

# **Binjour Bauxite Resource Increased 51% to 37 Million Tonnes**

# Company resources grow to 137 million tonnes 1

- 37 million tonnes of thick, gibbsite trihydrate bauxite resources at Binjour, central QLD
- Based on 930 drill holes into approximately 75% of the identified bauxite layer that extends over 44 square kilometre Binjour Plateau (Figure 2)

Emerging bauxite producer, Australian Bauxite Limited (**ABx, ASX Code ABX**) holds tenements covering the core of the Eastern Australian Bauxite Province (see Figure 6). ABx considers its Binjour Project located 115kms southwest of Bundaberg Port (see Figure 1) to be a discovery of a major bauxite province which is being assessed to become the company's flagship project over the next 5 years. Resource estimations are confirming the significant potential of Binjour.

A 3 to 15 metres thick layer of bauxite extends over the entire 44 square kilometre Binjour Plateau (see Figure 2). Parts of this bauxite layer totalling 10.4 million tonnes is suitable for simple bulkmining and shipping as "DSO Bauxite 1" whilst other areas totalling 26.6 million tonnes contain silica gel veinlets which require processing with ABx's proprietary TasTech technology to reduce silica and upgrade the Al<sub>2</sub>O<sub>3</sub> content to meet the target production grade.

Mine planning and scheduling is in progress to determine the optimum mining and processing needed to achieve the two main Binjour Products, the grades of which have been established by a bulk sampling program that subsampled 2,000 tonnes of drillhole samples in December 2017.

Product	Al <sub>2</sub> O <sub>3</sub> %	SiO <sub>2</sub> %	A/S ratio	Fe <sub>2</sub> O <sub>3</sub> %	TiO <sub>2</sub> %	LOI %	Avl Al <sub>2</sub> O <sub>3</sub> % @ 143°	Rx SiO <sub>2</sub> % @ 143°	Avg Yield %
Metallurgical Grade	45%	5%	9.0	23%	4%	23	40%	4.5%	60%
Cement Grade	37%	10%	3.7	28%	4%	20	28%	9.5%	65%

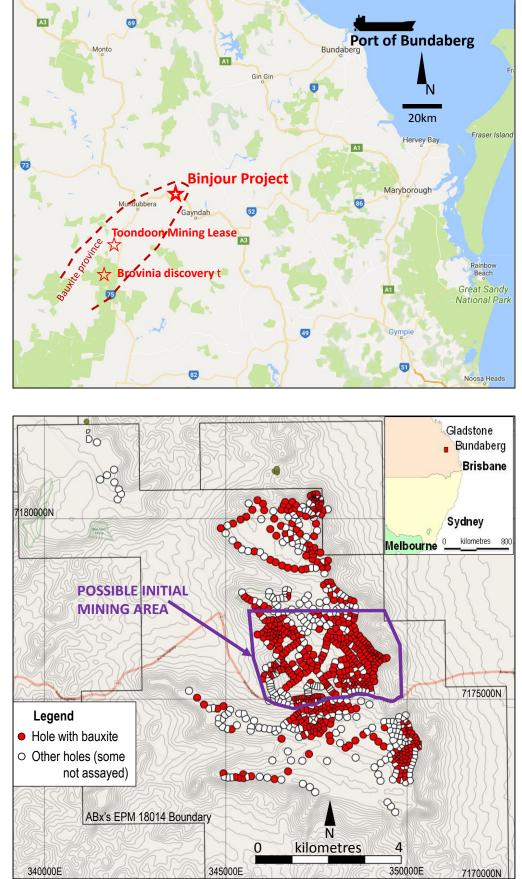
#### Table 1: Target bauxite products from Binjour based on recent bulk sampling tests

#### Table 2: Total Bauxite Resources at Binjour Plateau, Central Queensland

Cut-off: 3	0% Sieved	Al <sub>2</sub> O <sub>3</sub>		Raw ar	nd Scre	eened B	auxite	Before	TasTech	Sorting			
Resource category	Tonnes millions	Bauxite Thick- ness m	Al <sub>2</sub> O <sub>3</sub> %	SiO <sub>2</sub> %	A/S ratio	Fe <sub>2</sub> O <sub>3</sub> %	TiO <sub>2</sub> %	LOI %	Avl Al <sub>2</sub> O <sub>3</sub> % @ 143°	Rx SiO <sub>2</sub> % @ 143°	Lab Yield %	Over- burden m	Internal Waste m
Inferred	14.2	4.3	40.7	7.3	5.6	24.7	4.3	22.1	32.3	6.7	80%	8.5	0.3
Indicated	22.8	4.0	33.5	19.2	1.7	24.9	4.2	16.8	15.8	17.4	63%	6.6	0.3
TOTAL	37.0	4.1	36.2	14.6	2.5	24.9	4.2	18.8	22.1	13.3	<b>69</b> %	7.33	0.29

Cut-off grades applied: Minimum 30%  $AI_2O_3$ , 2m thickness, 100m search ellipse. Leach conditions to measure available alumina " $AI_2O_3$  Avl" & reactive silica "Rx SiO<sub>2</sub>" is 1g leached in 10ml of 90gpl NaOH at 143 degrees C for 30 mins. "A/S" ratio is  $AI_2O_3/SiO_2$ ; values above 6 are good. Tonnage is for bauxite in-situ. Yield is for screening lab samples at 0.26mm which approximates dry screening raw bauxite at 2.5mm. Tonnages requiring no upgrade have 100% yield.

