



## BAUXITE RESOURCE UPDATE FOR NORTH DARLING RANGE

### HIGHLIGHTS

- Upgrade in JORC Resource Classification for the Aurora Resource following modelling of recent drilling.
- Indicated Resource at Aurora of 7Mt @ 33.0% Available Alumina and 3.1% Reactive Silica.
- Additional Inferred Resource at Aurora of 4.4Mt @ 30.2% Available Alumina and 4.0% Reactive Silica.
- Inferred Resource at Rusina of 3.7Mt @ 29.1% Available Alumina and 5.3% Reactive Silica. Stage 2 drilling completed and modelling to commence in Q2 2011.
- First pass exploration drilling completed on several other prospects within the North Darling Range Project area with encouraging results. Resource Estimation for these prospects is currently underway.

Perth-based bauxite explorer and developer, Bauxite Resources Ltd (ASX: BAU) is pleased to announce an update to the bauxite resource base in the North Darling Range area. Resource modelling has been completed on recent drilling undertaken on the Aurora prospect that has resulted in an upgrade in classification for a large proportion of the Aurora resource. This area now has a total resource of 11.4Mt, of which 7Mt is at Indicated status. In addition, modelling of the first stage of drilling at the Rusina prospect has delineated an initial Inferred resource of 3.7Mt. The second stage of drilling is now complete and the resource model will be updated over the coming months once results are returned. Both areas come under the Joint Venture Resource Agreement with Yankuang Corporation ("Yankuang"), where Bauxite Resources holds a 30% bauxite interest. Resource modelling for both Aurora and Rusina has been conducted by Xstract Mining Consultants Pty Ltd and all results supersede previous resources announced by the company.

The Company considers these results to be Phase One of a program of work targeting:

Phase 1: Upgrading the JORC classification of the existing resource base; and then

Phase 2: Issuing maiden resources at a number of additional prospects within the Darling Range to expand the total bauxite resource base for the Company. Drilling in these areas is substantially complete and modelling is underway. Maiden resources on these prospects will be announced within 3 months.

### Global Resource

With the completion of this stage of resource modelling on drilling undertaken by Bauxite Resources, a robust resource base has been defined upon which the company will continue to build.

**Table 3: Global Mineral Resource for the North Darling Range (April 2011)**

JORC Classification	Dry tonnes ('000,000)	Al <sub>2</sub> O <sub>3</sub> (%)	Available Al <sub>2</sub> O <sub>3</sub> (%)	Reactive SiO <sub>2</sub> (%)	BAU Bauxite Rights
Indicated	7.0	43.5	33.0	3.1	30%
Inferred	8.1	40.8	29.7	4.6	30%
<b>Total (Ind. + Inf.)</b>	<b>15.1</b>	<b>42.1</b>	<b>31.2</b>	<b>3.9</b>	<b>30%</b>

*Note: Mineral Resources have been classified and reported in accordance with the JORC Code 2004*

As drilling continues across the 39 granted tenements in the Darling Range, additional resources will be defined in line with the company's broader business objectives. The first exploration drilling programs in both the East Darling Range and the South Darling Range have been completed and as access to land increases, drilling will intensify in these areas.



## Aurora Resource

The Aurora resource is located in the Bindoon region of Western Australia. Previously reported as Bindoon Area 2 & Area 3, the updated resource is based on drilling conducted by the company over the past 2 years on tenement E70/3064 and Minerals to Owner (MTO) properties. These resources replace all previous resource statements for Bindoon Area 2 & Area 3. Multiple stages of drilling have now been completed. This has enabled the majority of the resource to be classified as Indicated. The company completed a trial mining operation within the resource area in 2009/10, which provides further confidence in the geological modelling.

**Table 1: Details of the Aurora Mineral Resource (April 2011)**

JORC Classification	Dry tonnes ('000,000)	Al <sub>2</sub> O <sub>3</sub> (%)	Available Al <sub>2</sub> O <sub>3</sub> (%)	Reactive SiO <sub>2</sub> (%)	BAU Bauxite Rights
Indicated	7.0	43.5	33.0	3.1	30%
Inferred	4.4	41.3	30.2	4.0	30%
<b>Total</b>	<b>11.4</b>	<b>42.7</b>	<b>31.9</b>	<b>3.4</b>	<b>30%</b>

*Note: 24% Available Al<sub>2</sub>O<sub>3</sub> cut off grade and dry density of 1.6 used*

Material mined in 2009/10 and that component of the previously reported resource that falls within the Julimar State Forest has been excluded from the new published resource. Previous resource estimates across this area used a dry density of 1.8 when calculating tonnages. Subsequent detailed test-work on diamond drill core from within the current resource area indicated a dry density of 1.6 through the main ore zone.

