



**AUSTRALIAN BAUXITE LIMITED**

ASX: ABZ

**ASX ANNOUNCEMENT**

12 October 2011

**16.8 Million Tonnes Maiden Binjour Resource: High-Grade Bauxite**

Company resources grow to 84 million tonnes<sup>1,2,3,4</sup>

- **Maiden Resource: 16.8 million tonnes of gibbsite-rich bauxite at Binjour, central QLD**
- **Resource is based on 88 infill exploration holes that intersected a thick bauxite layer that is largely concealed beneath a surface clay horizon**
- **Most of the bauxite resources identified in this estimation are a superior quality bauxite suitable for sweetening circuits in refineries. It is termed “Brown Sugar” bauxite**
- **A high grade core totalling 9 million tonnes contains extremely high grade bauxite**
- **Recently identified new bauxite areas at Binjour are currently being drill tested**

Emerging bauxite exploration and development company, Australian Bauxite Limited (ABx, ASX Code ABZ) has discovered a thick layer of very high quality bauxite at its Binjour project in central QLD (see Figure 1). The bauxite lies beneath a clay horizon. Results from 88 holes into the bauxite are generally exceptionally high grade, thick gibbsite bauxite, ideal as a “sweetener” to any bauxite refinery. ABx refers to such high grade bauxite as “Brown Sugar” which commands a large price premium.

Resource estimates after application of cut-off grades for the drilled resource areas on the initial deposits tested at Binjour are summarised as follows:

Bauxite Resources				Sieved at 0.26mm									
Resource category	Tonnes millions	Thick-ness	Over-burden	Al <sub>2</sub> O <sub>3</sub> Avl %	Rx SiO <sub>2</sub> %	Avl/Rx Ratio	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 %	Yield %
<b>Inferred</b>	6.8	3.7 m	8.1 m	37.7	3.7	<b>10.3</b>	43.4	4.1	<b>10.5</b>	24.2	3.6	24.1	61%
<b>Indicated</b>	10.0	5.3 m	10.6 m	39.9	2.7	<b>14.9</b>	44.7	3.0	<b>14.8</b>	22.8	3.8	25.0	60%
<b>TOTAL</b>	<b>16.8 Mt</b>	<b>4.5 m</b>	<b>9.3 m</b>	<b>39.0</b>	<b>3.1</b>	<b>12.7</b>	<b>44.2</b>	<b>3.5</b>	<b>12.7</b>	<b>23.4</b>	<b>3.7</b>	<b>24.6</b>	<b>61%</b>

Cut-off grades applied: Minimum 30% Al<sub>2</sub>O<sub>3</sub>, 2m thickness, 45% yield. Maximum strip ratio (metres overburden:bauxite) 4.5:1. Leach conditions to measure available alumina "Al<sub>2</sub>O<sub>3</sub> Avl" & reactive silica "Rx SiO<sub>2</sub>" is 1g leached in 10ml of 90gpl NaOH at 143 degrees C for 30 mins. "Avl/Rx" ratio is (Al<sub>2</sub>O<sub>3</sub> Avl)/(Rx SiO<sub>2</sub>). Values above 10 are excellent. "A/S" ratio is Al<sub>2</sub>O<sub>3</sub>/SiO<sub>2</sub>. Tonnage is for bauxite in-situ. Yield is for screening all samples at 0.26mm. The significant tonnages requiring no upgrade will have 100% yield.

The Binjour deposit lies near the top of a plateau which has been widely cleared for farming but large parts are now left uncultivated because of the dry, poor soil that develops on bauxite.

The bauxite in the resource area is consistently high quality and most is “Brown Sugar” bauxite, being a superior quality, low silica, gibbsite bauxite suitable for sweetening circuits in refineries.

New areas of bauxite have been discovered in recent months and are currently being drilled to expand resource extent.



Figure 1: Location

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**Figure 2 Binjour Drillhole & Resource Locations**  
Scale: 500m grid squares (9km x 5km)

**Hole Legend:**

- Red diamonds (solid) = High grade holes
- Red diamonds (open) = Resource holes
- Grey dots = subgrade bauxite or no bauxite

