes				
Subtotal mine s/piles	8,085	tonnes				
Port stockpiles Cement-grade (bauxite stockpile pad)	1,864	tonnes				
<del>-</del>	0.040	tonnes				
Total saleable processed stockpiles	9,949	toilles				
lotal saleable processed stockpiles	9,949	toilles				
Screened material available for classification	94,426	tonnes				
	.,					
Screened material available for classification	94,426	tonnes				
Screened material available for classification Broken Ore Stocks ready for screening:	94,426 19,250	tonnes tonnes				

#### Production statistics as at 30 June 2019

Tonnes mined	48,471	tonnes
Tonnes screened (primary)	77,161	tonnes
Tonnes metallurgical-grade (added to cement-grade)	0	tonnes
Tonnes cement-grade	33,741	tonnes
Tonnes other screened material	35,798	tonnes
Total saleable tonnes produced	69,539	tonnes

Table 1
Operating Statistics as at 29 July 2019



Figure 5 Operations at Bald Hill mine at Campbell Town, northern Tasmania during the quarter.

The mine operation is now focussed on its annual rehabilitation work



Figure 6
Rehabilitation at Bald Hill mine was nearing completion at the end of the quarter.

Mine operators are waiting for optimum weather for seeding and weed suppression.



## ALEXE Bauxite Refining Technology

ALCORE's bauxite refining technology produces Aluminium Fluoride (AIF3) for aluminium smelting and other co-products including the gas-substitute Corethane for energy and Silica Fume for Eco-cement. ABx is in negotiations with potential customers, with initial focus on tonnage demand and technical specifications. These investigations concluded that there is sufficient demand to ultimately justify a 50,000 tonnes per year AIF<sub>3</sub> production plant in Australia, built in 5 stages, each of 10,000 tonnes per year AIF<sub>3</sub> production.

Currently all AIF<sub>3</sub> used in Australian aluminium smelters is imported at high prices. ALCORE may reverse this.

## **ALCORE Bauxite Refining Process : all co-products saleable**

Bauxite &/or coal ash =  $36\% \text{ Al}_2\text{O}_3 + \text{Fe}_2\text{O}_3 + \text{SiO}_2 + \text{TiO}_2$ 

Reagents: 2 Fluorine acids & water (mainly "FSA" a waste acid from fertiliser plants and used for water fluoridation).

#### **Process**

- 1. All minerals except hydrocarbon dissolved by reagents
- 2. Hydrocarbon floats & is recovered = "Corethane"
- 3. Metal fluorides form from dissolved minerals
- 4. Fluorides sequentially precipitated as oxide products (except AIF<sub>3</sub>) and F-acids recovered
- 5. Co-products are all in saleable pure forms



50,000 tpa refinery











Ultra-pure Silica Fume US\$600 to \$3,000/t

~US\$600/t

Iron Oxide Pigment Ti Oxide Pigment Aluminium Fluoride ~US\$1,800/t ~US\$1,500/t

Figure 7 Summary of the ALCORE process:

- 1. Inputs,
- 2. AIF<sub>3</sub> product &
- 3. Co-products

Corethane is an ultra-pure hydrocarbon to power the production plant with zero particulate emissions & CO<sub>2</sub> emissions similar to natural gas.

ALCORE can also sell electricity to the grid or sell Corethane to industrial customers, several of which have already expressed interest.

#### **Summary**

ALCORE's bauxite refining has the potential to convert a tonne of bauxite valued at US\$50 per tonne into a suite of products worth in excess of US\$800 representing a 10-times increase in net value.

Competitive Advantage of ABx's clean bauxite is zero emissions & wastes: ABx's clean bauxite allows ALCORE to operate with zero emissions and no waste products.

An ALCORE project can be located anywhere in the world, importing bauxite from bauxite producers for less than the \$US50 per tonne which is being conservatively assumed in ALCORE's economic studies.

Therefore, the ALCORE Technology is not affected by resource supply issues and can be located near to its major customers, near sources of low-cost reagents, in areas of skilled and semi-skilled labour and where financial incentives are most attractive for developing these mid-sized value-adding projects.

#### Risk management:

The ALCORE business plan is designed to minimise both the financial and technical risks as follows:

- 1. ALCORE technology operates at low temperatures & low pressures;
- 2. ALCORE's main products in the start-up years 1 to 5 are designed to be AIF<sub>3</sub>, silica fume and high-grade bauxite. These products have deep, well-established markets and can be sold at moderate grades and

This plan for ALCORE's initial products avoids the market risks of targeting high-purity products which can take several years of process improvements to achieve and often have very few buyers.