<sup>1.</sup> See Resources Table 5 and Definitions Pages 9 & 10



### Figure 1

Locations of Binjour Project, the Toondoon Mining Lease, Brovinia bauxite discovery & Regional Logistics

## Figure 2

Locations of 930 drillholes drilled by ABx across the Binjour Plateau.

Map shows the extent of holes with bauxite above the cutoff-grades for metallurgical bauxite (30% Al2O3) and cement grade bauxite (Al2O3 + Fe2O3 > 60%)



## Table 3: Details of Binjour Bauxite Resources Estimations by Bauxite Type

## DIRECT SHIPPING ORE (DSO<sup>\*</sup>)

Cut-off: 3	0% Sieved	Al <sub>2</sub> O <sub>3</sub>				Raw In-	Situ DS	SO <sup>*</sup> Bau	ixite				
Resource category	Tonnes millions	Bauxite Thick- ness	Al <sub>2</sub> O <sub>3</sub> %	SiO <sub>2</sub> %	A/S ratio	Fe <sub>2</sub> O <sub>3</sub> %	TiO <sub>2</sub> %	LOI %	Avl Al <sub>2</sub> O <sub>3</sub> % @ 143°	-	Yield %	Over- burden m	Internal Waste m
Inferred	7.7	4.5	42.0	6.4	6.6	23.7	4.4	22.8	34.3	5.8	100%	9.3	0.3
Indicated	2.7	4.9	41.6	6.4	6.5	23.8	4.5	22.9	34.2	5.9	100%	8.0	0.4
TOTAL	10.4	4.6	41.9	6.4	6.6	23.7	4.4	22.8	34.2	5.8	100%	8.96	0.35

# **BAUXITE FOR TASTECH<sup>\*\*</sup> UPGRADE**

Cut-off: 3	0% Sieveo	I Al₂O₃		Sc	reene	d Bauxit	te Befo	ore Tas <sup>-</sup>	Tech Sorti	ing			
Resource category	Tonnes millions	Bauxite Thick- ness m	Al <sub>2</sub> O <sub>3</sub> %	SiO <sub>2</sub> %	A/S ratio	Fe <sub>2</sub> O <sub>3</sub> %	TiO <sub>2</sub> %	LOI %	Avl Al <sub>2</sub> O <sub>3</sub> % @ 143°	Rx SiO <sub>2</sub> % @ 143°	Lab Yield %	Over- burden m	Internal Waste m
Inferred	3.5	5.0	36.4	5.4	6.7	32.4	3.8	20.9	29.8	4.9	59%	8.0	0.2
Indicated	1.8	4.9	36.1	5.0	7.3	33.1	3.6	20.9	29.9	4.5	61%	5.9	0.5
TOTAL	5.3	5.0	36.3	5.2	6.9	32.7	3.7	20.9	29.8	4.7	<b>60</b> %	7.23	0.30

## HIGH SILICA BAUXITE FOR TASTECH<sup>\*\*</sup> UPGRADE & CEMENT-GRADE BAUXITE

Cut-off: 3	0% Al <sub>2</sub> O <sub>3</sub>			Sc	reene	d Bauxit	te Befo	re Tas	Fech Sorti	ng			
Resource category	Tonnes millions	Bauxite Thick- ness m	Al <sub>2</sub> O <sub>3</sub> %	SiO <sub>2</sub> %	A/S ratio	Fe <sub>2</sub> O <sub>3</sub> %	TiO <sub>2</sub> %	LOI %		Rx SiO <sub>2</sub> % @ 143°	Lab Yield %	Over- burden m	Internal Waste m
Inferred	3.0	3.3	39.9	14.0	2.9	19.9	4.1	20.4	25.7	13.1	53%	7.2	0.1
Indicated	18.2	3.8	31.1	24.0	1.3	24.4	4.2	14.8	9.5	21.8	58%	6.4	0.3
TOTAL	21.3	3.7	32.4	22.6	1.4	23.7	4.2	15.6	11.9	20.5	57%	6.55	0.26

#### Table 2: Total Bauxite Resources at Binjour Plateau, Central Queensland

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Cut-off grades applied: Minimum 30%  $Al_2O_3$ , 2m thickness, 100m search ellipse. Leach conditions to measure available alumina " $Al_2O_3$  Avl" & reactive silica "Rx SiO<sub>2</sub>" is 1g leached in 10ml of 90gpl NaOH at 143 degrees C for 30 mins. "A/S" ratio is  $Al_2O_3/SiO_2$ , values above 6 are good. Tonnage is for bauxite in-situ. Yield is for screening lab samples at 0.26mm which approximates dry screening raw bauxite at 2.5mm. Tonnages requiring no upgrade have 100% yield.



