# **BAUXITE** RESOURCES LIMITED

## 48% INCREASE IN BAUXITE RESOURCE AT CERES DEPOSIT IN DARLING RANGE, WA

**23 April 2018**


**ASX Code: BAU**

**BAUXITE RESOURCES LTD**

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**Highlights**

- **BRL/HDM JV Ceres resource updated to JORC 2012 compliance and now stands at: 21.9Mt @ 31.4% low temp available alumina (41.2% total) and 3.2% reactive silica**
- **Resource is near surface**
- **Resource is close to existing bauxite state agreement areas**
- **BRL/HDM JV resources now totals 94.7Mt**
- **Under BRL/HDM JV, HDM is to pay 100% of exploration costs to earn up to a 60% interest in resource**

**Bauxite Resources Limited (ASX:BAU) ("BRL" or the "Company")** is pleased to announce a resource update for the BRL/HD Mining joint venture Ceres bauxite deposit in the Darling Range, Western Australia.

The exploration project areas are contained within the Company's joint venture agreement with HD Mining & Investments Pty Ltd, ("**HDM**") the wholly owned subsidiary of Shandong Bureau No.1 Institute for Prospecting of Geology & Minerals ("**Shandong**").

Under the BRL/HDM joint venture arrangements, HDM will earn a 40% participating interest in a specific resource after making a binding commitment to undertake a feasibility study on that resource. In addition, HDM will earn another 20% participatory interest in that resource after completion of a feasibility study and a decision to mine.

Up until decision to mine, HDM are fully funding exploration activities. BRL retains 100% interest in other minerals for these exploration licences.

Ceres is located on a number of private land holdings on exploration licence E70/3179 north of the township of Williams, approximately 135km southeast of Perth. The Company currently has exploration access agreements in place. Mining access agreements and the grant of a mining lease will be required for mining to occur.

The previous resource estimate announced in July 2012 stood at 14.8Mt at 31.7% available alumina, with the current upgrade resulting from the assignment of an updated bulk density and the drilling of an additional 119 vacuum holes during 2014 and 2017 (see Figure 2 for drill hole locations). The resource is shallow with mineralisation modelled up to 14m (average <3m).

**Table 1: Total Ceres Resource Classification (25% available alumina cut-off)**

| JORC classification | Quantity (Mt) | $Al_2O_3$ % (total) | $Al_2O_3$ % (available at 148°) | $SiO_2$ % (total) | $SiO_2$ % (reactive at 148°) |
|---|---|---|---|---|---|
| Inferred | 21.9 | 31.4 | 41.2 | 20.4 | 3.2 |
| **Total** | 21.9 | 31.4 | 41.2 | 20.4 | 3.2 |

*Note - all grades are unbeneficiated*

## Resource Details

The Maiden Ceres Mineral Resource was reported in accordance with JORC 2004 standards in April 2012 by Snowden Mining Consultants ("Snowden"). The updated Ceres March 2018 Mineral Resource was completed by Ashmore Advisory Pty Ltd.

### Geology and Geological Interpretation

The geological setting is laterite over a predominantly granitic basement with mineralisation occurring as flat lying to slightly undulating zones formed by the weathering of basement rocks. The deposit is similar in style to many other bauxite deposits in the Darling Range. The resource comprises a bauxite horizon modelled up to 14m depth (average thickness <3m).

The resource consists of 3 zones across a strike length of 18.5km, located on private landholdings.

### Sampling and Sub-sampling Techniques

Vacuum samples were collected at 0.5m intervals at the rig. Typically, entire samples were analysed, however those weighing more than 2kg were split using a twin riffle splitter (50:50) used at the rig. All samples were dry.

All holes were drilled vertically, with intersected thicknesses considered as true thickness, given the relatively flat lying nature of mineralisation.

### Drilling Techniques

The Ceres Mineral Resource is based on vacuum drilling completed between 2010 and 2017 totalling 3,147 vacuum holes completed for 8,426m, of which 1,057 of the holes have been included within the resource. See Figure 2 for all drill hole locations. Drill hole spacing is variable from 320m by 320m, with infill drilling to 80m by 80m.

Samples were analysed using a variety of methods including low temperature caustic (148°C) digest and ICP-OES analysis to determine available alumina and reactive silica. Fourier Transform Infra-Red spectroscopy was utilised to determine total $Al_2O_3$, $Fe_2O_3$, $SiO_2$, $TiO_2$ and a variety of trace elements, with check analysis by X-Ray Fluorescence spectrometry to verify results. Results reported as available alumina and reactive silica represent low temperature digestion analyses.