Figure 8: The Core Lab is a climate-controlled laboratory constructed inside the ALCORE Research Centre for the refining of bauxite to produce test samples of AIF<sub>3</sub> and co-products. It will become a research centre for testing its technology on many ores.

#### Prices for AIF<sub>3</sub> Remain Strong

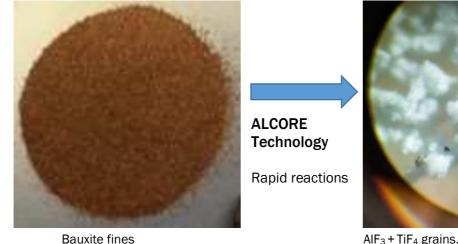
Prices of AIF<sub>3</sub> exports from China have remained firm, ranging from US\$1,550 to US\$1,800 per tonne in recent years – see Figure 1 on page 1 above.

#### **ALCORE Laboratory Progress**

- Lab testwork commenced on 29 June
- Fe<sub>2</sub>O<sub>3</sub> has been extracted from the bauxite
- Mixed metal fluorides AIF<sub>3</sub>, TiF<sub>4</sub> and trace SiF<sub>4</sub> have been produced as white granules
- In recent days, TiF<sub>4</sub> and SiF<sub>4</sub> have been removed from the mixed metal fluorides, theoretically leaving only AlF<sub>3</sub> assays are pending. Repeated experiments are underway.
- New discovery? Whilst conducting experiments, a particular combination of the two acids, water and temperature led to a complete dissolution of the bauxite, including all iron oxides and resistant minerals, leaving nothing but a clear liquid all within 60 seconds.

This super-reagent is called "HotMix Brew" but the temperature is not especially high. ALCORE has no direct use for this new discovery at this early stage other than perhaps producing iron fluorides directly from the  $Fe_2O_3$  that is extracted from the bauxite using the normal ALCORE process. Iron fluorides are being investigated for increasing energy density of Lithium Ion batteries.

The lesson from this is that ALCORE may well make unexpected discoveries because it has a laboratory capable of doing reactions that very few laboratories can do today.



AIF<sub>3</sub> + TiF<sub>4</sub> grains. Microscope image 26 July'19

Figure 9: The ALCORE Technology is converting bauxite fines into metal fluorides



#### Binjour Project Commencing Financial Studies & Marketing Strategy

This project area is located inland from Bundaberg, central Queensland, comprising the main project area located at Binjour, 115kms SW of Bundaberg between Gayndah and Mundubbera, and a granted Mining Lease at Toondoon 25kms south of Mundubbera.



Figure 10: Location of Binjour and Toondoon Bauxite Project Areas, Queensland

ABx and its Indian marketing partner, Rawmin Mining and Industries (**Rawmin**) are assessing the economic viability of the Binjour Bauxite project in the Wide Bay Burnett region, shipping from the Port of Bundaberg.

**Mine studies**: As a result of the bulk sampling program recently completed, the mine studies are being reassessed with an emphasis on easy-digging areas in early years on land blocks that are easy-access and less difficult for approval of a mining lease. Resources are currently estimated as totalling a combined 40.5 million tonnes from Binjour 1 and granted mining lease at Toondoon 1 46 kms south of Binjour - see Figure 10.

**Customers:** A tri-partite Memorandum of Understanding agreement with prospective customer Tianshan of China has been executed for supplying 1 to 1.5 million tonnes of bauxite per year to Tianshan's new low-temperature bauxite refinery currently under construct.

**Port of Bundaberg:** ABx has secured an option to use a stockpile site at the Port of Bundaberg that can accommodate 175,000 tonnes of bauxite and allow barge transhipment to a deepwater site within the port limits, loading of Cape-size ships carrying 150,000 tonnes of bauxite, thus achieving lowest shipping costs.

**Road Haulage:** ABx has now assessed a road transport study from expert consultants to identify opportunities for cost-efficient road transport from both Binjour deposit and Toondoon mining lease. Trucking costs can now be estimated with greater certainty. The challenges in transport options are significant.

**Rail Haulage:** ABx has been approached by a rail organisation seeking to assess the viability of reopening the rail line from north of Gayndah to haul bauxite and other products, albeit commencing at a low-tonnage rate. A mixed rail and road haulage is considered worthy of investigation.