**Resource Outlines:**

- Blue lines = High grade bauxite
- Red lines = Bauxite resources

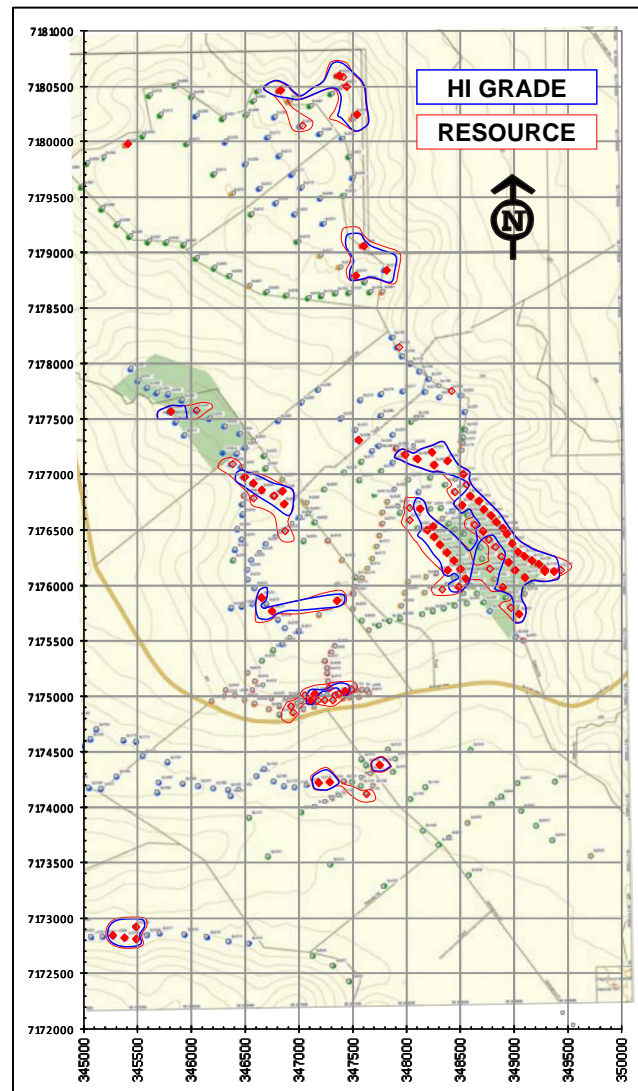
**Comments about bauxite distribution**

High grade bauxite results from a further 13 holes were received after the resource estimation process was well-in-hand. These will be included in the next Binjour resource update.

In places, otherwise good bauxite is rendered subgrade due to the presence of a white gelatinous-clay substance in the bauxite. Tests are underway to find a way to remove this material by simple washing methods.

If, after low cost washing, this material subsequently becomes bauxite-resource grade, the extent and continuity of Binjour bauxite resources will expand materially.

Recent discoveries of bauxite in outcrops suggests that several of the irregular resource outlines may coalesce into sizeable resource blocks when drilled in future.



Detailed mapping and reinterpretations suggest that there may be more than one bauxite layer at Binjour. Additional drill rods are being sourced so that the geometric distribution of bauxite can be better defined.

Regional exploration has found more bauxite in the district – these areas are being assessed.

**Core Zone of Very High Grade Bauxite**

As part of this resource estimation process, a high-grade core zone of bauxite was identified and estimated to total 9.3 million tonnes as follows:

Bauxite High Grade Core Zone				Sieved at 0.26mm									
Resource category	Tonnes millions	Thick-ness	Over-burden	Al <sub>2</sub> O <sub>3</sub> Avl %	Rx SiO <sub>2</sub> %	Avl/Rx Ratio	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 %	Yield %
Inferred	4.2	2.9 m	9.3 m	42.1	3.6	11.6	46.9	3.6	13.0	19.5	3.6	25.8	59%
Indicated	5.1	4.4 m	11 m	44.1	2.0	22.1	47.6	2.0	23.8	19.6	3.6	26.6	63%
<b>TOTAL</b>	<b>9.3 Mt</b>	<b>3.7 m</b>	10.2 m	<b>43.2</b>	<b>2.7</b>	<b>15.9</b>	<b>47.3</b>	<b>2.7</b>	<b>17.4</b>	<b>19.6</b>	<b>3.6</b>	<b>26.2</b>	<b>61%</b>

Cut-off grades applied: Minimum 30% Al<sub>2</sub>O<sub>3</sub>, 2m thickness, 45% yield. Maximum strip ratio (metres overburden:bauxite) 4.5:1. Leach conditions to measure available alumina "Al<sub>2</sub>O<sub>3</sub> Avl" & reactive silica "Rx SiO<sub>2</sub>" is 1g leached in 10ml of 90gpl NaOH at 143 degrees C for 30 mins. "Avl/Rx" ratio is (Al<sub>2</sub>O<sub>3</sub> Avl)/(Rx SiO<sub>2</sub>). Values above 10 are excellent. "A/S" ratio is Al<sub>2</sub>O<sub>3</sub>/SiO<sub>2</sub>. Tonnage is for bauxite in-situ. Yield is for screening all samples at 0.26mm. The significant tonnages requiring no upgrade will have 100% yield.

Should a project commence at Binjour, mining would probably commence on such material.

