

# BAUXITE RESOURCES LIMITED



ABN 72 119 699 982

ASX/MEDIA RELEASE

5 JUNE 2012

## SUBSTANTIAL NEW BAUXITE RESOURCE OF 73 MILLION TONNES AT FELICITAS PROJECT, DARLING RANGE WESTERN AUSTRALIA

### Key Points:

- **Substantial new Felicitas Bauxite Resource -**  
**73.3Mt @ 39.2% Al<sub>2</sub>O<sub>3</sub> (total), 30.3% Al<sub>2</sub>O<sub>3</sub> (available), 1.9% SiO<sub>2</sub> (reactive)**
- **143% increase to the total BRL Bauxite Resource base to -**  
**124.5Mt @ 40.0% Al<sub>2</sub>O<sub>3</sub> (total), 30.2% Al<sub>2</sub>O<sub>3</sub> (available), 2.7% SiO<sub>2</sub> (reactive)**
- **Resource has high available alumina to reactive silica ratios, considered a desirable characteristic for alumina refining**
- **Significant bauxite horizons between 2m to 16m thick, typical overburden between 0.5m to 2m**
- **Good resource road access, within 5km of existing heavy rail infrastructure being 100km to Kwinana Port**
- **Resource is on large privately owned and predominantly cleared farmland in an existing quarrying area**
- **Further resource and metallurgical drilling planned for 2012 with potential for resource increase**

**Bauxite Resources Limited (ASX: BAU) (“BRL” or “the Company”)** is pleased to announce an initial resource for the **Felicitas** bauxite deposit in the Darling Range Western Australia. The resource is situated on a small number of large private landholdings located approximately 100km north east of Perth, and 10km from the town of Wundowie. The resource is less than 5km from existing rail infrastructure providing a direct link to Fremantle/Kwinana Port being approximately 100km away.

The Felicitas resource is contained within the Company’s Bauxite Alumina Joint Ventures (“BAJV”) joint venture with Yankuang Resources Ltd (“Yankuang”); BAJV is managing the project.

**Table 1: Felicitas Deposit Resource Classification**

JORC Classification	Quantity <sup>(2)</sup> (000,000) tonnes	Al <sub>2</sub> O <sub>3</sub> (total) %	Al <sub>2</sub> O <sub>3(av)</sub> <sup>(1)</sup> %	SiO <sub>2(r)</sub> <sup>(1)</sup> %	SiO <sub>2(total)</sub> %	Al <sub>2</sub> O <sub>3 (av) : SiO<sub>2 (r)</sub></sub>
Indicated	20.9	39.2	30.6	1.5	5.8	20.4
Inferred	52.4	39.2	30.1	2.0	9.1	15.5
Total (Ind & Inf)	73.3	39.2	30.3	1.9	8.2	15.9

1. Available Al<sub>2</sub>O<sub>3</sub> and reactive SiO<sub>2</sub> determined using Bomb test at 143°C to replicate low temperature Bayer process method
2. See Table 2 for bauxite rights to individual deposits
3. Al<sub>2</sub>O<sub>3(av)</sub> = available alumina, SiO<sub>2(r)</sub> = reactive silica at 143°C

The new resource provides a 143% increase in the total bauxite resources in which the Company has an interest.

The Company considers that the new Felicitas resource advances the prospects of the BAJV achieving its stated aim of defining a minimum of 90 million tonnes of refinery grade bauxite to underpin the prospects of development of a long term alumina refinery for the joint venture. Whilst considerable effort will still be required to achieve this objective the Company is very pleased with the results achieved by the BAJV team thus far and notes that this resource has potential for increase with further exploration drilling.

### Location & Logistics

The Felicitas deposit extends across 2,500Ha of large private landholdings, 10km north of Wundowie and 100km north northeast of Perth (Figure 1). The deposit is situated on a small number of large private landholdings readily accessible by road that have been cleared for farming and grazing, and which are located less than 5km from existing rail infrastructure and being approximately 100km kilometres to the Kwinana port . The area is bounded to the west by state forest, to the north and east by existing quarry operations, and to the south by farmland.

Figure 1: Bauxite Resources Ltd tenement holding showing Felicitas Resource location