**Support:** ABx acknowledges the support and guidance from Queensland State government departments, local councils, the Port authority and local landholders who are typically hospitable, positive Queenslanders. Dealing with regulations is always a major challenge but local support heartens us.



#### **Qualifying statements**

#### General

The information in this report that relate to Exploration Information and Mineral Resources are based on information compiled by Jacob Rebek and Ian Levy who are members of The Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. Mr Rebek and Mr Levy are qualified geologists and Mr Levy is a director of Australian Bauxite Limited.

#### Mainland

The information relating to Mineral Resources on the Mainland 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.

Mr Rebek and Mr Levy have sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity, which they are undertaking to qualify as a Competent Person as defined in the 2004 Edition of the Australasian Code for Reporting of exploration Results, Mineral Resources and Ore Reserves. Mr Rebek and Mr Levy have consented in writing to the inclusion in this report of the Exploration Information in the form and context in which it appears.

#### **Tasmania**

The information relating to Exploration Information and Mineral Resources in Tasmania has been prepared or updated under the JORC Code 2012.

Mr Rebek and Mr Levy have sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity, which they are 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 Rebek and Mr Levy have consented in writing to the inclusion in this report of the Exploration Information in the form and context in which it appears.

#### **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.

Table 2: Tenement information required under LR 5.3.3

Tenement No.	Location
New South Wales	
EL 6997	Inverell
EL 8370	Penrose Forest
EL 7357	Taralga
EL 8600	Penrose Quarry
Queensland	
EPM 18014	Binjour
EPM 18772	Binjour Extension
EPM 25146	Toondoon EPM
EPM 19427	Brovinia 2
ML 80126	Toondoon ML
Tasmania	
EL 7/2010	Conara
EL 9/2010	Deloraine
EL 16/2012	Reedy Marsh
EL 18/2014	Prosser's Road
ML 1961 P/M	Bald Hill Bauxite

#### Note:

During the quarter, two exploration licences were relinquished.

All tenements are in good standing, 100% owned and not subject to any Farm-in or Farm-out agreements, third-party royalties nor are they encumbered in any way



#### **Resource Statement**

Tabulated below are the Mineral Resources for each ABx Project. The initial ASX disclosure for these Resources is given in the footnotes to the table. Refer to these announcements for full details of resource estimation methodology and attributions.