### Estimation Methodology

Wireframes for the resource study were generated using cross sectional interpretations based on mineralised envelopes constructed using down hole geochemistry and associated lithological logging. Ordinary Kriging was used to estimate the Ceres resource. Full details are attached below.

Bulk density assigned in the March 2018 Mineral Resource has increased due to measurements obtained from the analogous Felicitas bauxite deposit.

### Classification Criteria

The Ceres deposit meets the criteria for Inferred Mineral Resource. Geological evidence is sufficient to imply but not verify geological and grade continuity.

### Cut-off Grades

The selected cut-off grade at Ceres (25% available alumina) results in a resource grade (31.4% available alumina) comparable to that currently economically mined by open pit methods elsewhere in the Darling Range, and as such is believed to be viable for alumina refining.

### Mining Methods and Metallurgical Parameters

It is assumed that the deposit could potentially be mined using open pit techniques. No assumptions have been made regarding metallurgy other than the material could be refined using the industry recognised Bayer Processing method.

For further company details, please visit www.bauxiteresources.com.au



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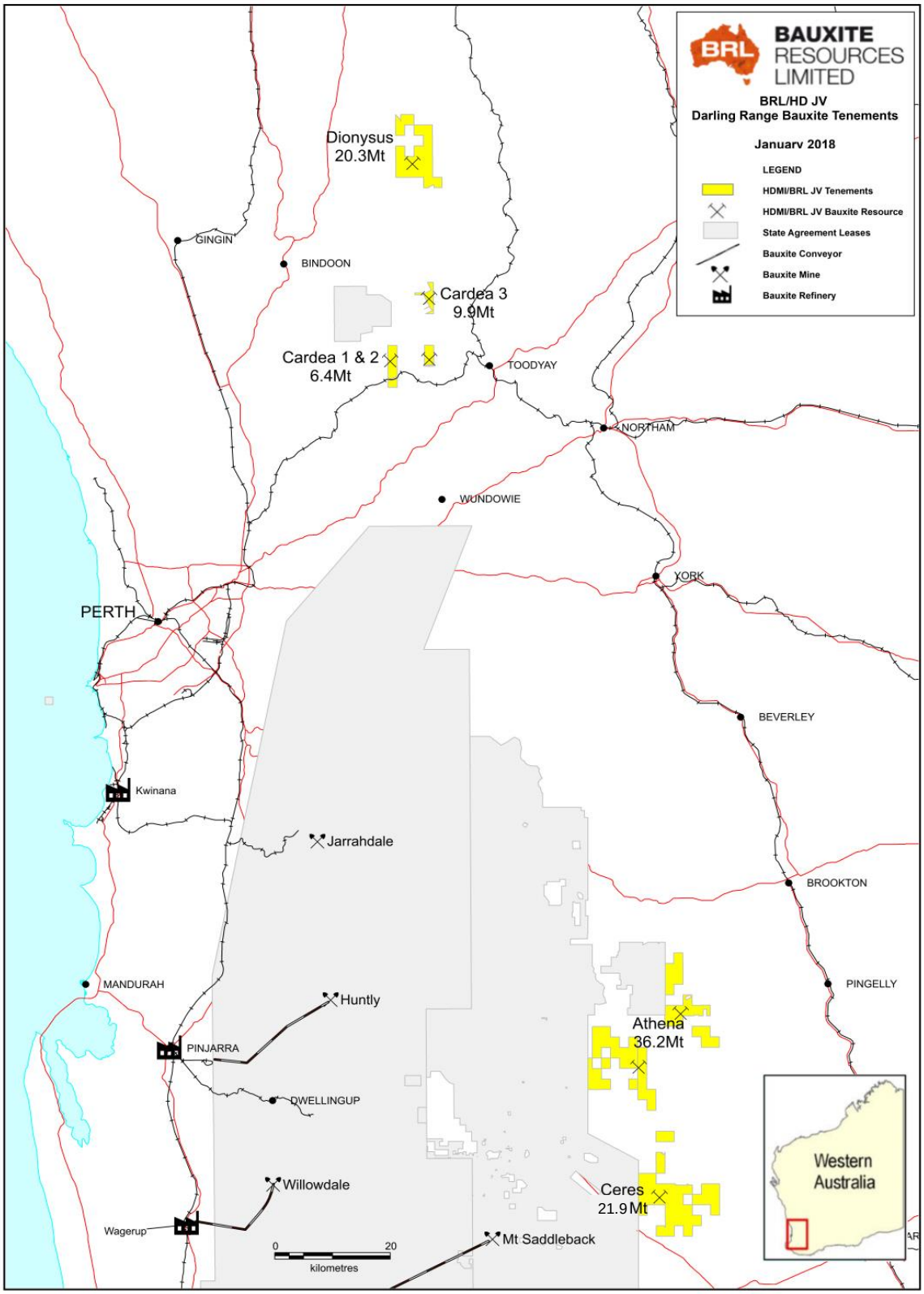