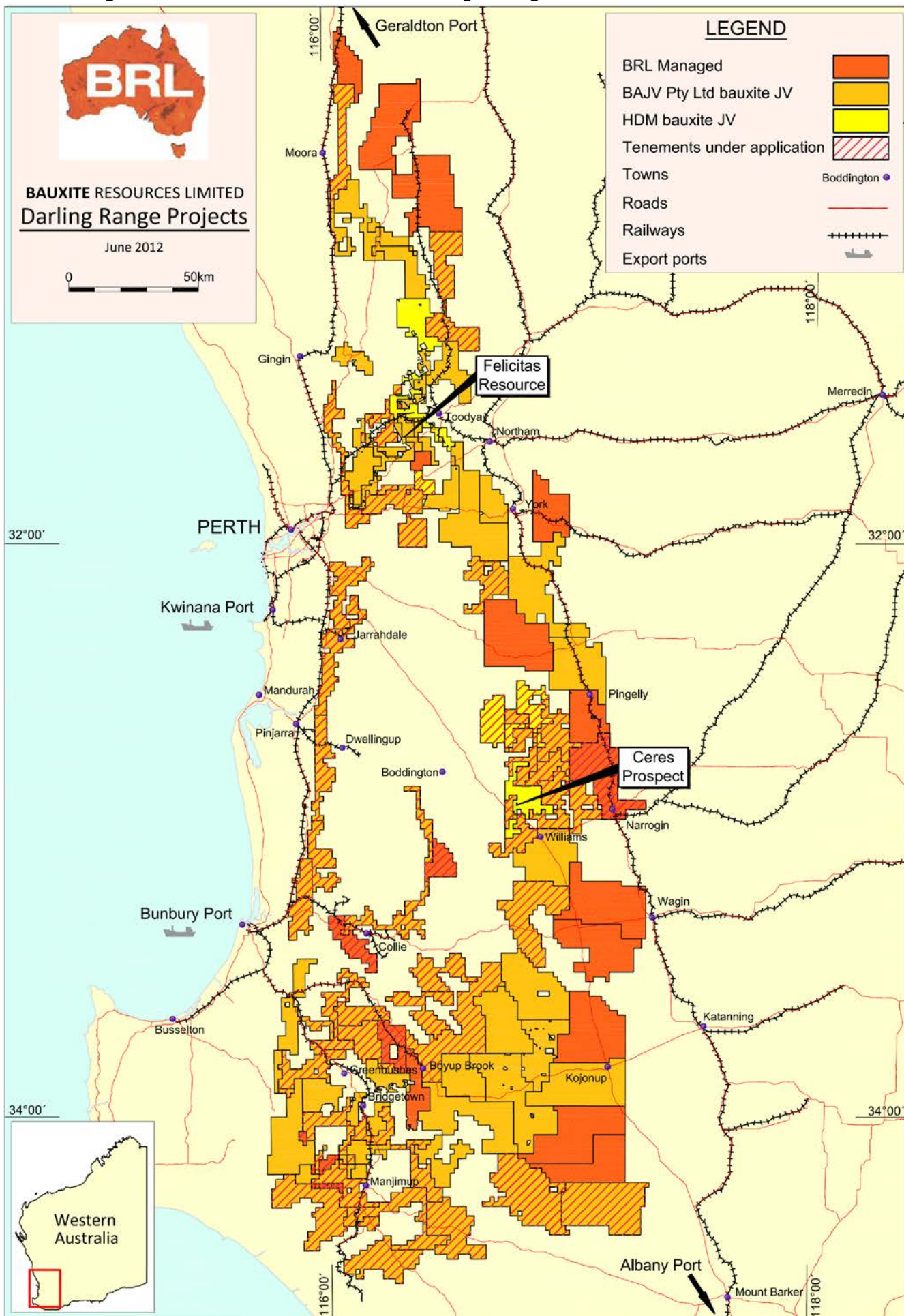


Figure 2: Bauxite Resources Ltd Felicitas Resource