**Table 3: ABx JORC Compliant Resource Estimates** 

Region	Resource	Million	Thickness	Al <sub>2</sub> O <sub>3</sub>	SiO <sub>2</sub>	A/S	Fe <sub>2</sub> O <sub>3</sub>	TiO <sub>2</sub>	LOI	Al <sub>2</sub> O <sub>3</sub> AvI	Rx SiO <sub>2</sub>	AvI/Rx	% Lab	O'Burden	Int.Waste
	Category	Tonnes	(m)	%	%	ratio	%	%	%	@ 143°C %	%	ratio	Yield	(m)	(m)
CAMPBELL TOWN	Inferred	1.3	3.0	42.6	3.5	12	25.4	3.5	24.6	36.7	3.0	12	50	2.1	0.1
AREA TASMANIA 7	Indicated	1.4	3.2	42.5	3.2	14	26.4	3.0	24.5	36.2	2.8	14	55	1.8	0.1
	Total	2.7	3.1	42.5	3.3	13	25.9	3.3	24.5	36.5	2.9	13	52	2.0	0.1
Fingal Rail Cement-	Inferred	2.4	3.3	30.9	19.5	-	35.4	3.9	16.7	-				1.9	0.1
Grade Bauxite 8	Indicated	3.9	3.8	31.1	19.0	-	35.2	4.0	16.9	-	-		-	1.7	0.1
	Total	6.3	3.6	31.0	19.2	-	35.3	4.0	16.8	-				1.8	0.1
DL-130 AREA TAS <sup>1</sup>	Inferred	5.7	3.8	44.1	4.3	10	22.8	3.1	25.0	37.6	3.2	12	55	1.5	0.1
	Total Tas	14.7	3.6	38.2	10.5	n.a.	28.7	3.5	21.4	n.a.	n.a.	n.a.	54	1.7	0.1
BINJOUR QLD 2	Inferred	14.2	4.3	40.7	7.3	6	24.7	4.3	22.1	32.3	6.7	5	80	8.5	0.3
	Indicated	22.8	4.0	33.5	19.2	2	24.9	4.2	16.8	15.8	17.4	1	63	6.6	0.3
	Total	37.0	4.1	44.1	3.6	12	23.1	3.7	24.6	39.0	3.0	13	61	8.9	0.3
TOONDOON QLD 3	Inferred	3.5	4.9	40.2	7.2	6	25.3	4.9	21.7	32.8	5.2	6	67	1.5	0.0
TARALGA S. NSW 4	Inferred	9.9	3.1	40.4	5.7	7	24.6	4.1	22.2	35.2	1.9	18	54	0.1	0.2
	Indicated	10.2	3.7	41.3	5.3	8	25.9	4.0	22.9	36.1	1.9	19	55	0.7	0.4
	Total	20.1	5.6	40.8	5.5	7	25.3	4.0	22.6	35.7	1.9	19	55	0.5	0.3
PDM-DSO*	Inferred	7.6	2.5	37.0	6.0	6	38.4	3.5	13.3	22.1*	1.3	17	72	0.2	0.1
	Indicated	10.3	3.1	37.6	3.9	10	40.4	3.7	13.5	22.4*	1.1	20	71	0.7	0.4
	Total	17.8	5.8	37.3	4.8	8	39.6	3.6	13.5	22.3*	1.2	18	72	0.5	0.3
	Total Taralga	37.9	5.7	39.2	5.2	8	32.0	3.8	18.3	35.4	1.6	23	63	0.5	0.3
INVERELL N. NSW 5	Inferred	17.5	4.7	39.8	4.8	8	27.7	4.3	22.2	31.0	4.2	7	61	2.3	
	Indicated	20.5	4.8	40.6	4.7	9	26.9	4.1	22.5	32.0	4.0	8	60	2.4	
	Total	38.0	4.8	40.2	4.7	9	27.3	4.2	22.4	31.6	4.1	8	61	2.4	
GUYRA N. NSW 6	Inferred	2.3	4.2	41.4	3.6	12	26.2	3.3	24.6	35.0	2.8	13	56	3.4	
	Indicated	3.8	5.9	43.1	2.6	16	27.3	3.9	24.5	37.4	2.0	18	61	4.4	
	Total	6.0	5.3	42.5	3.0	14	26.9	3.7	24.5	36.5	2.3	16	59	4.0	

GRAND TOTAL ALL AREAS 137.1

\* PDM is Al<sub>2</sub>O<sub>3</sub> spinel. Al<sub>2</sub>O<sub>3</sub> AvI at 225°C is >35%

Explanations: All resources 100% owned & unencumbered. Resource tonnage estimates are quoted as in-situ, pre mined tonnages. All assaying done at NATA-registered ALS Laboratories, Brisbane. Chemical definitions: Leach conditions to measure available alumina "Al2O3 Avl" & reactive silica "Rx SiO2" is 1g leached in 10ml of 90gpl NaOH at 143°C for 30 minutes. LOI = loss on ignition at 1000°C. "Avl/Rx" ratio is (Al2O3 Avl)/(Rx SiO2) and "A/S" ratio is Al2O3/SiO2. Values above 6 are good, above 10 are excellent. Tonnage is for bauxite in-situ. Lab Yield is for drill dust samples screened by ALS lab at 0.26mm. Production yields are not directly related and are typically between 60% and 75%. Tonnages requiring no upgrade will have 100% yield. Resource estimates exclude large tonnages of potential extensions, overburden & interburden detrital bauxite and underlying transitional bauxite mineralisation. Production will clarify these materials.

The information above relates to Mineral Resources previously reported according to the JORC Code (see Competent Person Statement) as follows:

- <sup>1</sup> Maiden Tasmania Mineral Resource, 5.7 million tonnes announced on 08/11/2012
- <sup>2</sup> Binjour Mineral Resource, 37.0 million tonnes announced on 18/06/2018
- $^{3}\,$  QLD Mining Lease 80126 Maiden Resource, 3.5 million tonnes announced on 03/12/2012
- 4 Goulburn Taralga Bauxite Resource Increased by 50% to 37.9 million tonnes announced on 31/05/2012
- <sup>5</sup> Inverell Mineral Resource update, 38.0 million tonnes announced on 08/05/2012
- <sup>6</sup> Guyra Maiden Mineral Resource, 6.0 million tonnes announced on 15/08/2011
- $^{7}$  Initial resources for 1st Tasmanian mine, 3.5 million tonnes announced on 24/03/2015
- 8 Resource Upgrade for Fingal Rail Project, Tasmania announced on 25/08/2016

Tabulated Resource numbers have been rounded for reporting purposes. The Company conducts regular reviews of these Resources and Reserve estimates and updates as a result of material changes to input parameters such as geology, drilling data and financial metrics.