*Figure 1 – BRL/HD JV Mining Darling Range bauxite tenement holding and resource locations*



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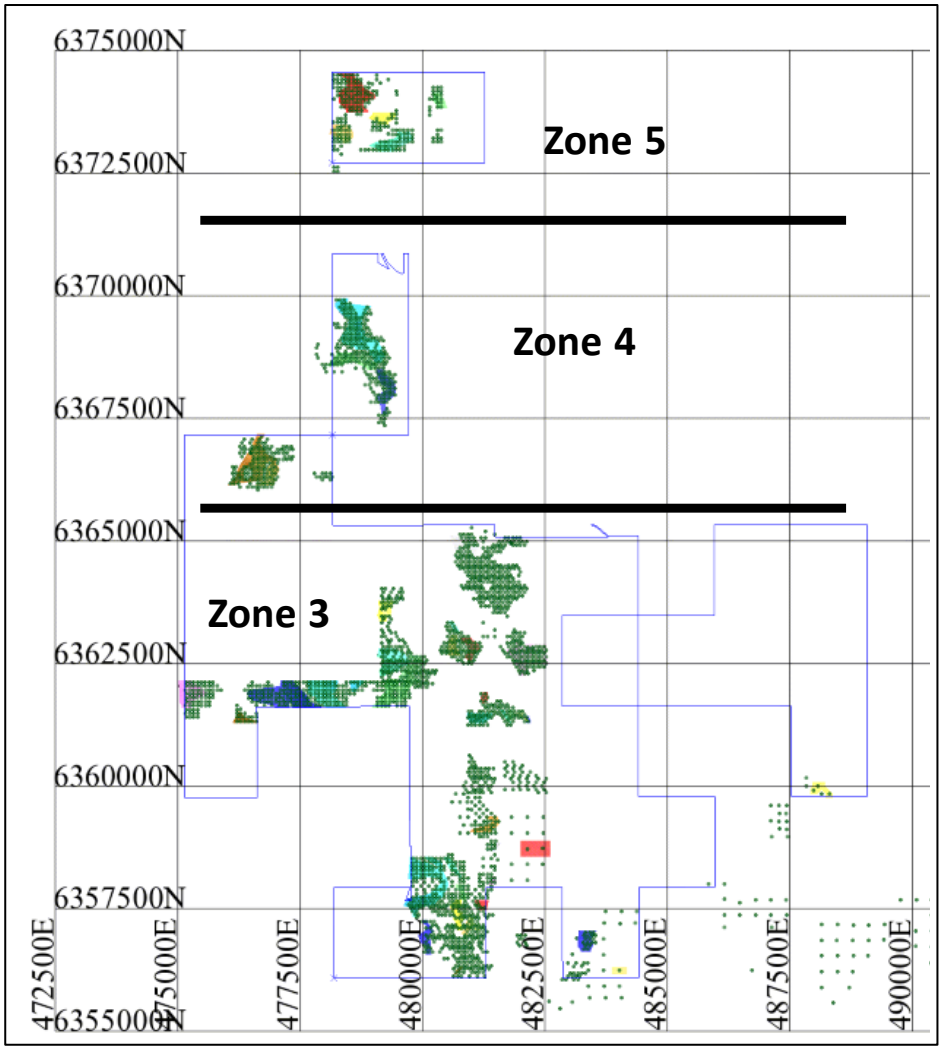


*Figure 2: Ceres Resource drill hole location map*

**Competent Persons Statement**

The information in this report that relates to the Ceres Mineral Resources is based on information compiled by Shaun Searle who is a Member of the Australian Institute of Geoscientists. Mr Searle is a director of Ashmore Advisory Pty Ltd, an independent consultant to BRL. Mr Searle 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 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Searle consents to the inclusion in the report of the statements based on his information in the form and context in which they appear.