## **Resource Estimation Details**

## 1. Location

Binjour Bauxite Project lies on a plateau located 115kms WSW from Bundaberg Export Port, in the Wide Bay Burnett Region of central Queensland, Australia. It is the best located of perhaps 5 projects in this region that may total in the order of 200 million tonnes of trihydrate gibbsite bauxite.

Mid Point	Mid Northing	Mid Easting	Mid Elevation RL	Projection	Mid Latitude	Mid Longitude
coordinates:	7176062	347586	366 m	WGS84 56S	-25.5249	151.4832

## 2. Logistics: Product Transport Route

**Road Transport:** A transport study is in progress by two land transport operators and involving discussions with government transport officers. The main destination focus is the Port of Bundaberg. Discussions with QLD transport department officers are well advanced.

All roads are gazetted major highways but have axle loading constraints and total truck tonnage restrictions on certain bridges, as is normal in Queensland. Trucking from Binjour to the Port of Bundaberg ranges from 188km to 198km.

**Port Bundaberg** is a river port with inner port restrictions of 200 x 32 metre ship sizes due to swing basin limits and a 9.5 metre channel depth (11m at the loading pocket) at the lowest astronomical tide. However, studies of potential barge transhipment and loading onto Cape Size ships within the outer port limits are being studied in detail

Port Bundaberg connects directly to deepwater shipping routes via well-defined shipping channels with shifting sand seafloors. The shipping channels are located well south of the Great Barrier Reef and will have zero impact on it.

#### 3. Tenement Holdings

ABx has two granted exploration permits-mining EPM 18014 Binjour and EPM 18772 Binjour Extension covering the Binjour Plateau. Resources estimated and reported herein are **all in EPM 18014** as shown in Figure 2 above. All tenements are in good standing and are unencumbered.

Other tenements in the area are shown in Figure 3 following and include a granted Mining Lease at Toondoon 25km south of Binjour and exploration tenements (EPMs) at Toodoon and Brovinia.

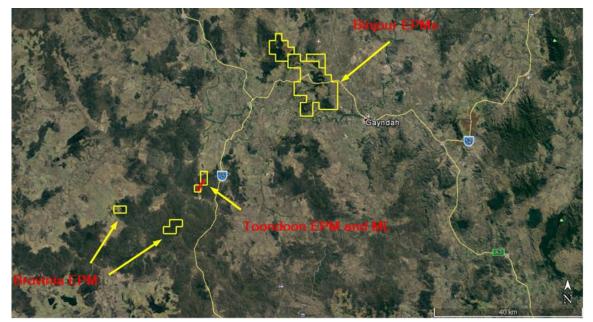


Figure 3: Tenements in the Binjour Region held by ABx



## 4. Land Status

The Binjour Bauxite Deposit occurs on land comprising freehold farms and lesser State Forest areas. It is not considered strategic cropping land but that will require confirmation in due course.

Native title applies to two small forestry reserve areas that may not be alienated land, covering approximately 7% of the bauxite resources. These can be excluded from any initial mining lease application should they prove to be native title so as to avoid undue project delays.

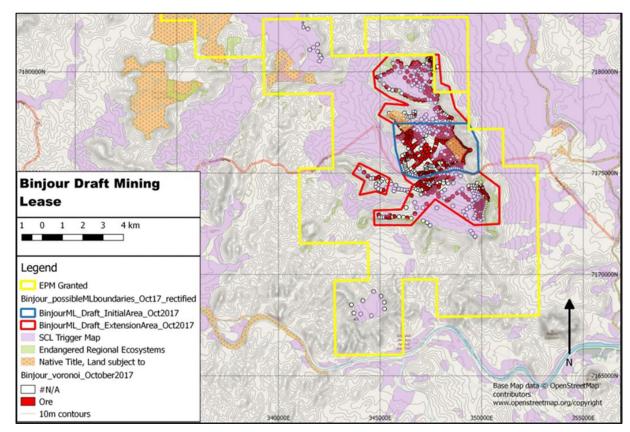


Figure 4: Land status for the Binjour Bauxite Resources

## 5. Geology

The district was subject to extensive tertiary alkali-basalt volcanic activity followed by deep weathering and topographic inversion (see Figure 5 overleaf). A residual bauxite layer covers the main topographic high, Binjour Plateau. The Bauxite is interpreted to have been deposited as a flat lying of volcanic tuffaceous origin. This strata has been preserved on a series of plateaus which are remnants of an old peneplain surface.

Most bauxite lies beneath a soft, dry red mud horizon of variable thickness (typically 6m to 8m). Much of the high grade bauxite occurs in lenses and bands. Some bauxite zones are considered best suited to cement-grade because of intergranular clay veins (often halloysite-clay) but ABx's proprietary TasTech processing technology may increase yields of metallurgical grade bauxite. Bauxite occurs in both nodular and massive forms with the nodular bauxite sitting directly above the massive bauxite.