## Rusina Resource

The Rusina resource is located in the New Norcia region of Western Australia. Not previously reported, the resource is based on over 2,700m of exploration drilling conducted within the past 12 months on tenement E70/3007.

**Table 2: Details of the Rusina Mineral Resource (April 2011)**

JORC Classification	Dry tonnes ('000,000)	Al <sub>2</sub> O <sub>3</sub> (%)	Available Al <sub>2</sub> O <sub>3</sub> (%)	Reactive SiO <sub>2</sub> (%)	BAU Bauxite Rights
Inferred	3.7	40.3	29.1	5.3	30%

*Note: 24% Available Al<sub>2</sub>O<sub>3</sub> cut off grade and dry density of 1.6 used*

Drilling was conducted in two stages across the prospect, of which only the first has been modelled. Modelling of the second stage of completed drilling (1,565m) is due to commence in Q2 2011 and will serve to not only provide better definition of the current resource area, but has the potential to expand the lateral extents of the mineralised zone.

## Vallonia Prospect

Bauxite Resources has yet to complete remodelling of resources in the Vallonia prospect (formerly reported as Avon Area 4, 5 & 6). The company has redrilled a portion of this area and when remodelling is complete this will be included in an updated global resource.

## Juturna Prospect

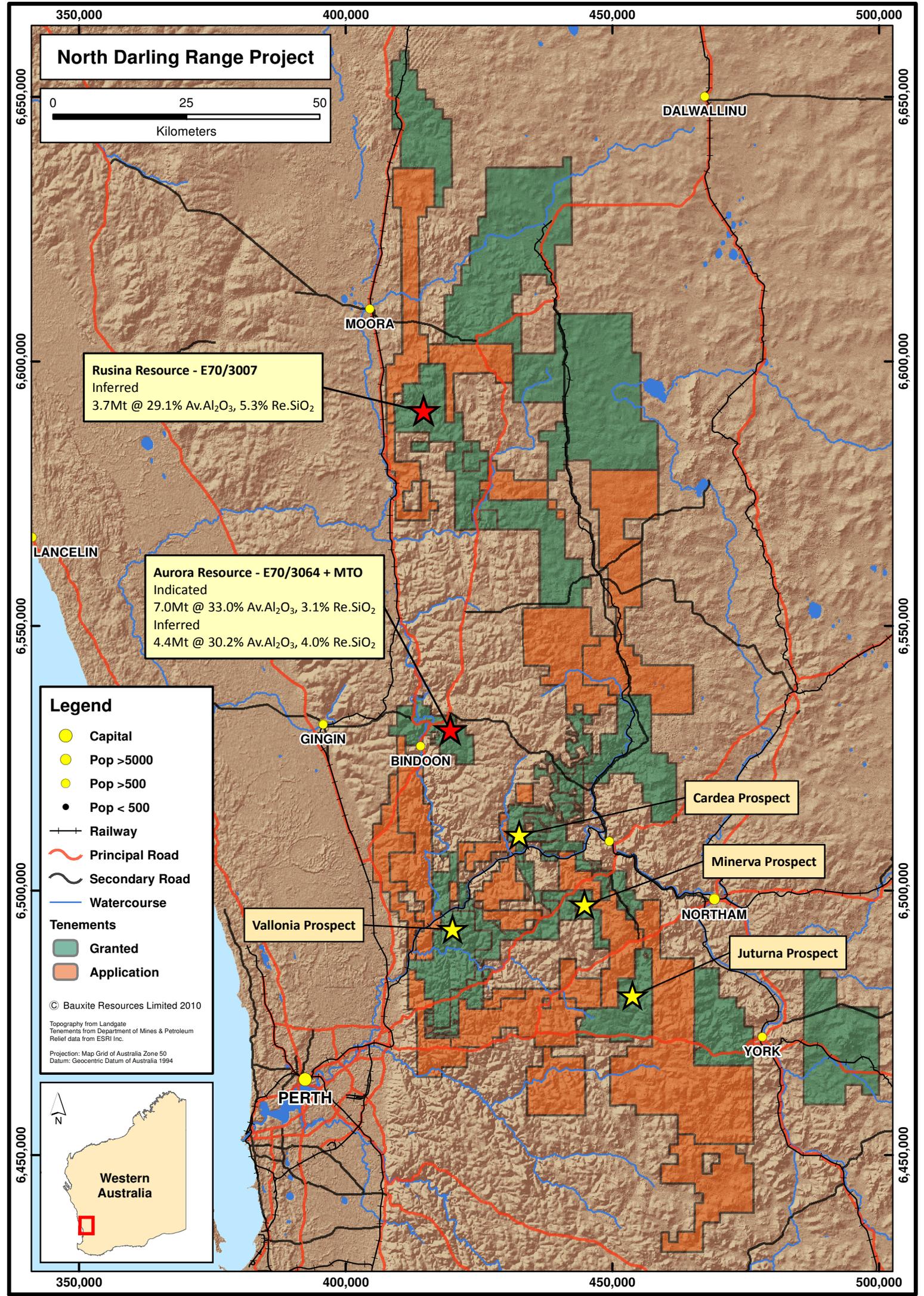
Drilling on the Juturna prospect located near Bakers Hill has returned intersections of bauxite. A total of 473 holes have been completed and resource modelling is expected to start as soon as is practicable.