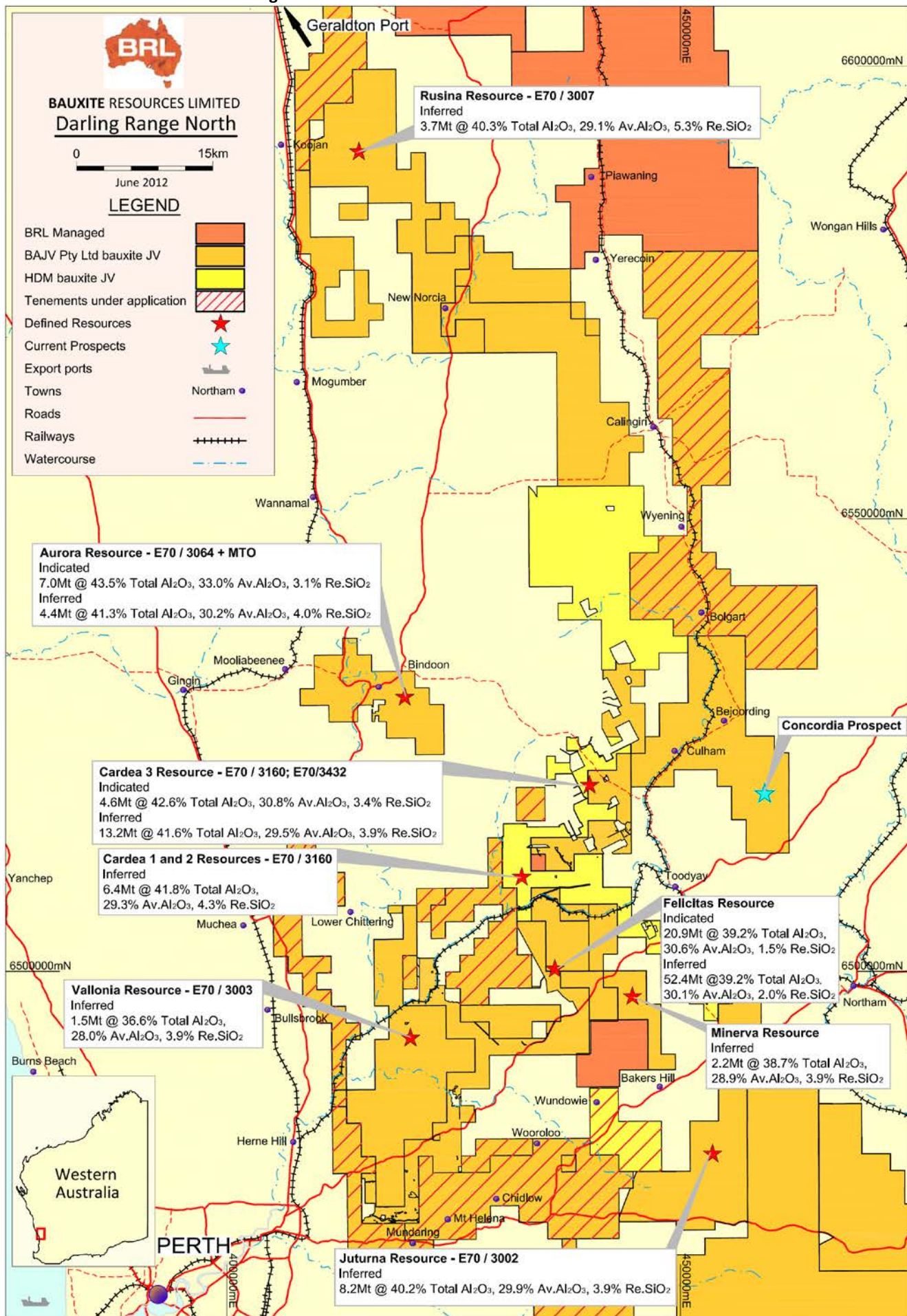
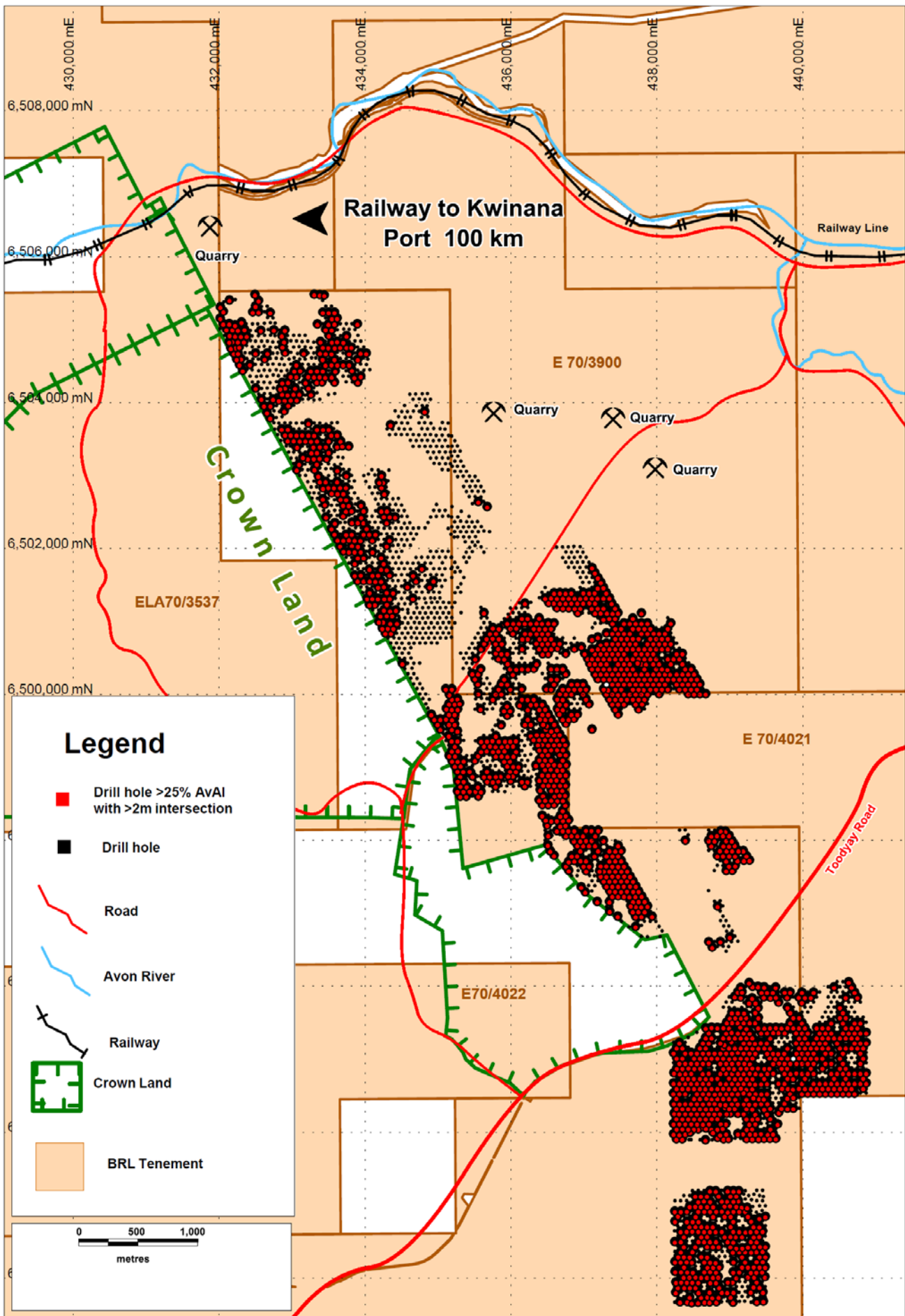