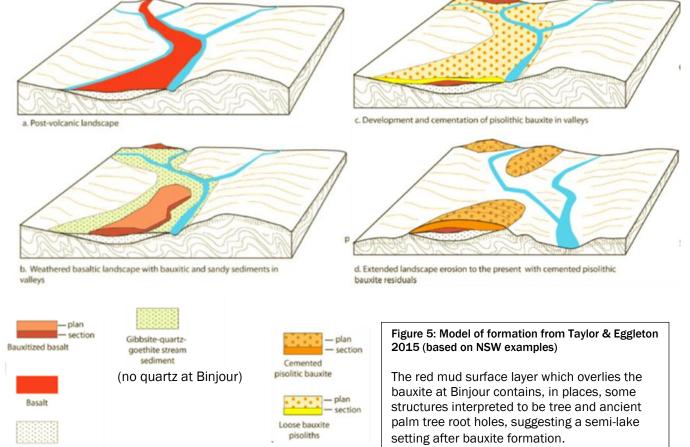
Underlying the bauxite is another mottled clay-mud unit which is probably more than 70m thick.

The bauxite generally outcrops on the edges of slopes and has been inferred to be the result of weathering around the edge of the plateau. Good continuity of the bauxite layer is displayed away from the outcropping bauxite, with the same layer being intercepted under the red clay layer well into the plateau.

Because of concealment by the upper mud clay layer there is significant potential for the discovery of additional bauxite resources both at Binjour and regionally.

**Regional bauxite province:** A province of bauxite deposits of various sizes on bauxite-hosting plateau extend south-south-westwards from Binjour Plateau for over 100kms – see Figure 1 above.





Stream sediment

#### 6. Resource Estimation

#### **Drill Statistics**

A total of 930 RC aircore holes have been drilled for 19,098m (average depth 20.5 metres). 30 of these holes are excluded from the database because they were either not on EPM 18014 or were for non-resource purposes. For resource estimation, the results from the 900 aircore holes totalling 18,599m (average depth 20.7m) on EPM 18014 were extracted from the ABx master database system called ABacus.

In addition, a 6-hole diamond drilling program was done at the end of the aircore drilling programs to assess the geological profile, collect samples for microscopy, petrology, mineralogy and density determinations by gravimetric methods (see below).

#### Drilling procedure and sample recovery

Drilling was undertaken using a light truck mounted reverse circulation rig using compressed air and drilling using the air core method. The rig operates with twin rear wide tyres for low ground pressure and minimal ground disturbance. The rig is fully contained carrying 3m rods and a compressor on board. A field support vehicle is required for mobility.

Drilling is conducted in a semi-random pattern largely governed by access and site availability. Drill spacing is typically between 75m and 150m. Drill chip recovery is extremely consistent at Binjour, mainly because of dry ground conditions above and through the bauxite layer. If the sample recovery was deemed to be significantly lower than expected, the hole was abandoned and a new hole started nearby.

#### Location of data points

All drill hole locations were surveyed at the time of drilling using hand held GPS, with accuracy of  $\pm 5m$ . Topographic control was assessed using data from the 3 second SRTM derived digital elevation model. This procedure gives adequate accuracy for the level of the resource which has been defined using inverse distance squared grade interpolation in a 2-dimensional plan projection and confirmed by other methods.



#### Sampling technique

Samples were collected at metre intervals and assessed by the geologist on site. All samples suspected of containing bauxite were split from the main sample bag using a broad headed, flat based shovel and placed in a calico bag for testing at ALS Laboratory in Brisbane.

A sub sample is also taken to be tested with the company's own mobile XRF device for rapid results, mainly silica determination. The mobile XRF results are used to lead further drilling.

A small grab sample of each 1 metre long sample is also added into a plastic mud-logger's chip tray. The remainder of the sample is stored in a secure lockup rented from the Forestry Department. All non-bauxite sample intervals are also stored at the lockup. All samples are stored in a neatly ordered pallet system allowing for easy recovery of every sample drilled.

#### Logging and lithology

Each metre interval is described in the field by colour, texture, lithology, apparent moisture and lumpiness (assessed visually). A brief description of the sample may also be written if there are interesting or distinguishing features that need to be recorded separately from the ABx coding system. Each sample, chip tray, and hole rehabilitation is photographed for record keeping and review. 100% of the samples are logged.

The computerised logging information, scans of the had-written log sheets, photos of all samples and the drillhole itself before drilling and after rehabilitation are stored in ABx's proprietary database called ABacus so as to allow real-time inspection of any information (see Data storage below).

#### Quality of assay data and laboratory tests.

The Assay work was completed at a fully certified ALS laboratory in Brisbane, Australia. For Standard XRF runs there was a minimum of 1 Blank, 2 Standards and 2 Duplicates per 43 Regular samples. For available Al<sub>2</sub>O<sub>3</sub> and reactive SiO<sub>2</sub> there was 1 Blank, 3 Standards and 2 Duplicates for 42 Regular samples. For the LOIs, there was 1 Standard and 1 Duplicate per 19 Regular samples. Leach conditions to measure available alumina "AvI Al2O3" and reactive silica "Rx SiO2" were 1g leached in 10ml of 90gpl NaOH at143 degrees C for 30 minutes.