## Minerva Prospect

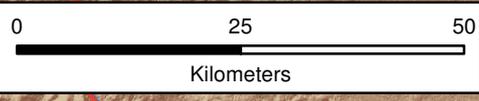
Exploration drilling in the Minerva prospect to the south-west of Toodyay has commenced and several programs have already been completed. Vacuum drilling to date totals 1,602m from 382 holes, with modelling due to start when final assays are returned in the current quarter.

## Cardea Prospect

The Cardea prospect has been the focus of much of the company's recent drilling and several of the programs are complete with results returned for 2,500m of drilling. Over 2,100 holes have been drilled and resource modelling of the early stage drilling is anticipated to begin by mid 2011.



# North Darling Range Project



**Rusina Resource - E70/3007**  
 Inferred  
 3.7Mt @ 29.1% Av. $Al_2O_3$ , 5.3% Re. $SiO_2$

**Aurora Resource - E70/3064 + MTO**  
 Indicated  
 7.0Mt @ 33.0% Av. $Al_2O_3$ , 3.1% Re. $SiO_2$   
 Inferred  
 4.4Mt @ 30.2% Av. $Al_2O_3$ , 4.0% Re. $SiO_2$

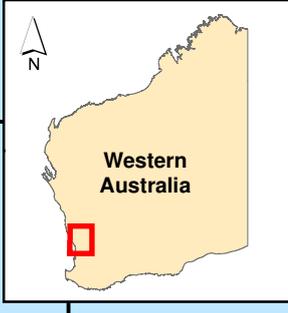
**Legend**

- Capital
- Pop >5000
- Pop >500
- Pop < 500
- Railway
- Principal Road
- Secondary Road
- Watercourse

**Tenements**

- Granted
- Application

© Bauxite Resources Limited 2010  
 Topography from Landgate  
 Tenements from Department of Mines & Petroleum  
 Relief data from ESRI Inc.  
 Projection: Map Grid of Australia Zone 50  
 Datum: Geocentric Datum of Australia 1994