The information in this report that relates to the HD Mining Joint Venture (HDJV) resource base as a whole, was compiled by Nick Algie. Mr Algie is a qualified geologist and a full time employee of Bauxite Resources Limited (BRL). He is a shareholder in BRL and is entitled to participate in BRL's employee performance plan, details of which are included in BRL's 2017 Remuneration Report. Mr Algie is a member of the Australian Institute of Mining and Metallurgy, and 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 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Algie has consented to the inclusion in this report of material in the form and context in which it appears.



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## JORC list of reporting criteria for Ceres resource, reported under 2012 reporting guidelines

### Section 1 Sampling Techniques and Data

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| ***Sampling techniques*** | • *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.*<br>• *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*<br>• *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.* | • The mineralised lodes at the Ceres deposit were sampled using Vacuum ("VAC") drilling. Holes were drilled vertical to optimally intersect the flat lying laterite.<br>• All drill hole collars in the supplied database have been accurately located with coordinates in MGA94 grid system. Down hole surveys have not been taken as drill holes are all less than 14m in depth and drilled vertically through the predominantly flat lying laterite.<br>• Vacuum samples were collected at 0.5m intervals. Whole samples were taken when sample return was less than 2kg. A twin riffle splitter was used for samples weighing more than 2kg, with one split collected in a calico bag for analysis and the remainder dropped on the ground. Sampling and QAQC procedures were carried out to industry standards. |
| ***Drilling techniques*** | • *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).* | • All drilling was undertaken using a tractor mounted vacuum drill rig utilising a 45mm drill bit. |
| ***Drill sample recovery*** | • *Method of recording and assessing core and chip sample recoveries and results assessed.*<br>• *Measures taken to maximise sample recovery and ensure representative nature of the samples.*<br>• *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.* | • All samples were weighed. This provides an indirect record of sample recovery.<br>• All VAC samples were visually checked for recovery, moisture and contamination.<br>• No relationship exists between sample recovery and grade. |
| ***Logging*** | • *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.*<br>• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.*<br>• *The total length and percentage of the relevant intersections logged.* | • All holes were field logged by company supervised geologists. Weathering, lithology, alteration and mineralogy information were recorded.<br>• No diamond core was drilled.<br>• All drill holes were logged in full.<br>• Logging was qualitative in nature. |
| ***Sub-sampling techniques and sample preparation*** | • *If core, whether cut or sawn and whether quarter, half or all core taken.*<br>• *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.*<br>• *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*<br>• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* | • No diamond core was drilled.<br>• All 0.5m VAC samples are collected at the rig. Typically, entire samples were analysed, however those weighing more than 2kg were split using a twin riffle splitter (50:50) used at the rig. All samples were dry.<br>• Samples were submitted to Nagrom Laboratories in Perth for a variety of analysis techniques. Samples at Nagrom were dried in a convection oven for 12 hours at 105°C. Dried samples were weighed to determine |