#### **Resource Continuity**

Comparisons of results from twinned holes (Levy, June 2012 "Twinned Holes Report Jun12.doc") suggest that the repeatability or "precision" of individual metre samples is low, probably due to the combined effects of variations in sieving yields in the laboratory and variable quality distributions throughout the bauxite horizon. This is not unusual for bauxite.

However, average grades of the full drill intercepts thicknesses and grades display a greater degree of shortdistance continuity or "precision", probably due to random imprecision factors that average-out over the full bauxite intercept.

This supports the use of resource estimation methods which use full bauxite intercepts as the data points for block modelling, rather than block-modelling methods based on individual metre samples as the data points.

#### Data storage and database integrity

All assay, lithology, and collar data is securely stored on a proprietary Microsoft Access database system known as ABacus. ABacus has been specifically tailored for ABx by consultants GR-FX Pty Limited. The Database has inbuilt checks to ensure database integrity.

All data is checked to ensure it belongs to a valid hole, and that all sample numbers belong to a valid logged sample number that has been entered into the database.

Paper logs can be displayed on screen with the digital data for further verification. The assay data is verified by checking that the totals of at least three different analysis sum to the same total as the original file provided by the laboratory.

A photo of every sample, chip tray, hole rehabilitation, and scanned log sheet is also stored in the ABacus database. All hand written field logs are digitised by a trained database technician. The digital version is then double checked by the relevant geologist to ensure consistency.



#### **Block Modelling**

Resources estimation modelling was undertaken by Scandus Pty Ltd using intercept data provided by ABx. A cross-check estimation was done using a polygonal method which achieved satisfactorily similar results.

The Binjour data was provided to Scandus as intercepts (true width), thickness and assays (for sieved 0.26mm material) and ratios (AvI/Srx, A/S, Waste/Bauxite, Al2O3, avI Al2O3, LOI, SiO2, SiO2rx, TiO2, Fe2O3, thickness of Bauxite and Yield) as length weighted averages, and depth to bottom of overburden.

25x25m Blocks were created in the east and north orientation and the Z value was a nominal 5 m, however the z value was replaced with modelled thickness for volume determinations similar to seam modelling. Polygons were then created to constrain the model, these polygons were drawn based on geological knowledge of the deposit style and topographic constrains. The block model was coded with 'rock type' based on the blocks contained in the provided polygons, as were the intercepts. The estimation was carried out using Inverse Distance Squared, no top cut was used. A search ellipse of 400x400m with a minimum of 1 sample and maximum of 12 samples was used to estimate blocks to the edges of the observed geological/ ore boundary.

This search ellipse was deemed adequate based on variogram analysis which indicated geostatistical continuity at this distance. Confidence in this distance is further strengthened when the geological model for this deposit indicates good horizontal continuity.

The number of samples used in the estimation of each block was recorded as was the distance to the closest sample from the estimated block and this information is used to help classify the blocks. Blocks with fewer than 3 samples (ie. 3 holes) were then removed from the model. Blocks with between 3 and 9 data points were classified as being inferred resources, and blocks with over 9 samples being classified as indicated.

All assays, ratios, thickness Overburden and included dilution were modelled using the same parameters.

#### In-Situ Bulk Dry Density

An average of 1.9 t/m3 Specific Gravity was used to convert Volumes to Tonnes. This value was calculated by gravimetric and water displacement density testing methods based on samples collected from diamond drill core from a 6 hole diamond drilling program (Roach, 2012, "Core Program\_Report\_26102012\_blr.doc"). Results are summarised below:

Table 4: In-Situ Dry Bulk Density of Formations at Binjour

Baak	Hala	Erom	Та	Longth	Sample	Sample	Weight	Water	Relative	Avao	Agree	Core	Weight	80	Avgs
									-		-	volum	es (assun	nes uni	form
BINJOU	JR DENS		ING GF	RAVIME	TRIC & W	ATER DI	SPLACEN		THOD (R	oach, 2	2012)	Check r	method - I	oy usin	g core
						•		•			•				

#### Rock Volume 10 .engti ۱vgs Length Diameter Grams Density d SG volume Grams Туре displaced t/bcm t/bcm t/bcm t/bcm m m m mm mm qms mls t/bcm mls qms

#### **Overlying Red Mud Unit**

	U														
мст	BJC_001	2.00	2.10	0.10	110	82	1175	600	1.96			581	1175	2.02	
мст	BJC_003	6.93	7.06	0.13	130	82	1347	675	2.00	1.886	1.90	687	1347	1.96	1.922
мст	BJC_008	2.90	3.00	0.10	100	80	895	525	1.70			503	895	1.78	