Figure 3: Felicitas Resource drill hole and location map.



## Resource Details

The Felicitas deposit is situated on granted exploration tenements E70-3159, E70-3900 and E70-4021. It is comprised of a bauxite horizon of 2m to 16m thickness that is typically covered by 0.5m to 2m of loose overburden. The resource estimate, completed by Runge Limited, was based on 3,624 vertical holes drilled for 24,085 metres on a nominal 80m x 80m drill pattern. The available alumina and reactive silica results quoted are based on low temperature bomb analysis (143°C), and the results indicate that the majority of alumina present is as the tri-hydrate mineral gibbsite.

The deposit is considered to have further resource growth potential as drilling programs to date have yet to fully test the lateral extent of the mineralisation and it is therefore not considered to be closed off. Additional drilling is planned to commence in 2012 with the intention of adding to the resource base and to provide material for beneficiation and metallurgical test work. This test work is in turn aimed at determining the potential for improving the economics of the existing resource through removal of excess detrimental materials, principally quartz and reactive silica, thus upgrading the quality of the ore.

The Felicitas deposit adds to the global resource base that BRL and its joint venture partners have defined within the northern Darling Range of Western Australia. Table 3 below provides a summary of the total bauxite resources and the bauxite rights that are attributable to the company.

**Table 2: BRL Bauxite Projects in south west Western Australia – Resource Summary Table**

Deposit & Classification	Size Mt	Al <sub>2</sub> O <sub>3</sub> (total) %	Al <sub>2</sub> O <sub>3</sub> (available) %	SiO <sub>2</sub> (reactive) %	JV & Resource Details #
Felicitas					
Indicated	20.9	39.2	30.6	1.5	BAJV (Jun 2012)
Inferred	52.4	39.2	30.1	2.0	BAJV (Jun 2012)
Cardea 3 (BAJV)					
Indicated	3.5	42.5	31.1	3.2	BAJV (Nov 2011)
Inferred	7.0	41.0	30.1	3.5	E70/3432
Minerva					
Inferred	2.2	38.7	28.9	3.9	BAJV (Aug 2011)
Aurora					
Indicated	7.0	43.5	33.0	3.1	BAJV (Apr 2011)
Inferred	4.4	41.3	30.2	4.0	
Rusina					
Inferred	3.7	40.3	29.1	5.3	BAJV (Apr 2011)
Juturna					
Inferred	8.2	40.2	29.9	3.9	BAJV (Jun 2011)
Vallonia					
Inferred	1.5	36.6	28.0	3.9	BAJV (Jun 2011)
<b>BAJV sub-total</b>	<b>110.8</b>	<b>39.8</b>	<b>30.3</b>	<b>2.5</b>	
Cardea (1&2)					
Inferred	6.4	41.8	29.3	4.3	HDM (Aug 2011)
Cardea 3 (HDM)					
Indicated	1.1	42.8	30.0	4.0	HDM (Nov 2011)
Inferred	6.2	40.3	28.9	4.4	E70/3169
<b>HDM sub-total</b>	<b>7.3</b>	<b>40.7</b>	<b>29.1</b>	<b>4.3</b>	
<b>Total Indicated</b>	<b>32.5</b>	<b>40.6</b>	<b>31.1</b>	<b>2.1</b>	<b>BAJV &amp; HDM</b>
<b>Total Inferred</b>	<b>92.0</b>	<b>39.8</b>	<b>29.8</b>	<b>2.9</b>	<b>BAJV &amp; HDM</b>
<b>South West WA TOTAL Bauxite</b>	<b>124.5</b>	<b>40.0</b>	<b>30.2</b>	<b>2.7</b>	<b>BAJV &amp; HDM</b>

# BAJV - Bauxite Alumina Joint Venture area with Yanguang Resources Ltd where the BRL retains 30% beneficial interest in the bauxite rights.