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|---|---|---|
| | • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.*<br>• *Whether sample sizes are appropriate to the grain size of the material being sampled.* | that they were less than 2kg and any overweight samples were crushed to -6.3mm if necessary then split to less than 2kg. Samples were then pulverised in a vibrating disc LM-5 pulveriser to produce a 150µm pulp. These pulps were split into 100g samples for retention and analysis.<br>• Field QC procedures involved the use of certified reference materials (1 in 40), and field duplicates (1 in 20 for samples >2kg in weight). The field duplicates have accurately reflected the original assay. Recognised laboratories have been used for analysis of samples.<br>• The standard sampling procedure used by BRL is to submit the entire sample to Nagrom for analysis. Samples are only split at the rig when the sample weight exceeds 2kg. A twin riffle splitter is used to collect a sample for analysis with the remainder dropped on the ground. Field duplicates are collected from these split samples at a rate of 1:20<br>• Sample sizes are considered appropriate to correctly represent the bulk tonnage mineralisation based on: the style of mineralisation, the thickness and consistency of the intersections, the sampling methodology and assay value ranges for bauxite. |
| ***Quality of assay data and laboratory tests*** | • *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*<br>• *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.*<br>• *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.* | • Samples were analysed at Nagrom Laboratory in Perth by Fourier-Transform Infrared ("FTIR"). Samples returning greater than or equal to 23% available alumina underwent low temperature caustic analysis (148°) bomb digestion ("BOMB") for analysis by ICP-OES using 1.0 ± 0.04g samples to determine available alumina and reactive silica. FTIR was used to determine total $Al_2O_3$, $Fe_2O_3$, $SiO_2$, $TiO_2$ and a variety of trace elements, with 10% of samples returning greater than 23% available alumina validated by X-Ray Fluorescence Spectroscopy ("XRF").<br>• For the 2014 and 2017 programs all samples returning greater than 23% available alumina underwent analysis by BOM digest and of those 10% also had analysis by XRF.<br>• No geophysical tools were used to determine any element concentrations.<br>• Laboratory QAQC includes the use of internal standards using certified reference material, laboratory duplicates and pulp repeats. The field duplicates have accurately reflected the original assay. Certified standards have generally reported within acceptable limits although bias in the FTIR results show the need for careful calibration when using this analytical technique. The QAQC results confirm the suitability of the drilling data for use in the resource estimation. |
| ***Verification of sampling and assaying*** | • *The verification of significant intersections by either independent or alternative company personnel.*<br>• *The use of twinned holes.*<br>• *Documentation of primary data, data entry* | • Significant drill hole intersections were previously reported by BRL to the ASX and verified by BRL exploration personnel. The BRL logging process involves placing drill samples for each 0.5m interval into chip trays |



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| Criteria | JORC Code explanation | Commentary |
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| | *procedures, data verification, data storage (physical and electronic) protocols.*<br>• *Discuss any adjustment to assay data.* | which are then photographed to provide a permanent record of the down hole lithology.<br>• No twin holes were drilled.<br>• BRL geologists logged all drill samples at the rig, with a minimum logging interval of 0.5m. Regular chip-tray samples were collected as permanent physical records for audit and validation purposes, and all holes photographed for future reference and reconciliation of assay results with geology. All logging data was captured in digital logging devices to ensure consistency of coding and minimise data entry errors. Logging is described using the BRL Bauxite Logging Codes preloaded into the data logger.<br>• Assay values that were below detection limit were adjusted to equal half of the detection limit value. Intervals with no samples were left blank in the database. |
| ***Location of data points*** | • *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*<br>• *Specification of the grid system used.*<br>• *Quality and adequacy of topographic control.* | • All the drill holes have been accurately surveyed in MGA grid co-ordinates. Down hole surveys have not been taken as drill holes are all less than 14m in depth and drilled vertically through the predominantly flat lying laterite.<br>• Collars have been located in UTM, MGA94, Zone 50K co-ordinates.<br>• Topographic surface based on surveyed collar coordinates. |
| ***Data spacing and distribution*** | • *Data spacing for reporting of Exploration Results.*<br>• *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.*<br>• *Whether sample compositing has been applied.* | • Prior to 2014, drill holes were completed on a nominal 160m by 160m grid and then infilled to 80m by 80m. For the 2014 and 2017 drill programs, drill holes were completed on a nominal 320m by 320m grid and then infilled to 160m by 320m and 160m by 160m in some areas.<br>• The mineralised domains have demonstrated sufficient continuity in both geological and grade continuity to support the estimation procedure and classification applied under the 2012 JORC Code.<br>• All samples were taken at even 0.5m intervals so no compositing was required. |
| ***Orientation of data in relation to geological structure*** | • *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*<br>• *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.* | • The orientation of the drilling (vertical) is approximately perpendicular to the sub-horizontal mineralisation and is unlikely to have introduced any significant sampling bias.<br>• No orientation based sampling bias has been identified in the data |
| ***Sample security*** | • *The measures taken to ensure sample security.* | • Chain of custody is managed by BRL. Samples are stored on site prior to being trucked to Nagrom in Perth by courier. BRL employees have no further involvement in the preparation or analysis of the samples. |
| ***Audits or reviews*** | • *The results of any audits or reviews of sampling techniques and data.* | • The BRL Project Manager and Exploration Manager frequently visited site during drilling operations. On each occasion sample collection and geological logging was found to be in accordance with the Companies internal 'Vacuum Drilling Sampling Guideline'. |

