



AUSTRALIAN **BAUXITE** LIMITED

ASX: ABZ

## QUARTERLY REPORT

Quarterly Activities Statement period ending 31 December 2011

### 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 8,250 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>. A 16.8 million tonnes<sup>4</sup> maiden resource has been declared at the Binjour Plateau in central QLD, confirming 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 favorably 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.**

### ABx Pic of the Quarter

A wall of high-grade bauxite...



**Tamara Coyte:** ABx Project Geologist at historic Goulburn district bauxite quarry.

This quarterly activities statement is dated 31st January 2012 and is for the three months ending 31st December 2011.

### PRINCIPAL POINTS

#### Corporate

MOU signed with Marubeni Corp of Japan (a significant & highly respected participant in the global aluminium industry) to jointly conduct a Pre-Feasibility Study (**PFS**) in relation to the Goulburn-Taralga Project, NSW. Marubeni will contribute 35% toward the PFS funding, estimated to be \$1.5 million.

John Dawkins AO was appointed director and elected Chairman. Peter Meers is deputy Chairman of the Company.

Drago Panich appointed project manager of the Goulburn Bauxite Project.

55.6 million shares and 9 million options were released from escrow on 24 December 2011.

Cash in hand at the end of the December quarter was \$3.767 million.

#### Exploration

- Company global bauxite resources grow to 84 million tonnes
- Maiden JORC resource of 16.8Mt declared at Binjour, Queensland.

#### December Quarter Exploration Summary

During the December quarter exploration was focused on the Goulburn and Binjour regions.

Drilling in these areas continues to define additional resources.

During the December quarter 144 holes were drilled at Taralga (for a total of 812) and 187 holes at Binjour (for a total of 700).

AUSTRALIAN **BAUXITE** LIMITED

ACN 139 494 885

Level 2 Hudson House 131 Macquarie Street Sydney NSW 2000  
P: +61 2 9251 7177 F: +61 2 9251 7500



Sample results from these drilling programs are still pending.

### Goulburn Bauxite Project Pre-Feasibility Study (PFS)

The PFS continues to schedule and to budget.

Marubeni is conducting a marketing scoping study. Metallurgical testing and product development continues with further resource areas defined.

Project manager, Drago Panich commenced in January 2012 and will manage the PFS through to completion, expected in April 2012.

### Tenement status

Tenements are 100% in good standing.

### 16.8 Million Tonnes High-Grade Bauxite Maiden Binjour Resource declared

- 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

During the December quarter, ABx discovered a thick layer of very high quality bauxite at its Binjour project in central QLD (see below). 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.



New South Wales		
ABx1 Pty Ltd	Project	Km <sup>2</sup>
EL 6997	Inverell	297
EL 7268	Pindaroi	138
EL 7361	Guyra	300
EL 7824	Guyra Extension	288
EL 7596	Merriwa - 1	75
EL 7597	Merriwa - 2	639
EL 7598	Merriwa - 3	558
ELA 4398*	Merriwa Extension	264
EL 7872	Glencoe	300
EL 7858*	Stannifer	294
ELA 4443*	White Hill	210
ABx2 Pty Ltd		
EL 7269	Windellama	270
EL 7279	Wingello West	21
ELA 4038*	Wingello Extended	39
EL 7357	Taralga	300
EL 7681	Taralga Extension	300
EL 7857	Taralga 2nd Ext	306
ELA 4350*	Taralga 3rd Ext	309
EL 7601	Bungonia	276
EL 7546	Penrose	33
		<b>5,217</b>
Queensland		
ABx3 Pty Ltd		
EPM 17790	Hampton	336
EPM 17800	Red Hill	144
EPM 17801	Red Hill South	150
EPM 17830	Haden	264
EPM 17831	Hillgrove	267
EPM 18014	Binjour	150
EPM 18772	Binjour Extension	123
EPM 19169	Tellebang	150
TBA*	Brovinia	147
		<b>1,584</b>
Tasmania		
ABx4 Pty Ltd		
EL 4/2010	Evandale	197
EL 5/2010	Powranna	234
EL 6/2010	Cleveland	209
EL 7/2010	Conara	238
EL 9/2010	Deloraine	224
EL 14/2010	Myalla	80
EL 37/2010*	Westbury	237
TBA*	Sassafras	30
* Application		<b>1,449</b>
<b>Total all tenements</b>		<b>8,250</b>

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 %
Inferred	6.8	3.7 m	8.1 m	37.7	3.7	10.3	43.4	4.1	10.5	24.2	3.6	24.1	61%
Indicated	10.0	5.3 m	10.6 m	39.9	2.7	14.9	44.7	3.0	14.8	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.