**Logistical Setting**

The Binjour bauxite project is located approximately 160kms inland from Bundaberg port. Australian Bauxite Limited is participating in a major transport study of the region to assess the alternative ways to transport this high quality bauxite to markets, either in Australia or overseas.

**Further Work Planned**

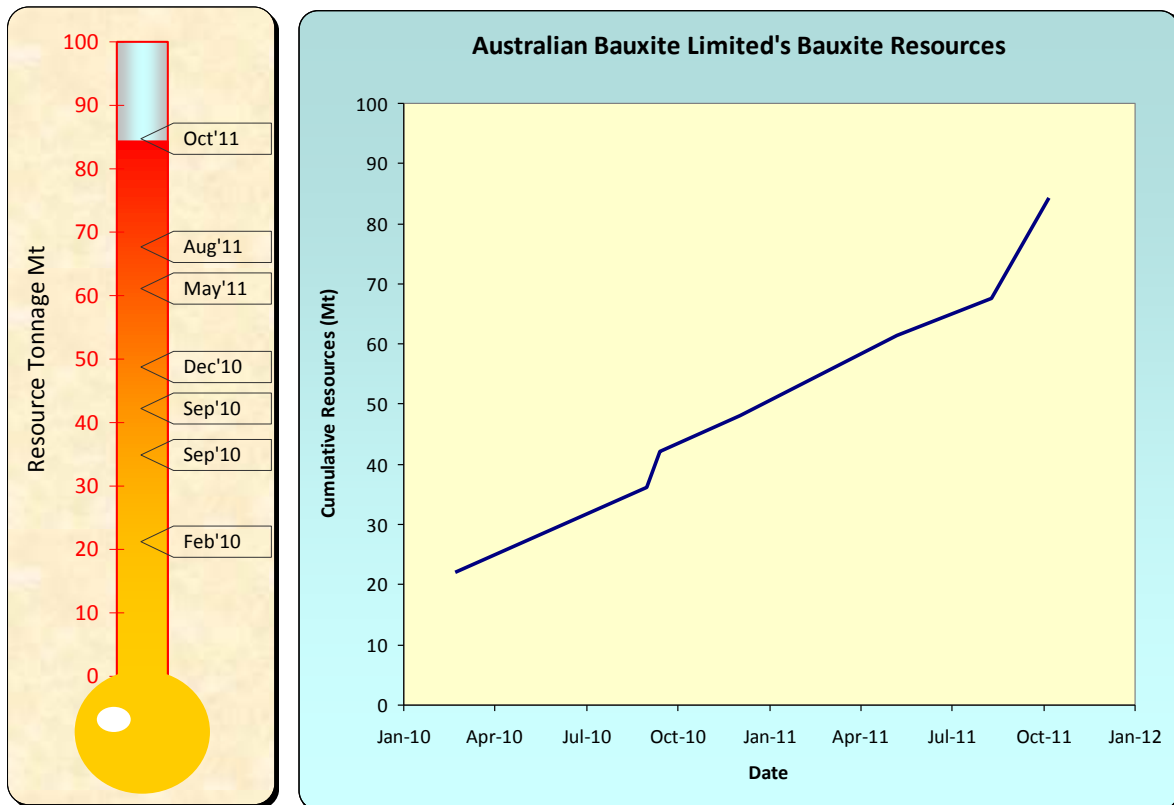
The bauxite deposit is open in many locations and many other deposits have been identified. Follow-up drilling of the Binjour plateau (25km x 10km in area) and surrounding new prospects is being scheduled over the coming months.

**New Exploration Permit Applications**

The bauxite deposit is concealed beneath a shallow surface clay layer but the company’s exploration technology indicates that this high quality bauxite layer extends over a considerable distance. A new exploration permit application has been made to secure the extension areas for ABx. Once approved, exploration will accelerate even more in the Binjour district.

**GROWTH IN TOTAL BAUXITE RESOURCES OVER TIME**

In the 21 months since listing on the ASX on 24 December 2009, Australian Bauxite Limited has discovered, drilled and declared bauxite resources totalling 84 million tonnes <sup>1,2,3,4</sup>, mainly of high-quality, low silica gibbsite rich bauxite. The resource growth (see Figure 3 below) has already exceeded the company’s target for calendar 2011 and shows no sign of slowing across the 37 tenements in QLD, NSW & Tasmania (see Figure 4 overleaf).



**Figure 3: Growing Bauxite Resources**  
 (see Exploration Target Statement)



## RESOURCE ESTIMATE METHOD

Reconnaissance and follow-up exploration drilling was done on a semi-random pattern governed by site availability across Binjour EPM 18014 and Binjour Extension EPM 18772 to test several of the many bauxite targets. By 30 September, 88 holes had intersected a consistently good quality bauxite layer concealed beneath a surface clay layer. High grade bauxite results from a further 13 holes arrived too late to be incorporated in this maiden resource estimation.