#### BAUXITE LAYER

BX	BJC_001	12.30	12.55	0.14	140	80	1278	750	1.70			704	1278	1.82	
BX	BJC_002	12.00	12.15	0.15	150	82	1518	825	1.84			792	1518	1.92	
BX	BJC_003	15.24	15.34	0.10	100	80	1002	450	2.23			503	1002	1.99	
BX	BJC_003	15.40	15.48	0.08	80	80	691	375	1.84	1.966	1.90	402	691	1.72	1.810
BX	BJC_004	4.80	4.93	0.13	130	82	1390	600	2.32			687	1390	2.02	
BX	BJC_008	11.07	11.21	0.14	140	82	1351	700	1.93			739	1351	1.83	
BX	BJC_008	13.22	13.33	0.11	110	80	761	400	1.90			553	761	1.38	

#### Other rock types

Bx / Tuff	BJC_001	8.00	8.18	0.18	175	80	1462	900	1.62
Tuff	BJC_004	9.30	9.42	0.12	120	80	998	525	1.90

880	1462	1.66
603	998	1.65

SG



#### **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.

#### Mineral Resources

Information relating to Mineral Resources herein was prepared and disclosed in compliance with the JORC Code 2012. by lan Levy who is a member of The Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. Mr Levy is a qualified geologist and employed as CEO of Australian Bauxite Limited.

Geostatistical block modelling was carried out by independent consultant, Scott McManus using Gemcom mining software. Mr McManus is an experienced resource modelling consultant and a member of the Australian Institute of Geoscientists.

Mr Levy has sufficient experience which is relevant to the style of mineralisation and type of deposit under consid-eration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edi-tion of the Australasian Code for Reporting of exploration Results, Mineral Resources and Ore Resources. Mr McManus and Mr Levy have consented in writing to the inclusion in this announcement of the Exploration Infor-mation in the form and context in which it appears.

More detailed explanations regarding resource methodologies are included in the Appendix.

#### **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.

#### Definitions

True Width: The true-width of the deposit is not known and will be determined by further resource definition drilling.

**DSO bauxite:** Bauxite that can be exported directly with minimal processing **Averaging method:** Aggregated average grades are length-yield-weighted averages of each metre grades & yields.

#### For further information please contact:

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About Australian Bauxite Limited	ASX Code ABX	Web: www.australianbauxite.com.au	

Australian Bauxite Limited (**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 km<sup>2</sup> 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.

Directors		Officers	
Paul Lennon Ian Levy Ken Boundy	Chairman CEO & MD Director	Leon Hawker Jacob Rebek Paul Glover	Chief Operating Officer Chief Geologist Logistics & Exploration Manager
Henry Kinstlinger	Company Secretary		



## **Resource Statement, Definitions and Qualifying 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 5: ABx JORC Compliant Resource Estimates

Region	Resource	Million	Thickness	$Al_2O_3$	SiO <sub>2</sub>	A/S	$Fe_2O_3$	TiO <sub>2</sub>	LOI	Al <sub>2</sub> O <sub>3</sub> Avi	Rx SiO <sub>2</sub>	Avl/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 <sup>8</sup>	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 OLD <sup>2</sup>	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
DSO, Screen & Cement	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 <sup>3</sup>	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 <sup>4</sup>	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-DS0*	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 <sup>*</sup>	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 <sup>6</sup>	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 A		0.0 137.1	5.3	42.5	3.0	14	26.9	3.1	24.5	* PDM is Al <sub>2</sub>	-	-			

GRAND TOTAL ALL AREAS 137.1

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 "AI2O3 AVI" & 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. "AV/Rx" ratio is (AI2O3 AVI)/(Rx SiO2) and "A/S" ratio is AI2O3/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.

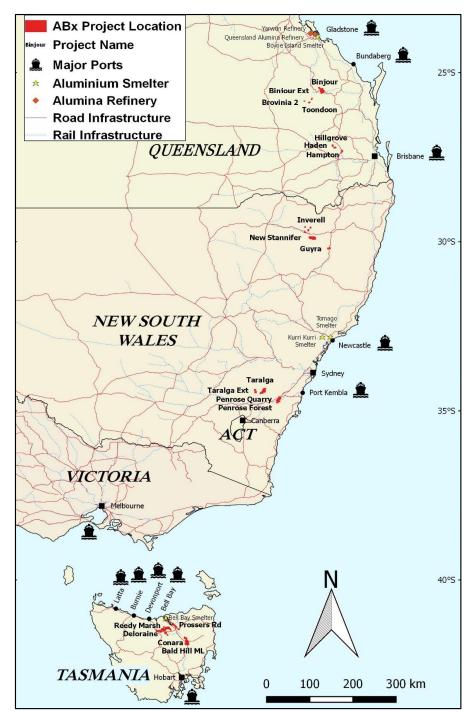
The information above relates to Mineral Resources previously reported according to the JORC Code (see Competent Person Statement) as follows:

- <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 (this report)
- <sup>3</sup> QLD Mining Lease 80126 Maiden Resource, 3.5 million tonnes announced on 03/12/2012
- <sup>4</sup> 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
- <sup>8</sup> 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.