#### 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.

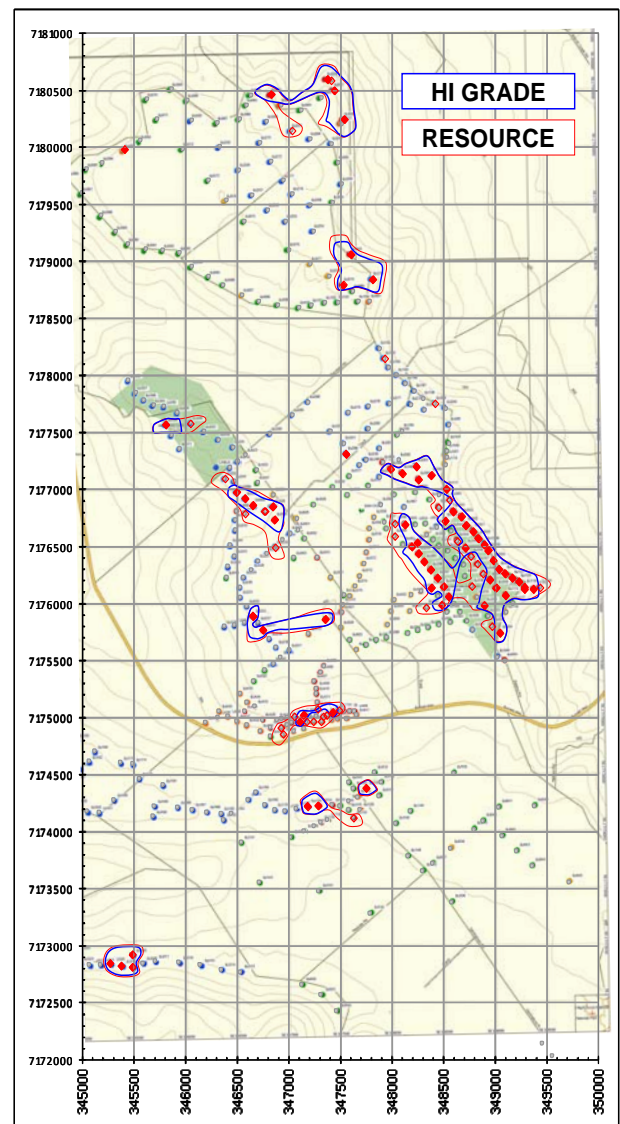
**Figure 2 Binjour Drillhole & Resource Locations**  
Scale: 500m grid squares (9km x 5km)

#### 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



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>	<b>10.2 m</b>	<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 continues.

### 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.

## FURTHER INFORMATION

Henry Kinstlinger  
Investor Relations

Telephone: +61 2 9251 7177

## 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 2011, 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 STATEMENTS**

The information in this report that relate to exploration programmes are based on information compiled by Jacob Rebek who is a member of Australian Institute of Mining and Metallurgy. Mr. Rebek is a qualified geologist and is a director of Australian Bauxite Limited.

Mr. Rebek has sufficient experience, which is relevant to the style of mineralization 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. Rebek consents to the inclusion in the report of the matters based on 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 of bauxite from 196 drillholes drilled across an area that is less than 15% of the known bauxite deposits on a single Exploration Lease EL 6997 at Inverell in northern NSW. Furthermore, Mineral Resources totalling 25 million tonnes 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.

#### **Direct Shipping Ore**

In this report all references to direct shipping ore (**DSO**) refers to the company’s exploration objective of defining DSO grade mineralisation.

#### **JORC Code Compliant Public Reports**

The Company advises that this presentation contains summaries of Exploration Results and Mineral Resources as defined in the 2004 Edition of the ‘Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves’ (“JORC Code”).

The following table references the location of the Code-compliant Public Reports or Public Reporting on which the summaries are based. These references can be viewed on the ASX website and the Company will provide these reports, free of charge, to any person who requests it.

1	02 September 2010	ASX Inverell JORC Resource Update 36 Million Tonnes
2	12 May 2011	ASX Taralga Bauxite Resource Doubled to 25 Million Tonnes
3	15 August 2011	ASX Guyra Maiden Resource 6 Million Tonnes
4	12 October 2011	ASX Binjour Maiden Resource 17 Million Tonnes



Project Tenements and Major Infrastructure – December 2011