**Section 2 Reporting of Exploration Results**



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| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| ***Mineral tenement and land tenure status*** | • *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*<br>• *The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.* | • The Ceres deposit occurs within tenement E70/3179. The tenement is covered mostly by private land. Historically several land access agreements have been entered into. E70/3179 forms part of the HD/BRL JV formed to explore for and define bauxite resources in the Darling Range of Western Australia.<br>• The tenement is in good standing. Mining access agreements and the grant of a Mining Lease will be required before mining operations can occur. |
| ***Exploration done by other parties*** | • *Acknowledgment and appraisal of exploration by other parties.* | • Bauxite was identified in the greater region by Pacminex Pty Ltd in the period 1968-1975 by drilling of several target areas. |
| ***Geology*** | • *Deposit type, geological setting and style of mineralisation.* | • Regionally, The bauxite intersected is typical of that seen in number of Darling Range deposits, representing a profile of weathering and alteration, of apparently in-situ material, separated by a thin clay or saprolite interval from the underlying ancient granite and gneiss of the Yligarn Craton. Resultant bauxite zones occur as flat lying tabular bodies, often pod like in nature. |
| ***Drill hole information*** | • *A summary of all information material to the under-standing of the exploration results including a tabulation of the following information for all Material drill holes:*<br>  • *easting and northing of the drill hole collar*<br>  • *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*<br>  • *dip and azimuth of the hole*<br>  • *down hole length and interception depth*<br>  • *hole length*<br>• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.* | • All exploration results have previously been reported by BRL.<br>• All information has been included in the appendices. No drill hole information has been excluded. |
| ***Data aggregation methods*** | • *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.*<br>• *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.*<br>• *The assumptions used for any reporting of metal equivalent values should be clearly stated.* | • Exploration results are not being reported.<br>• Not applicable as a Mineral Resource is being reported.<br>• Metal equivalent values have not been used. |
| ***Relationship between mineralisation widths and intercept lengths*** | • *These relationships are particularly important in the reporting of Exploration Results.*<br>• *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.*<br>• *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').* | • All drill holes are vertical and intersect the tabular, flat lying mineralisation orthogonally, and represent close to true thickness. |
| ***Diagrams*** | • *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for* | • Relevant diagrams have been included within the Mineral Resource report main body of |



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| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | *any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.* | text. |
| ***Balanced Reporting*** | • *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*<br>• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.* | • All hole collars were surveyed in MGA94 Zone 50 grid using differential GPS.<br>• Exploration results are not being reported. |
| ***Other substantive exploration data*** | • *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples - size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.* | • No other exploration data other than vacuum drill samples have been collected at Ceres. |
| ***Further work*** | • *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large- scale step-out drilling).*<br>• *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.* | • Drilling completed to date indicates the presence of bauxite mineralisation only. Further drilling will be conducted to improve the confidence in the geological continuity.<br>• Refer to diagrams in the body of text within the Mineral Resource report. |



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## Section 3 Estimation and Reporting of Mineral Resources

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| ***Database integrity*** | • *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.*<br>• *Data validation procedures used.* | • The database is validated by rOREdata before sending to BRL geologists. All drill logs are validated digitally by the database geologist once assay results are returned from the laboratory.<br>• Ashmore also performed data audits in Surpac and checked collar coordinates, down hole surveys and assay data for errors. No errors were found. |
| ***Site visits*** | • *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.*<br>• *If no site visits have been undertaken indicate why this is the case.* | • A site visit has not been conducted by Ashmore.<br>• A site visit was not considered necessary due to the Ceres Mineral Resource classification (Inferred); and that an associate of Ashmore's previously visited site during the 2011 drill campaign. |
| ***Geological interpretation*** | • *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.*<br>• *Nature of the data used and of any assumptions made.*<br>• *The effect, if any, of alternative interpretations on Mineral Resource estimation.*<br>• *The use of geology in guiding and controlling Mineral Resource estimation.*<br>• *The factors affecting continuity both of grade and geology.* | • The confidence in the geological interpretation is considered to be good. The geological setting is laterite overlying granitic basement. The bauxite mineralisation is related to the weathering of granite or mafic rocks. The deposit is similar in style to many bauxite deposits in the Darling Range.<br>• Geochemistry has been used to assist identification of the rock type applied in the interpretation process.<br>• The deposit is tabular in geometry, however is often pod like in nature. Clear boundaries define the mineralisation.<br>• Outcropping of mineralisation has supported geochemistry. The mineralised domains are wireframed based on geochemistry and geological logging.<br>• The flat lying bauxite lodes are near surface within the laterite profile and follow the undulating topography. Lodes tend to thin out towards areas of higher terrain, thicken across flat to gently sloping terrain. The basal extent of the lodes is determined from geochemical changes noted down hole (such as a sudden marked increase in reactive silica across 0.5m intervals), in association with a noted increase in the clay content observed through lithological logging. |
| ***Dimensions*** | • *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.* | • The Ceres Mineral Resource area extends over a strike length of 18.5km (from 6,356,100mN to 6,374,500mN), has a maximum width of 7.5km (from 475,000mE to 482,500mE) and was modelled from surface to a depth of approximately 13m below surface. |
| ***Estimation and modelling techniques*** | • *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.*<br>• *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* | • Using parameters derived from modelled variograms, Ordinary Kriging ("OK") was used to estimate average block grades within the bauxite domain using Surpac software for seven elements; available alumina, reactive silica, Al2O3, SiO2, Fe2O3, TiO2 and LOI. No high grade cuts were deemed necessary. Drill hole sample data was coded using mineralisation wireframes and composited to 0.5m lengths using the fixed length technique. Maximum extrapolation distance from data points was 80m, half of the 160m drill hole spacing. |