HDM – Resources within joint venture with HD Mining & Investments Pty Ltd, the wholly owned subsidiary of Shandong Bureau No.1 Institute for Prospecting of Geology & Minerals, where HD Mining can earn up to 60 % of bauxite rights upon completion of certain milestones including completion of a BFS leading to a decision to mine.



## Bauxite Market Prospects

China is the Asia Pacific regions principal market for bauxite, alumina and aluminium. Indonesia is currently the major supplier of unrefined bauxite to China providing over 79% (Australia 19%) in 2011, however Indonesia has recently passed laws that will discourage non-value added mineral exports. The result is expected to be a reduced supply and increased price for Indonesian bauxite and a rise in demand and price for Australian bauxite.

## Corporate & Joint Venture Details

BRL holds in excess of 24,000km<sup>2</sup> of the highly prospective Darling Ranges in the southwest of Western Australia under granted tenure (13,790km<sup>2</sup>) and tenement application. As at 31 March 2012, BRL held \$48.5 million (consolidated) at bank and retained no bank debt. The company is focussed on definition and development of bauxite resources within its granted tenement area.

On 1 April 2011, Bauxite Resources and Yankuang Group commenced the Bauxite Resources Joint Venture and the Alumina Refinery Joint Venture (collectively BAJV). The joint ventures aim to prove up a minimum of 90 million tonnes (Mt) of refinery grade bauxite resource and to complete a feasibility study into the viability of building a refinery in Western Australia capable of producing a minimum of 1.1 million tonnes per annum of alumina. As part of this agreement, in 2011 the Company received the sum of \$9 million from Yankuang Group for the reimbursement of past exploration costs. In addition, Yankuang will continue to pay 70 percent of the cost of all future exploration and mining for bauxite in return for a 70 percent interest in the bauxite rights within the JV tenements. The proposed refinery is subject to a bankable feasibility study (BFS), site selection, all regulatory approvals and substantial commencement within five years and five months of the agreement date. Subject to all necessary approvals and the decision by the parties to proceed under the BFS, Yankuang will pay 91 percent of the refinery construction costs and receive 70 percent of the alumina product. Bauxite Resources will fund 9 percent of the refinery construction cost and receive 30 percent of the alumina product and receive assistance from Yankuang to arrange financing. As part of the financing assistance Yankuang has committed to offtake 50% of BRL's share of alumina production for 10 years.

On 30<sup>th</sup> July 2010, the Company entered into a bauxite farm-in and joint venture agreement with HD Mining & Investment Ltd (HDM) a wholly owned subsidiary of Shandong Bureau No.1 Institute for Prospecting of Geology & Minerals, (Shandong). HDM is currently working towards obtaining 40% interest in the bauxite rights of several tenements wholly owned by BRL. This interest will be triggered if HDM enters into a binding commitment to undertake a mining feasibility study on the tenements. Should HDM and BRL make a decision to mine, then HDM will earn an additional 20% interest in bauxite rights on the tenements. BRL maintains 100% interest in other minerals.

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

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## COMPETENT PERSON STATEMENT

### ***Cardea 1&2, Cardea 3, Juturna, Vallonia, Minerva, Aurora, Rusina and Vallonia Mineral Resources***

*The information in this report that relates to Mineral Resources is based on information compiled by Peter Senini who is a Member of the Australian Institute of Geoscientists. Mr Senini is a consultant to the company. 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 his information in the form and context in which it appears.*

### ***Felicitas Mineral Resource***

*The information in this report that relates to Mineral Resources is based on information compiled by Graham de la Mare who is a Member of the Australian Institute of Geoscientists. Mr de la Mare is employed by Runge Limited. Mr de la Mare 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 de la Mare consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

*The information in this announcement that relate to Exploration Information are based on information compiled by Neil Martin a member of the Australian Institute of Geoscientists. Mr Martin is a qualified geologist with sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as a Competent Person as defined in the 2004 Edition of the "Australasian Code for Reporting of exploration Results, Mineral Resources and Ore Reserves". Mr Martin has consented to the inclusion in this announcement of the Exploration Information in the form and context in which it appears.*