DALWALLINU

MOORA

LANCELIN

GINGIN

BINDOON

Cardea Prospect

Minerva Prospect

Vallonia Prospect

NORTHAM

Juturna Prospect

PERTH

YORK

**Table 4: Sampling Techniques and Data**

Drill sample recovery	Bauxite Resources geologists monitor sample recovery from vacuum drilling by weighing and tracking the mass of recovered sample cuttings. Poor recovery can occur due to cavities, partial blockages of the samples hose and wet samples. Recovery is generally high for the data input into the resource estimates. For diamond-core drilling the core recovery is established by measurement of the recovered core. Triple-tube diamond drilling is used to maximise recovery and where recovery is poor through target zones of resource, the holes are abandoned and re-drilled nearby until acceptable recovery is achieved.
Logging	Bauxite Resources geologists log the vacuum samples in 0.5-metre down-hole increments. Regular chip-tray samples are collected as permanent physical records for audit and validation purposes. Diamond core samples are logged and photographed in core trays. Data is captured in digital core loggers. All logging data is captured in digital logging devices to ensure consistency of coding and minimise data entry errors.
Sub-sampling techniques and sample preparation	The entire vacuum samples for each 0.5 metres of drilling are collected into a calico bag at the drill site. The majority of diamond core is collected whole in 0.25 metre interval into a calico bag. The whole core is broken with a brick chisel or collected by hand in unconsolidated material. Selected intervals of bauxite mineralisation are collected in longer intervals and despatched for bulk density measurements.
Quality of assay data and laboratory tests	The majority of Bauxite Resources samples were analysed at Nagrom Laboratory in Perth with some earlier samples analysed at Ultra Trace Laboratory in Perth. Bauxite Resources documentation describes the analysis of samples by a number of ISO standards methodologies (6140:1991, 9516:2003, 12677:2003, 6606:1986, ISO 6607:1985, 10213:10213, 6994:1986, 6995:1985, 6606:1986; 8557:1985). These analyses provided estimates of principal bauxite components of alumina, silica, iron, titania, and loss on ignition, and a suite of trace elements. Results reported by Bauxite Resources as available alumina and reactive silica represent partial extractions.  Bauxite Resources documentation describes the in-laboratory quality control methods which include the use of four matrix match standards, and determination of precision and accuracy according to ISO standards. The company also include a high-grade and a low-grade, in-house (uncertified), standard as blind-standards in the field sample stream at a 1:200 ratio. Bauxite Resources also collect duplicate samples and include blank samples in the field sample stream.
Verification of sampling and assaying	Bauxite Resources have carried out a vacuum-diamond core twin-hole programme at Aurora. The company's analysis of these holes was that the vacuum drilling tended to marginally understate alumina and marginally overstate silica.
Location of data points	Drillhole collar surveys are based on WA's Department of Land and Administration survey marks for control and using differential GPS equipment to locate the drill collars within an precision of $\pm 0.05$ metres. Topographic data used for the Mineral Resource areas is a combination of GEODATA TOPO 250K Series 3 and Landgate Medium-scale Topographic Database data. Bauxite Resources did not survey the hole paths of any of the drilling because all holes are short and any deviation errors are not significant relative the average drill-hole spacing used to defined the Mineral Resources.
Data spacing and distribution	Bauxite Resources has drilled a variety of data collar spacings ranging from first pass drilling on a 160-metre square grid, second pass drilling on a 40-metre square grid and detailed drilling on a 20-metre square grid. All vertical sampling is on a 0.5-metre interval, either raw or composited.
Orientation of data in relation to geological structure	All data points for the resource estimate are vertical strings originating at the topography.

**Table 5: Estimation and Reporting of Mineral Resources**

Database integrity	The Bauxite Resources drilling data is hosted by an external provider (rOREdata Pty Ltd) in the acquire database system, which is designed to capture, store and verify geological drilling data. Data collected in field loggers is transferred to the database via text files as is data from the laboratory. rOREdata provide reports to the company regarding basic integrity validation of the data such as overlapping records, missing assays and duplicate drillhole identifiers.
Geological interpretation	For both Rusina and Aurora, Xstract determined the limits of the bauxite mineralisation using a maximum-thickness for a particular available-alumina grade cut-off methodology. Xstract tested a range of available alumina cut-off grades and determined that a nominal >24 percent available alumina threshold at Rusina and >24 percent available alumina threshold at Aurora best defined the bauxite layer in terms of geological continuity and target grade characteristics for available alumina and reactive silica. Xstract then created bauxite outlines for this threshold in two-dimensions to control the resource estimate. The Aurora outlines were extended to a three-dimensional volume, which was clipped to topography where necessary. At Rusina the interpretation uncertainty is higher as available alumina grades have been largely estimated by regression of alumina. The uncertainty at Aurora is lower as measurements are available for available alumina in all but very recent in-fill drillholes.
Dimensions	At Aurora, mineralisation occurs in two large pods. The south pod has maximum extents in the order of 5.3 kilometres by 2.6 kilometres. The north pod has maximum extents in the order of 1.3 kilometres by 1.3 kilometres. The pod thickness in the north averages 2.74 metres and range from 0.10 metres to 11 metres while in the south the thickness averages 1.56 metres and range from 0.10 metres to 8.60 metres. The pods are near surface, flat lying and with average overburden thicknesses of 0.5 metres in the north and 0.9 metres in the south. At Rusina, the mineralisation occurs in four separate pods. The north pod has maximum extents in the order of 1.5 kilometres by 0.6 kilometres, the east pod has extents of 0.9 kilometres by 0.4 kilometres, the south pod has extents of 1.4 kilometres by 0.6 kilometres, and the west pod has extents of 0.9 kilometres by 0.4 kilometres. The pod thickness average is 1.7 metres and range of 0.5 to 5 metres in thickness. The pods are near surface, flat lying and with average overburden thickness 0.75 metres.