Global Mineral Resources declared to 18/06/2018 total 137.1 million tonnes.



#### **About Australian Bauxite Limited** ASX Code ABX

Australian Bauxite Limited (ABx) has its first bauxite mine in Tasmania & holds the core of the Eastern Australian Bauxite Province. ABx's 14 bauxite tenements in Queensland, New South Wales & Tasmania totalled 752 km² & 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 gibbsite trihydrate (THA) bauxite that can be processed into alumina at low temperature and is becoming increasingly in shortest supply.

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, mainly highly 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 at Inverell & Guyra in northern NSW, Taralga in southern NSW, Binjour in central QLD & in Tasmania, confirming that ABx has discovered significant bauxite deposits.

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, which is a globally significant bauxite province. 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.

#### **About ALCORE Limited:**

Australian Bauxite Limited (ABx) has incorporated ALCORE Limited as a wholly-owned subsidiary to fund and manage the ALCORE Project, to lead to the construction of an ALCORE Production Plant to produce Aluminium Fluoride (AIF3) and valuable co-products, using patent (pending) new technology. The ALCORE Technology is designed to convert low grade bauxite worth \$50 per tonne into a suite of valuable products worth more than \$800 per tonne. Site construction works for Stage 1 of the ALCORE project commenced on 1 July as planned at ALCORE's pre-approved Research Centre in Berkeley Vale, Central Coast NSW.

Stage 1 is designed to produce  $AIF_3$  test samples for prequalified aluminium smelter customers & then produce Corethane, which is pure hydrocarbon powder refined from low-value coals and has been used to provide thermal and electrical power with low  $CO_2$  emissions when used as a gas-substitute to fuel large gas turbine. Corethane has also been used as a diesel substitute for fuel security purposes and is ideally suited for use as a sulphur-free bunker fuel.

#### Directors of ABx Officers

Paul Lennon Chairman Leon Hawker COO
lan Levy CEO & MD Jacob Rebek Chief Geologist
Ken Boundy Director Paul Glover Marketing, Exploration
Henry Kinstlinger Company Secretary

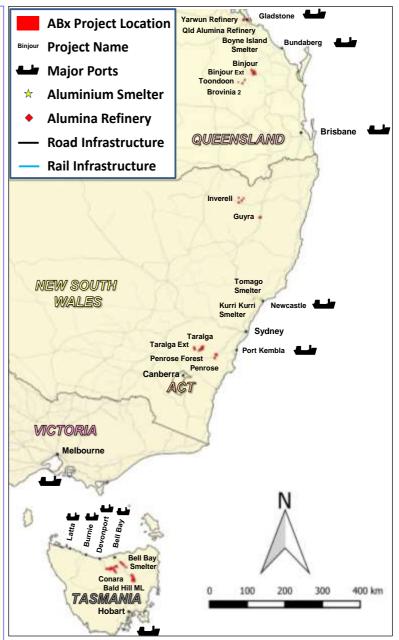


Figure 11 above

ABx Project Tenements & Major Infrastructure in ABx's major bauxite project areas nearest export ports in Eastern Australia as follows, from south to north:

- 1. Northern Tasmania, south of Bell Bay Port
- 2. Southern NSW Taralga & Penrose pine forest west of Port Kembla
- 3. Central Queensland based on the major Binjour Bauxite Project, southwest of Port of Bundaberg which is a port that has no impact on the Great Barrier Reef.