<b>Parameters for Felicitas resource estimate</b>	
Sampling techniques	Vacuum samples were collected as 0.5m samples using a twin riffle splitter.
Drilling techniques	All drilling is vacuum using a 45mm drill bit.
Drill sample recovery	Actual recoveries are not recorded but riffle split samples are weighed and should be approximately 1.5kg. This provides an indirect record of sample recovery. Geologists comment when recovery is poor or ground conditions are wet.
Logging	All holes were field logged by company geologists. Lithology and weathering information is routinely recorded.
Sub-sampling techniques and sample preparation	All sampling procedures are considered to be of an acceptable standard and adhere to industry standards. Vacuum – 0.5m samples collected at the rig using a riffle splitter to collect approximately 1.5kg samples in calico bags, with the remaining sample dropped onto the ground. Procedure for field duplicate sampling for vacuum drilling is to retain both riffle split samples at a rate of 1:100, and more recently to 1:25 samples.
Quality of assay data and laboratory tests	Estimates for principal bauxite components of alumina, silica, iron, titania, loss on ignition, and a suite of trace elements analysed by XRF at Nagrom Laboratory in Perth. Laboratory control measures include the use of four matrix matched standards, and determination of precision and accuracy according to ISO standards (certified standards, blanks, check assay and duplicate sampling).  BAJV programs of QAQC have produced results which support the sampling and assaying procedures used at the site.
Verification of sampling and assaying	No verification of intersections has been carried out at Felicitas
Location of data points	All the drill holes used in the resource estimate have been accurately surveyed. Down hole surveys have not been taken as drill holes are all less than 25m in depth and drilled vertically through the predominantly flat lying laterite.
Data spacing and distribution	Drill spacing of 80m (along strike) by 80m (on section) and considered adequate to establish both geological and grade continuity.
Orientation of data in relation to geological structure	The orientation of the drilling (vertical) is approximately perpendicular to the sub-horizontal mineralisation and is unlikely to have introduced any significant sampling bias.
Audits or reviews.	Sampling techniques were viewed in the field.
Database integrity	Data audits were undertaken in Surpac. No major errors were recorded. rOREdata validate the database before sending to BAJV.
Geological interpretation	Geological logging of drilling has confirmed the geometry of the mineralisation with a high degree of confidence. Geochemical changes down hole have been used to determine the bauxite zone.
Dimensions	The Felicitas resource area extends over a strike length of 14.8km (from 6,490,730mN – 6,505,550mN) and includes the 25m vertical interval from 358mRL to 333mRL.
Estimation and modelling techniques	The deposit mineralisation was constrained by wireframes constructed using a nominal 18% available Al <sub>2</sub> O <sub>3</sub> cut-off grade in association with changes to reactive silica down hole. The wireframes were applied as hard boundaries in the estimate. The bauxite domain was constrained into 24 separate objects. A statistical analysis was conducted on these objects. No high grade cuts were applied to the data. A geostatistical analysis was carried out on 4 of the main objects with resultant parameters applied to adjacent smaller lodges. Using parameters derived from modelled variograms, Ordinary Kriging was used to estimate average block grades in 3 passes using Surpac. Parent block size of 40m NS by 40m EW by 1m vertical with sub-cells of 20m by 20m by 0.5m. The parent block size was selected on the basis of being approximately 50% of the average drill hole spacing in the deposit. Validation of the model included detailed comparison of composite grades and block grades by northing and elevation. Validation plots showed good correlation between the composite grades and the block model grades.
Moisture	Tonnages and grades were estimated on a dry in situ basis. No moisture values were reviewed
Cut-off parameters	The Mineral Resource has been reported at a 25% Av Al <sub>2</sub> O <sub>3</sub> cut-off and has been based on assumptions about economic cut-off grades for open pit mining.
Mining factors and assumptions	The deposit has the potential to be mined using open pit techniques.
Metallurgical assumptions	No assumptions have been made regarding metallurgy other than the material could be refined using the industry recognised Bayer Processing method.
Bulk density	The in situ bulk density assignment was based on 773 previous reported measurements on diamond core samples taken from neighbouring BAJV deposits.
Classification	Mineral Resources were classified in accordance with the Australasian Code for the Reporting of Identified Mineral Resources and Ore Reserves (JORC, 2004). The Indicated portion of the resource was defined where the drill spacing was at 80m by 80m, continuity of mineralisation was robust through the thickest bauxite zones where limited or no calculated assays were used, the overlying topography was flat to slightly inclined, and kriging efficiencies were greater than 90%. The Inferred portion of the resource was defined where the drill spacing was still predominantly 80m by 80m but the topography was more undulating resulting in thinner and less continuous zones of mineralisation.
Audits and reviews	Internal audits have been completed by RUL which verified the technical inputs, methodology, parameters and results of the estimate.