Estimation and modelling techniques	<p><b>Aurora</b> Three dimensional block modelling within the interpreted 24% Available Alumina envelope. Block grades for alumina, silica, available alumina and reactive silica were estimated using ordinary kriging within the envelope from composited drillhole data.</p> <p><b>Rusina</b> Two dimensional block modelling within the interpreted 24% Available Alumina envelope. Block grades for alumina and silica were estimated using ordinary kriging of thickness and the accumulated variables within the envelope from composited drillhole data. Available alumina and reactive silica grades were estimated using regression from the estimated alumina and silica block grades.</p> <p>The models were validated by visual comparison of input data and output block estimated grades, and comparison of input and output means. An internal peer review process confirmed correct application of estimation parameters in the estimation processes. Standardised kriging variances were used as a guideline to the local precision of estimates.</p>
Moisture	Mineral Resource tonnages are reported as dry metric tonnes with an assumed dry density of 1.6 tonnes per cubic metre. Available test data indicates the dry density is in the order of 1.6 tonnes per cubic metre with wet density in the order of 1.7, which implies an in situ moisture content of 0.1 tonnes per cubic metre (6 to 7 percent moisture).
Cut-off parameters	The cut-off grade applied to Rusina is a nominal 26 percent available alumina threshold derived from data measurements and/or regression estimates. The cut-off grade applied to Aurora is a nominal 24 percent available alumina threshold derived from data measurements and/or regression estimates. The cut-off envelope has been rationalised in realistic lateral geological continuity.
Mining factors and assumptions	Bauxite Resources and Xstract have assumed that mining of the deposit will be via truck and shovel configuration and that there will be good visual control to establish the top and base of bauxite during mining. There has been no minimum mining thickness assumed.
Metallurgical assumptions	At both Aurora and Rusina, the available alumina grades exceed the stated Bauxite Resources target grade. However, reactive silica grades exceeding four dry-weight percent have a significant negative effect on Bayer-process reagent consumption. The company is carrying out studies to assess the degree to which high-silica Mineral Resources such as at Rusina, can be positively affected by application of beneficiation techniques. High-silica is not an issue for Aurora Resources and there are also low-silica sources within the deposit that could be blended with Rusina Resources to produce acceptable process products.
Bulk density	Xstract has applied a dry bulk density of 1.6 tonnes per cubic metre in Rusina and Aurora estimates.
Classification	Xstract has classified the Mineral Resource estimates primarily on the basis of collar spacing with adjustments for data quality where considered appropriate. The Bauxite Resources Competent Person has reviewed and agrees with this approach. The Rusina estimate is all classified as Inferred Mineral Resource due to the incomplete measurement of available alumina and reactive silica, incomplete survey and the two-dimensional nature of the block model. The Aurora estimate has been classified as Indicated Mineral Resource where the collar spacing is 40 metres square or less and Inferred Mineral Resource elsewhere.
Audits and reviews	The mineral resource estimates have been peer reviewed by Xstract and by Bauxite Resources' Competent Person. No external fully independent audits or reviews have been completed.
Discussion of relative accuracy/ confidence.	No uncertainty studies have been carried out to establish the local confidence and accuracy of the Mineral Resource estimates. A trial mining exercise has been completed at Aurora but the mining information is yet to be compared and reconciled.

#### COMPETANT PERSON STATEMENT

*In accordance with the Australian Stock Exchange requirements, the technical information contained in this report has been reviewed by Mr. Peter Senini, an employee of the company. The information in the report to which this statement is attached that relates to Mineral Resources is based on information reviewed by Mr. Senini, who is a Member of the Australian Institute of Geoscientists. Mr. Senini 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 Reserves." Mr. Senini consents to the inclusion in the report of the matters based on this information in the form and context in which it appears.*

For further information visit [www.bauxiteresources.com.au](http://www.bauxiteresources.com.au) or contact:

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