#### Figure 6

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 of Launceston

2. Southern NSW Taralga & Penrose pine forest west of Port Kembla

Central Queensland based on the major Binjour Bauxite Project, southwest of Port of Bundaberg

# **APPENDIX:** Section 3 Estimation & Reporting of Mineral Resources

 $\mathbf{S}\mathbf{x}$ 

Criteria	JORC Code explanation	Commentary
Database in- tegrity	Measures taken to ensure data has not been corrupted by, for example, transcription or keying errors, between its initial collection & its use for Mineral Resource estimation purposes.	<ul> <li>Random QA-QC checks done quarterly</li> <li>Rare data errors or lab errors would be obvious during estimation due to conflicts with geological logging.</li> <li>Hand-held XRF readings double-check</li> </ul>
0.4	Data validation procedures used.	Lab data entered electronically & signed-off. Written logs & sample photos also in database
Site visits	Comment on any site visits undertaken by the Competent Person & outcome of those visits.	Competent persons visited sites at discovery, mapping, drilling, bulk sampling & mining. All satisfactory.
Geological interpreta- tion	<ul> <li>If no site visits, why.</li> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> </ul>	<ul> <li>All sites visited</li> <li>Geology is simple strata. Drillholes determine degree of variation, especially where concealed by soil or covering layers.</li> </ul>
	Nature of the data used & of any assumptions made.	Outcrops mapped & sampled. Drillholes complete the subsurface mapping.
	Effect, if any, of alternative interpretations on Mineral Resource estimation.	Outlines can vary estimate by 10% to 15% so we do 2     different methods to double-check
	The use of geology in guiding & controlling Mineral Resource estimation.	<ul> <li>Method 1 = geological model outlines</li> <li>Method 2 = voronoi polygon statistics</li> </ul>
	<ul> <li>Factors affecting continuity both of grade &amp; geology.</li> </ul>	<ul> <li>Continuity is assumed to be semi random or highly variable, as is normal for bauxite</li> </ul>
Dimensions	<ul> <li>Extent &amp; variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, &amp; depth below surface to the upper &amp; lower limits of Mineral Resource.</li> </ul>	Bauxite channels 100 to 250m wide meander over 1 to 2km strike. Dissected by erosion channels. Bauxite thickness varies from 1 to 14 metres. Overburden varies from 0 to 12m.
Estimation & modelling techniques	<ul> <li>Nature &amp; appropriateness of estimation technique(s) applied &amp; key assumptions, including treatment of extreme grade values, domaining, interpolation parameters &amp; maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a</li> </ul>	<ul> <li>Method 1: Block model 25m x 25m horizontally inside geological boundaries. Thickness set by intercepts in holes. Grades interpolated Gemcom software by inverse distance squared methods. Search ellipse 400m.</li> <li>Method 2: each drill sample is allocated an area half way to next holes, to a limit of 60 metres. Tonnage is density x area x</li> </ul>
	description of computer software & parameters used.	sample length. Samples meeting grade cutoffs accumulated by tonnage weighting. Good correlation with Method 1.
	<ul> <li>Availability of check estimates, previous estimates &amp;/or mine production records &amp; whether the Mineral Resource estimate takes appropriate account of such data.</li> </ul>	<ul> <li>Good consistency between initial estimates &amp; re- estimations after additional drilling.</li> <li>Moderate correlation between mined results &amp; drill estimates – usually mined yields are higher.</li> </ul>
	<ul> <li>The assumptions made regarding recovery of by- products.</li> </ul>	<ul> <li>By-products are not reported but will be produced &amp; sold. Viability not dependent on by-products.</li> </ul>
	Estimation of deleterious elements or other non- grade variables of economic significance	Bauxite has many grades, including reactive silica (Rx SiO <sub>2</sub> ) which is the main deleterious element.
	<ul> <li>In the case of block model interpolation, the block size in relation to the average sample spacing &amp; the search employed.</li> </ul>	<ul> <li>Blocks 25m x 25m. Suits irregular drill spacing of 50 to 75m and fits the geological shapes. Search ellipse 250m along strike by 150m</li> </ul>
	Any assumptions behind modelling of selective mining units.	<ul> <li>Minimum thickness of 1.25m, 1.5m &amp; 2m to suit ore geometry &amp; depth. Mine has achieved 1.25m</li> </ul>
	Assumptions about correlation between variables.	• Nil
	<ul> <li>Description of how the geological interpretation was used to control the resource estimates.</li> </ul>	<ul> <li>Method 1 25mx25m blocks kept inside boundaries.</li> <li>Method 2: Voronoi polygons also inside main boundaries</li> </ul>
	<ul> <li>Discussion of basis for using or not using grade cutting or capping.</li> </ul>	<ul> <li>Bauxite grades are major elements &amp; normally distributed without outliers :. best left uncut.</li> </ul>
	<ul> <li>Process of validation, checking process used, comparison of model data to drill hole data, &amp; use of reconciliation data if available.</li> </ul>	<ul> <li>2 estimation methods correspond reasonably. Holes compare well with twinned holes, pit samples &amp; reasonably well with mine results.</li> </ul>
Moisture	<ul> <li>Whether the tonnages are estimated on a dry basis or with natural moisture, &amp; the method of determination of the moisture content.</li> </ul>	<ul> <li>Dry density factor applied so tonnages and grades are on a dry basis. Moisture is measured gravimetrically by weighing wet and after drying</li> </ul>
Cut-off pa-	The basis of the adopted cut-off grade(s) or quality	<ul> <li>Mine &amp; pits show screened silica is best for first</li> </ul>
rameters Mining fac-	parameters applied.  Assumptions made regarding possible mining methods	<ul> <li>selection of ore, then refined by alumina +30%.</li> <li>Mining is simple quarking – costs well known</li> </ul>
tors or as- sumptions	<ul> <li>Assumptions made regarding possible mining methods, minimum mining dimensions &amp; internal (or external) mining dilution. It is always necessary as part of the</li> </ul>	<ul> <li>Mining is simple quarrying – costs well known.</li> <li>Screen performance results to date suggest yields of bauxite will range between 65% &amp; 75%</li> </ul>
	process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding	<ul> <li>Mining &amp; screening are less than 10% of costs (logistics +90%) so exact estimations of yields are not as important as logistics and grades of products.</li> </ul>
	mining methods & parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	<ul> <li>All subgrade bauxite treated as overburden or internal waste. 1m length samples incorporate considerable dilution which is easily screened out.</li> </ul>