+Rule 5.5

## Appendix 5B

# Mining exploration entity and oil and gas exploration entity quarterly report

Introduced 01/07/96 Origin Appendix 8 Amended 01/07/97, 01/07/98, 30/09/01, 01/06/10, 17/12/10, 01/05/13, 01/09/16

#### Name of entity

Australian Bauxite Limited

ABN

Quarter ended ("current quarter")

14 139 494 885

30 June 2019

Con	solidated statement of cash flows	Current quarter \$A'000	Year to date (6 months) \$A'000
1.	Cash flows from operating activities		
1.1	Receipts from customers	1,730	2,041
1.2	Payments for		
	(a) exploration & evaluation	(145)	(223)
	(b) development	(150)	(235)
	(c) production	(1,625)	(1,912)
	(d) staff costs	(29)	(87)
	(e) administration and corporate costs	(120)	(155)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	6	14
1.5	Interest and other costs of finance paid	-	-
1.6	Income taxes paid	-	-
1.7	Research and development refunds	-	-
1.8	Other (research & development refund)	-	-
1.9	Net cash from / (used in) operating activities	(333)	(557)

2.	Cash flows from investing activities
2.1	Payments to acquire:
	(a) property, plant and equipment
	(b) tenements (see item 10)
	(c) investments
	(d) other non-current assets

<sup>+</sup> See chapter 19 for defined terms

Con	solidated statement of cash flows	Current quarter \$A'000	Year to date (6 months) \$A'000
2.2	Proceeds from the disposal of:		
	(a) property, plant and equipment	-	-
	(b) tenements (see item 10)	-	-
	(c) investments	-	-
	(d) other non-current assets	-	-
2.3	Cash flows from loans to other entities	(419)	(672)
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	-	-
2.6	Net cash from / (used in) investing activities	(419)	(672)

3.	Cash flows from financing activities		
3.1	Proceeds from issues of shares	-	-
3.2	Proceeds from issue of convertible notes	79	387
3.3	Proceeds from exercise of share options	-	-
3.4	Transaction costs related to issues of shares, convertible notes or options	-	-
3.5	Proceeds from borrowings	300	300
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
3.10	Net cash from / (used in) financing activities	379	687
4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	1,675	1,844
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(333)	(557)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(419)	(672)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	379	687
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	Cash and cash equivalents at end of period*	1,302	1,302

<sup>+</sup> See chapter 19 for defined terms 1 September 2016

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	22	300
5.2	Call deposits	675	770
5.3	Bank overdrafts	-	-
5.4	Other (secured bank deposits)	605	605
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	1,302	1,675

6.	Payments to directors of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to these parties included in item 1.2	20
6.2	Aggregate amount of cash flow from loans to these parties included in item 2.3	Nil

6.3 Include below any explanation necessary to understand the transactions included in items 6.1 and 6.2

\$20,000 director fee was paid to Paul Lennon, for his services rendered.

7.	Payments to related entities of the entity and their associates	Current quarter \$A'000
7.1	Aggregate amount of payments to these parties included in item 1.2	Nil
7.2	Aggregate amount of cash flow from loans to these parties included in item 2.3	Nil

7.3 Include below any explanation necessary to understand the transactions included in items 7.1 and 7.2

N/A			

<sup>+</sup> See chapter 19 for defined terms

8.	Financing facilities available Add notes as necessary for an understanding of the position	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000	
8.1	Loan facilities	Nil	Nil	
8.2	Credit standby arrangements	Nil	Nil	
8.3	Other (please specify)	N/A	N/A	

8.4 Include below a description of each facility above, including the lender, interest rate and whether it is secured or unsecured. If any additional facilities have been entered into or are proposed to be entered into after quarter end, include details of those facilities as well.

N/A

9.	Estimated cash outflows for next quarter	\$A'000
9.1	Exploration and evaluation	25
9.2	Development	50
9.3	Production	75
9.4	Staff costs	70
9.5	Administration and corporate costs	20
9.6	Other (provide details if material)	-
9.7	Total estimated cash outflows	240

10.	Changes in tenements (items 2.1(b) and 2.2(b) above)	Tenement reference and location	Nature of interest	Interest at beginning of quarter	Interest at end of quarter
10.1	Interests in mining tenements and petroleum tenements lapsed, relinquished or reduced	EL 7361 EL 7681	Exploration License Exploration License	100% 100%	0% 0%
10.2	Interests in mining tenements and petroleum tenements acquired or increased	-	-	-	-

<sup>+</sup> See chapter 19 for defined terms

#### **Compliance statement**

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Sign here: Date: 30 July 2019

(Company secretary)

Print name: Henry Kinstlinger

#### **Notes**

- 1. The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity that wishes to disclose additional information is encouraged to do so, in a note or notes included in or attached to this report.
- 2. If this quarterly report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, AASB 6: Exploration for and Evaluation of Mineral Resources and AASB 107: Statement of Cash Flows apply to this report. If this quarterly report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
- 3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.

<sup>+</sup> See chapter 19 for defined terms