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| Criteria | JORC Code explanation | Commentary |
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| | • *The assumptions made regarding recovery of by-products.*<br>• *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).*<br>• *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.*<br>• *Any assumptions behind modelling of selective mining units.*<br>• *Any assumptions about correlation between variables.*<br>• *Description of how the geological interpretation was used to control the resource estimates.*<br>• *Discussion of basis for using or not using grade cutting or capping.*<br>• *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.* | • Three dimensional mineralised wireframes were used to domain the data. As all samples were taken at even 0.5m intervals, no compositing was carried out.<br>• No top-cuts were applied to the data as no extreme grades were noted.<br>• The maximum distance of extrapolation from data points was 80m.<br>• No previous mining activity has taken place at Ceres. A previous estimate of Ceres was completed in 2012. Reporting of the updated Mineral Resource verifies the previous Mineral Resource grades, however tonnage has increased due to the higher bulk density used.<br>• It is assumed that there will be no by-products recovered from the mining of bauxite.<br>• The non-grade elements estimated are $Fe_2O_3$, and $TiO_2$. The deleterious elements estimated are reactive silica, whole rock $SiO_2$ and LOI.<br>• The parent block size was 20m NS by 20m EW by 2m vertical with sub-cells of 2.5m by 2.5m by 0.5m. The parent block size was selected based on Kriging Neighbourhood Analysis ("KNA"). Block discretisation was set to 4 by 4 by 2. An orientated 'ellipsoid' search was used to select data and was based on parameters taken from the variography. Three passes were used; the first pass used a range of 200m, with a minimum of 6 samples. For the second pass, the range was kept at 200m, with a minimum of 2 samples. For the third and final pass, the range was extended to 400m with a minimum of 1 sample. A maximum of 16 samples was used for each pass.<br>• Selective mining units were not modelled. The block size used in the resource model was based on drill sample spacing and lode orientation.<br>• There is a strong positive correlation between $Al_2O_3$ and available alumina and also between available alumina and LOI. Both $Al_2O_3$ and available alumina show a strong negative correlation with $Fe_2O_3$. There is a strong negative correlation between LOI and $Fe_2O_3$. The remaining elements are un-correlated.<br>• The deposit mineralisation was constrained by wireframes constructed using down hole geochemistry and associated lithological logging. The optimum bauxite mineralisation is characterised by high available alumina and very low reactive silica (preferably with a ratio of better than 10:1). The basal extent of the bauxite was determined by a noticeable increase in reactive silica with an associated decrease in available alumina across a 0.5m interval. This geochemical change generally coincided with intervals logged as transitional or clay material. The base of logged gravel coincided with the upper limit of the bauxite material. The wireframe was applied as a hard boundary in the estimate.<br>• To assist in the selection of appropriate top-cuts, log-probability plots and histograms |