<b>Parameters common to Aurora, Rusina, Juturna, Vallonia, Cardea 1&amp;2, Minerva &amp; Cardea 3 resource estimates</b>	
Sampling techniques	Vacuum samples were collected over 0.5m intervals (whole sample: Aurora, Rusina, Juturna & Vallonia; 50% twin riffle split sample: Cardea 1 & 2, Minerva, Cardea 3 )
Drilling techniques	The majority of drilling is vacuum using a 45mm drill bit
Drill sample recovery	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	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 sample for each 0.5m of vacuum drilling was collected into a calico bag at the drill site (Aurora, Rusina, Juturna & Vallonia) or samples for each 0.5m of vacuum drilling was split once through a riffle splitter and collected into a calico bag at the drill site (Cardea 1 & 2, Minerva, Cardea 3). If there is any chance that contamination or bias may occur through wet or sticky samples during riffle splitting, then the whole sample is collected. At the laboratory samples were dried, crushed, pulverized to p95/150micron before a subsample was taken for analysis. 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 in the field sample stream. Principal analytical techniques utilized include Fourier Transform Infra Red (FTIR), XRF (fused beads), and adiabatic bomb analysis (148°C, 30min. finish A/C <0.40).
Verification of sampling and assaying	A vacuum-diamond core twin-hole programme has been undertaken 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 a 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 to the average drill hole spacing used to defined the Mineral Resources.
Data spacing and distribution	Aurora & Rusina: variety of drill 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. Juturna, Vallonia Cardea 1 & 2, Minerva & Cardea 3: a variety of drill collar spacings ranging from wide spaced first pass drilling on a 160-metre square grid, to broader coverage on an 80-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	The orientation of the drilling (vertical) is approximately perpendicular to the sub-horizontal mineralisation and is unlikely to have introduced any significant sampling bias.
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.
<b>Aurora &amp; Rusina Resource Estimate Parameters – May 2011</b>	
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% available alumina threshold at Rusina and >24% 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	Aurora: mineralisation occurs in two large pods. The south pod has maximum extents in the order of 5.3km x 2.6km. The north pod has maximum extents in the order of 1.3km x 1.3km. The pod thickness in the north averages 2.7m and ranges from 0.1m to 11m while in the south the thickness averages 1.6m and ranges from 0.1m to 8.6m. The pods are near surface, flat lying and with average overburden thicknesses of 0.5m in the north and 0.9m in the south. Rusina: mineralisation occurs in four separate pods. The north pod has maximum extents in the order of 1.5km x 0.6km, the east pod has extents of 0.9km x 0.4km, the south pod has extent of 1.4km x 0.6km, and the west pod has extent of 0.9km x 0.4km. The pod thickness average is 1.7m and range of 0.5m to 5.0m in thickness. The pods are near surface, flat lying and with average overburden thickness 0.75m.
Estimation and modelling techniques	Aurora: 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. Rusina: 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. 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.
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% moisture).
Cut-off parameters	The cut-off grade applied to Rusina is a nominal 26% available alumina threshold derived from data measurements and/or regression estimates. The cut-off grade applied to Aurora is a nominal 24% 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	It is 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	A dry bulk density of 1.6 tonnes per cubic metre was applied to Rusina and Aurora estimates.
Classification	The Mineral Resource estimates were classified primarily on the basis of collar spacing with adjustments for data quality where considered appropriate. 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 40m 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.
<b>Juturna &amp; Vallonia Resource Estimate Parameters – June 2011</b>	
Geological interpretation	For both Juturna and Vallonia, geological wireframes were constructed to represent the major zones within the laterite profile. The overlying gravel zone and underlying clay zone are assumed to be outside of the main mineralised envelope, which is defined by the hardcap, bauxite and transitional zones. Each zone has been estimated individually in the Juturna model however due to the similarity of populations, the hardcap and bauxite zones were estimated together at Vallonia.
Dimensions	Juturna: mineralisation occurs in three main pods, joined loosely by some lower grade material. The two southern pods have a combined maximum extent in the order of 3.2km x 1.5km. The north pod has maximum extents in the order of 1.7km x 1.7km. The thickness of the main ore bearing zones in the south averages 2.5m and ranges from 0.3m to 8.0m while in the north the thickness averages 3.2m and ranges from 0.2m to 11.0m. The pods are near surface, flat lying and with average overburden thicknesses of 0.7m. Vallonia: the resource was modelled as two discrete zones. The eastern zone has maximum extents in the order of 1.0km x 0.6km; the western zone has extents of 2.1km x 1.1 km. The thickness of the main ore bearing zones averages 1.8m and ranges from 0.8m to 6.0m. The pods are near surface, flat lying and with average overburden thickness 0.6m.
Estimation and modelling techniques	Both Juturna and Vallonia were estimated using three dimensional block modelling within the interpreted mineralised zones of hardcap, bauxite and transitional. Block grades for alumina, silica, available alumina and reactive silica were estimated using ordinary kriging within the discrete geological zones. Some available alumina and reactive silica grades outside of the main ore zone were not assayed and were populated using a multiple linear regression from the estimated alumina and silica block grades. These values were then merged with assayed values to provide a complete data set for estimation purposes. 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.
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% moisture).
Cut-off parameters	The cut-off grade applied to both Juturna and Vallonia is a nominal 25% available alumina threshold derived from data measurements and/or regression estimates.
Mining factors and assumptions	It is 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. Reactive silica is below the four to five dry-weight percent that is implied to 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. Low-silica sources within the deposits could also be blended with higher silica resources to produce acceptable process products.
Bulk density	A dry bulk density of 1.6 tonnes per cubic metre has been used in both the Juturna and Vallonia estimates.
Classification	The Mineral Resource estimates were classified primarily on the basis of collar spacing with adjustments for data quality where considered appropriate. The Aurora estimate has been classified as Indicated Mineral Resource where the collar spacing is 40m square or less and Inferred Mineral Resource elsewhere.
Audits and reviews	The mineral resource estimates have been peer reviewed by Snowden 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.
<b>Cardea 1&amp;2 &amp; Minerva Resource Estimate Parameters – August 2011</b>	
Geological interpretation	For both Cardea and Minerva, geological wireframes were constructed to represent the major zones within the laterite profile. The overlying gravel zone and underlying clay zone are assumed to be outside of the main mineralised envelope, which is defined by the hardcap, bauxite and transitional zones. Each zone has been estimated individually in each model.
Dimensions	At Cardea, the area of mineralisation occurs within a series of geological zones which extend over 2.8km strike length and 10 km width. The area is extended to a known depth of 9m from the surface. The thickness of the individual zones ranges from less than 1 m up to 6 m.
Estimation and modelling techniques	Both Cardea and Minerva were estimated using three dimensional block modelling within the interpreted mineralised zones of hardcap, bauxite and transitional. Block grades for alumina, silica, available alumina and reactive silica were estimated using ordinary kriging within the discrete geological zones. Some available alumina and reactive silica grades outside of the main ore zone were not assayed and were populated using a multiple linear regression from the estimated alumina and silica block grades. These values were then merged with assayed values to provide a complete data set for