Criteria	JORC Code explanation	Commentary
Metallurgical factors or as- sumptions	<ul> <li>Basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes &amp; parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</li> </ul>	<ul> <li>Screen performance results to date suggest yields of bauxite will range between 60% &amp; 70%</li> <li>Mining &amp; screening are less than 10% of costs (logistics are +80%) so yield prediction is less important than logistic costs &amp; product grade predictions.</li> <li>Bulk tests confirmed that dry-screening at 2.5mm mesh size produces similar yield and grade results to laboratory wet screening at 0.26mm.</li> </ul>
Environmen- tal factors or assumptions	Assumptions made regarding possible waste & process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining & processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions.	<ul> <li>All material extracted is either saleable or returned to exhausted pit areas. Bauxite is widely used because it is chemically benign.</li> <li>Soils over bauxite are invariably dry and thin but are easily reinstated immediately a pit is exhausted and reformed.</li> <li>Area selection criteria is to be free of socio-environmental constraints. ABx gets environmental clearances before any drilling.</li> <li>Land access agreements are in place for all near-term development areas.</li> </ul>
Bulk density	<ul> <li>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size &amp; representativeness of the samples.</li> </ul>	<ul> <li>Measured densities - dry in-situ by volumetric methods from 6 drillholes, cross-checked against surface samples</li> <li>Broken density &amp; stowage factors for transport, plus the angle of repose for stockpiling estimated too.</li> </ul>
	<ul> <li>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture &amp; differences between rock &amp; alteration zones within the deposit.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul> <li>Measured volumetrically by diamond blade sawing of precise channels, drying &amp; weighing.</li> <li>9 diamond drill cores measured and weighed dry corroborated pit channel sample estimates of 1.9 to 2.1 tonnes per cubic metre (high due to high Fe<sub>2</sub>O<sub>3</sub>)</li> <li>No assumptions. ABx uses measured densities.</li> </ul>
Classification	The basis for the classification of the Mineral Resources into varying confidence categories.	<ul> <li>Method 1: number of data points per block</li> <li>Method 2: nearness to next holes</li> </ul>
	<ul> <li>Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology &amp; metal values, quality, quantity &amp; distribution of the data).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul> <li>Resources will not be classified as measured until mining experience is gained sufficient to correlate resource predictions with actual production outcomes. Data variability is similarly high in holes and in mine openings.</li> <li>Estimation results appropriately reflects Competent Persons' views of deposits</li> </ul>
Audits or re- views	Results of any audits or reviews of Mineral Resource estimates.	None. Mine reconciliations are the key reviews/audit
Discussion of relative accu- racy/ confi- dence	<ul> <li>Where appropriate a statement of the relative accuracy &amp; confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy &amp; confidence of the estimate.</li> </ul>	<ul> <li>All Competent Persons do manual, volume-based checks of estimates to be satisfied with results from Method 1 (geostatistical block modelling) &amp; Method 1 (voronoi polygon estimation).</li> <li>Competent Persons have signed approvals for publicly released resource reports.</li> <li>No objections to date &amp; comments are welcomed</li> </ul>
	<ul> <li>Statement should specify whether it relates to global or local estimates, &amp;, if local, state the relevant tonnages, which should be relevant to technical &amp; economic evaluation. Documentation should include assumptions made &amp; the procedures used.</li> </ul>	<ul> <li>Each deposit is estimated individually.</li> <li>Each 25m x 25m block in Method 1 (geostatistical block modelling) is individually estimated locally</li> </ul>
	<ul> <li>Statements of relative accuracy &amp; confidence of the estimate should be compared with production data, where available.</li> </ul>	<ul> <li>Is always being done, in accordance with industry practice &amp; common sense triple-checking.</li> </ul>