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| | | were generated. The data from the bauxite domain typically showed normal distributions for all the elements except for reactive silica and total silica which showed a slight positive skewness. The lack of any distinct breaks in the shape of each distribution on the log probability plots and population histograms, and the very low CV values, suggest that no top-cuts are required.<br>• To validate the model, a qualitative assessment was completed by slicing sections through the block model in positions coincident with drilling. A quantitative assessment of the estimate was completed by comparing the average grades of the sample file input against the block model output for all the Mineral Resource lodes. A trend analysis was completed by comparing the interpolated blocks to the sample data within all the lodes. This analysis was completed for northings and elevations across the deposit. Validation plots showed excellent correlation between the sample grades and the block model grades. |
| ***Moisture*** | • *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.* | • Tonnages and grades were estimated on a dry in situ basis. |
| ***Cut-off parameters*** | • *The basis of the adopted cut-off grade(s) or quality parameters applied.* | • The Mineral Resource has been reported at a 25% available alumina cut-off grade.<br>• BRL has previously operated in its own right and under two Joint Ventures, with Yankuang (BAJV – now terminated) and HD Mining (HD Mining JV) respectively. The purpose of BRL activity is to explore for bauxite, where bauxite is defined under the JV's as heterogeneous material composed primarily of one or more aluminium hydroxide minerals and having more than 25% available alumina. BRL believes that the selected cut off at Ceres (25% available alumina) results in a product that is viable for alumina refining. |
| ***Mining factors or assumptions*** | • *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.* | • Ashmore has assumed that the deposit could potentially be mined using medium scale open pit techniques. The minimal amount of overburden and shallow nature of the deposit allows mining to be carried out with surface mining equipment, but the economic viability of this approach has not been verified in this study. |
| ***Metallurgical factors or assumptions*** | • *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an* | • No assumptions have been made regarding metallurgy other than the material could be refined using the industry recognised Bayer Processing method. |



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| | *explanation of the basis of the metallurgical assumptions made.* | |
| ***Environmental factors or assumptions*** | • *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.* | • The Ceres deposit is not subject to any environmental liabilities. |
| ***Bulk density*** | • *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.*<br>• *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.*<br>• *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.* | • Bulk density has been determined from results analysed by BAJV on the nearby Felicitas deposit. The Ceres mineralisation is assumed to be the same material and have the same bulk density. A value of 2.17t/$m^3$ was assigned to bauxite and waste material. This was based on 89 reported measurements on diamond core samples analysed from the BAJV drill program on the Felicitas deposit. Samples were dried and weighed prior to being coated in wax and weighed again whilst submerged in water.<br>• The 89 measurements have been recorded from 16 diamond drill holes at the Felicitas deposit. The samples have returned specific gravity values between 1.55t/$m^3$ and 2.85t/$m^3$ with an average bulk density figure of 2.32t/$m^3$. The first quartile value of 2.17t/$m^3$ has been applied to the block model. This is considered a conservative assignment of bulk density to allow for void spaces present in the material. |
| ***Classification*** | • *The basis for the classification of the Mineral Resources into varying confidence categories.*<br>• *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).*<br>• *Whether the result appropriately reflects the Competent Person's view of the deposit.* | • The Mineral Resource estimate is reported here in compliance with the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' by the Joint Ore Reserves Committee (JORC). The Mineral Resource was classified as Inferred Mineral Resource based on data quality, sample spacing, and lode continuity.<br>• The input data is comprehensive in its coverage of the mineralisation and does not favour or misrepresent in-situ mineralisation. The definition of mineralised zones is based on high level geological understanding producing a robust model of mineralised domains. This model has been confirmed by infill drilling which supported the interpretation. Validation of the block model shows good correlation of the input data to the estimated grades.<br>• The Mineral Resource estimate appropriately reflects the view of the Competent Person. |
| ***Audits or reviews*** | • *The results of any audits or reviews of Mineral Resource estimates.* | • Internal audits have been completed by Ashmore which verified the technical inputs, methodology, parameters and results of the |



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| | | estimate. |
| ***Discussion of relative accuracy/ confidence*** | • *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.*<br>• *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.*<br>• *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.* | • The lode geometry and continuity has been adequately interpreted to reflect the applied level of Inferred Mineral Resource. The data quality is good and the drill holes have detailed logs produced by qualified geologists. A recognised laboratory has been used for all analyses.<br>• The Mineral Resource statement relates to global estimates of tonnes and grade.<br>• No historical mining has occurred at Ceres, therefore reconciliation could not be conducted. |



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