	estimation purposes. 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.
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% moisture).
Cut-off parameters	The cut-off grade applied to both Cardea and Minerva is a nominal 25% available alumina threshold derived from data measurements and/or regression estimates.
Mining factors and assumptions	It is 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. Reactive silica is below the four to five dry-weight percent that is implied to 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. Low-silica sources within the deposits could also be blended with higher silica resources to produce acceptable process products.
Bulk density	A dry bulk density of 1.6 tonnes per cubic metre has been used in both the Cardea and Minerva estimates
Classification	Bauxite Resources has classified the Mineral Resource estimates primarily on the basis of collar spacing with adjustments for data quality where considered appropriate. 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 Snowden 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.
<b>Cardea 3 Resource Estimate Parameters – November 2011</b>	
Geological interpretation	Geological logging of drilling has confirmed the geometry of the mineralisation with a high degree of confidence. Geochemical changes down hole have been used to determine the bauxite zone. A wireframe was constructed to represent the major zone of mineralisation within the laterite profile. The overlying gravel zone and underlying clay zone are assumed to be outside of the main mineralised envelope, which is defined by the hardcap, bauxite and transitional zones
Dimensions	The Cardea 3 resource area extends over a strike length of 3,8km, includes the 11.5m vertical interval from 344mRL to 332.5mRL and occurs as one continuous zone (pod). The Cardea3 portion within E70-3432 (BAJV) occurs as one main zone in the south and a small limb to the north which extends into E70-3160 (Shandong/HDM) and is part of the main continuous zone of mineralisation. The mineralisation is near surface, flat lying with an average overburden thickness of 0.75 metres.
Estimation and modelling techniques	The deposit mineralisation was constrained by wireframes constructed using a 16% available alumina cut-off grade in association with changes to reactive silica down hole. The wireframes were applied as hard boundaries in the estimate. The bauxite domain was constrained into one continuous zone of mineralisation and a statistical analysis was conducted on this domain. No high grade cuts were applied to the data. Using parameters derived from modelled variograms, Ordinary Kriging was used to estimate average block grades in 3 passes using Surpac. An ID2 interpolation was used to check the OK model. Parent block size of 40m NS by 40m EW by 1m vertical with sub-cells of 10m by 10m by 0.5m. The parent block size was selected on the basis of being approximately 50% of the average drill hole spacing in the deposit. Validation of the model included detailed comparison of composite grades and block grades by northing and elevation. Validation plots showed good correlation between the composite grades and the block model grades.
Moisture	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% moisture).
Cut-off parameters	The Mineral Resource has been reported at a 25% available Al <sub>2</sub> O <sub>3</sub> cut-off and has been based on assumptions about economic cut-off grades for open pit mining.
Mining factors and assumptions	It is 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	The available alumina grades exceed the stated Bauxite Resources target grade. Reactive silica is below the four to five dry-weight percent that is implied to 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 can be positively affected by application of beneficiation techniques. Low-silica sources within the deposits could also be blended with higher silica resources to produce acceptable process products.
Bulk density	A dry bulk density of 1.6 tonnes per cubic metre has been used. The in situ bulk density assignment was based on 770 previous reported measurements on diamond core samples taken from neighbouring BRL deposits.
Classification	Mineral Resources were classified in accordance with the Australasian Code for the Reporting of Identified Mineral Resources and Ore Reserves (JORC, 2004). The Indicated portion of the resource was defined where the drill spacing was at 80m by 80m, continuity of mineralisation was robust through the thickest bauxite zones where limited or no calculated assays were used, and supported by kriging efficiencies of greater than 90%. The Inferred portion of the resource was defined where the drill spacing was still predominantly 80m by 80m, continuity of mineralisation was good, but a portion of available alumina and reactive silica assays were calculated rather than assayed.
Audits and reviews	The mineral resource estimates have been peer reviewed by Snowden 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.