Drill samples were collected at 1 metre intervals from the aircore drillholes and analysed at ALS Laboratories in Brisbane including trihydrate (THA) available alumina (“Al<sub>2</sub>O<sub>3</sub> Avl”) and reactive silica (“Rx SiO<sub>2</sub>”) measurements. Leach conditions to measure available alumina “Al<sub>2</sub>O<sub>3</sub> Avl” and reactive silica “Rx SiO<sub>2</sub>” were 1g leached in 10ml of 90gpl NaOH at 143 degrees C for 30 minutes.

Estimation was done by geostatistical block modelling of bauxite intercepts, constrained within geological boundaries using Gemcom resource estimation software. The block size is 25m x 25m and drill spacing within the bauxite zones was typically at 75 to 150 metres spacings. Data interpolation of up to 300 metres was done, based on statistical assessments of continuity. Blocks with less than 5 datapoints within that 300 metre search ellipse were classified as Inferred Resources and the more heavily drilled blocks were classified as Indicated Resources.

Bauxite density was conservatively assumed at 1.85 dry tonnes per cubic metre in situ even though this bauxite layer is generally unweathered due to protection from the overlying clay layer.

### Qualifying Statement

The information in this announcement that relates to Exploration Results, Mineral Resources and Bauxite Classifications is based on results and interpretations compiled by Ian 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 consideration and to the activity which he is 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 Resources. Mr McManus and Mr Levy have consented in writing to the inclusion in this announcement of the Exploration Information in the form and context in which it appears.

### Exploration Target Statement

ABx has an exploration target of 200 to 300 million tonnes of bauxite (40-50 million tonnes is the exploration target for the Goulburn Bauxite Project area), based on the Mineral Resources totalling 36 million tonnes<sup>1</sup> of bauxite from 196 drillholes drilled across an area that is less than 15% of the known bauxite deposits on a single Exploration Licence EL 6997 at Inverell in northern NSW. Furthermore, Mineral Resources totalling 25 million tonnes<sup>2</sup> of bauxite have been estimated from 577 drillholes that have tested approximately 60% of the known bauxite deposits at Taralga on EL 7357. In accordance with the JORC Code, readers are advised that with regards this exploration target of 200 to 300 million tonnes, “the potential quality and grade is conceptual in nature, that there has been insufficient exploration to define full Mineral Resources and that it is uncertain if further exploration will result in the determination of a Mineral Resource”. Inverell tenement EL 6997 was the first of 30 tenements to be drilled and has since discovered sizeable, good quality bauxite occurrences on several other tenements.

ABx sees no reason to vary its exploration target.

The following are JORC-compliant Public Reports released to the ASX declaring the JORC resources referred to. These can be viewed on the ASX website and the Company will provide these reports, free of charge on request.

<sup>1</sup> 02/09/2010 ASX Inverell JORC Resource Update 36 Million Tonnes

<sup>2</sup> 12/05/2011 ASX Taralga Bauxite Resource Doubled to 25 Million Tonnes

<sup>3</sup> 15/08/2011 ASX Guyra Maiden Resource 6 Million Tonnes

<sup>4</sup> 12/10/2011 ASX Biniour Maiden Resource 17 Million Tonnes



Figure 4: ABx Project Locations

**About Australian Bauxite Limited: ASX Code ABZ**

Australian Bauxite Limited (ABx) holds the core of the newly discovered Eastern Australian Bauxite Province. Its 37 bauxite tenements in Queensland, NSW and Tasmania covering 8,500 km<sup>2</sup> were rigorously selected on 3 principles:

1. good quality bauxite;
2. proximity to infrastructure connected to export ports; and,
3. free of socio-environmental or native title land constraints.

All tenements are 100% owned and free of obligations for processing and third-party royalties. ABx has already discovered many bauxite deposits and new discoveries are still being made as knowledge and expertise grows.

The company's bauxite is high quality and can be processed into alumina at low temperature – the type that is in short-supply globally. **Global resources declared to date total 84 million tonnes.** At the company's first drilling prospect in Inverell, northern NSW, an interim resource of 35 million tonnes<sup>1</sup> has been reported from drilling 15% to 20% of the area prospective for bauxite and a resource of 25 million tonnes<sup>2</sup> of bauxite has been reported at the Taralga project in southern NSW. 6 million tonnes maiden resource was declared at Guyra<sup>3</sup>. Results from the Binjour Plateau in central QLD confirm that ABx has discovered a significant bauxite deposit including some bauxite of outstandingly high quality. Australian Bauxite Limited aspires to identify large bauxite resources in the Eastern Australian Bauxite Province which is emerging as one of the world's best bauxite provinces.

ABx has the potential to create significant bauxite developments in three 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.**

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