



**BAUXITE**  
RESOURCES  
LIMITED

***Building a Long Term  
Bauxite Business  
AMEC Presentation  
23 June 2015***

### **Forward Looking Statements**

These materials include forward looking statements. Often, but not always, forward looking statements can generally be identified by the use of forward looking words such as “may”, “will”, “expect”, “intend”, “plan”, “estimate”, “anticipate”, “continue”, or other similar words and may include, without limitation, statements regarding plans, strategies, and objectives of management. Forward looking statements inherently involve known and unknown risks, uncertainties and other factors that may cause the company’s actual results, performance and achievements to differ materially from any future results, performance or achievements. Relevant factors may include, but are not limited to, changes in commodity prices, foreign exchange fluctuations and general economic conditions, increased costs, the speculative nature of exploration and project development, including the risks of obtaining necessary licenses and permits, political and social risks, changes to the regulatory framework within which the Company operates or may in the future operate, environmental conditions including extreme weather conditions, recruitment and retention of personnel, industrial relations issues and litigation.

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### **Competent Person’s Statement**

The information in this presentation that relates to **Cardea1&2, Juturna, Minerva and Rusina** Mineral Resources is based on information compiled by Peter Senini who is a member of the Australian Institute of Geoscientists. Mr Senini was an employee of the Company at the time of resource estimation and remains competent person for the above mentioned resources. He 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 Senini 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 presentation that relates to **Felicitas, Cardea3, Aurora, Ceres, Cronus, Fortuna, Dionysus and Athena** 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 RungePincocKMinarco (RPM). 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 2012 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 presentation that relates to **Exploration results** is based on information compiled by Mark Menzies, who is a member of the Australian Institute of Geoscientists. Mr Menzies is a qualified geologist and a full time employee, 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 Menzies has consented to the inclusion in this announcement of the Exploration Information in the form and context in which it appears.

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

The Company advises that material contains summaries of Exploration Results and Mineral Resources as defined in the 2012 Edition of the ‘Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves’ (JORC Code). The JORC compliant Public Reports released to the ASX declaring the exploration results or JORC resources referred to can be viewed on both the ASX and the Company websites, free of charge.

The company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of estimates of Mineral Resources that all material assumptions and technical parameters underpinning the estimate in the relevant market announcement continue to apply and have not materially changed. The company confirms that the form and context in which the Competent Person’s findings are presented have not materially modified from the original market announcement.

# Building a Long Term Bauxite Business

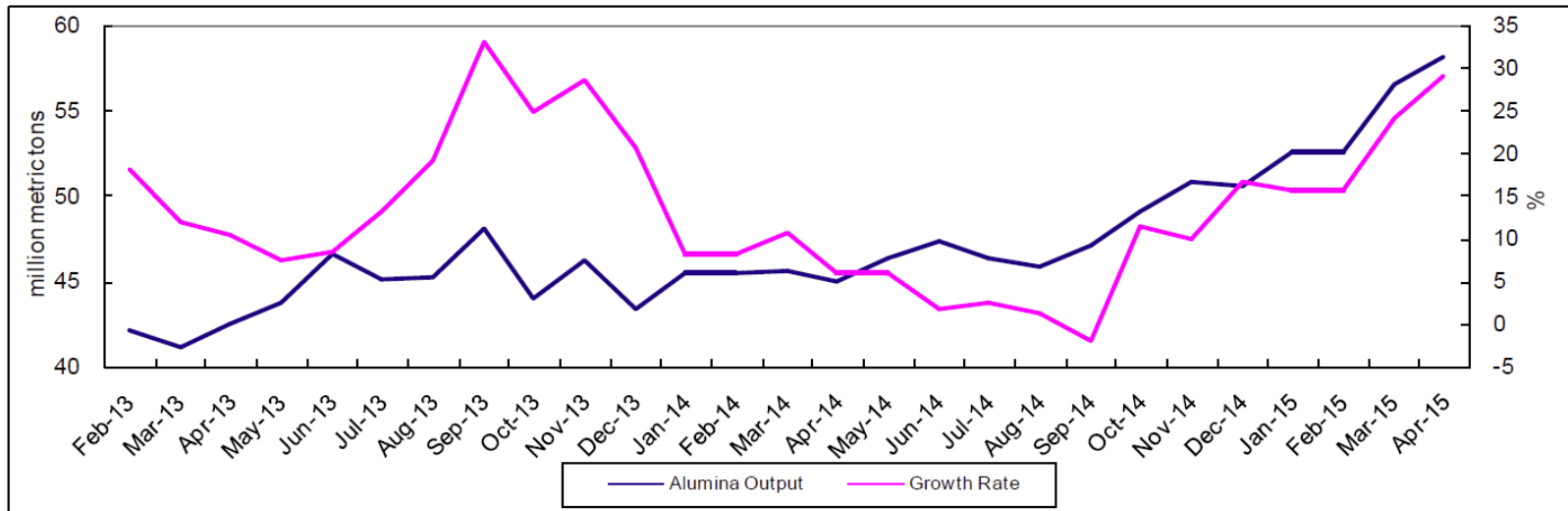
- Market Dynamics
- Secure supply of economic bauxite – Scale
- Drivers of Location of Supply – Opportunities or Threats
  - Infrastructure
  - Efficient Logistics/Proximity to Customer
  - Land Security
  - Capital and security of investment
  - Approval Requirements
  - Capital Intensity/Funding



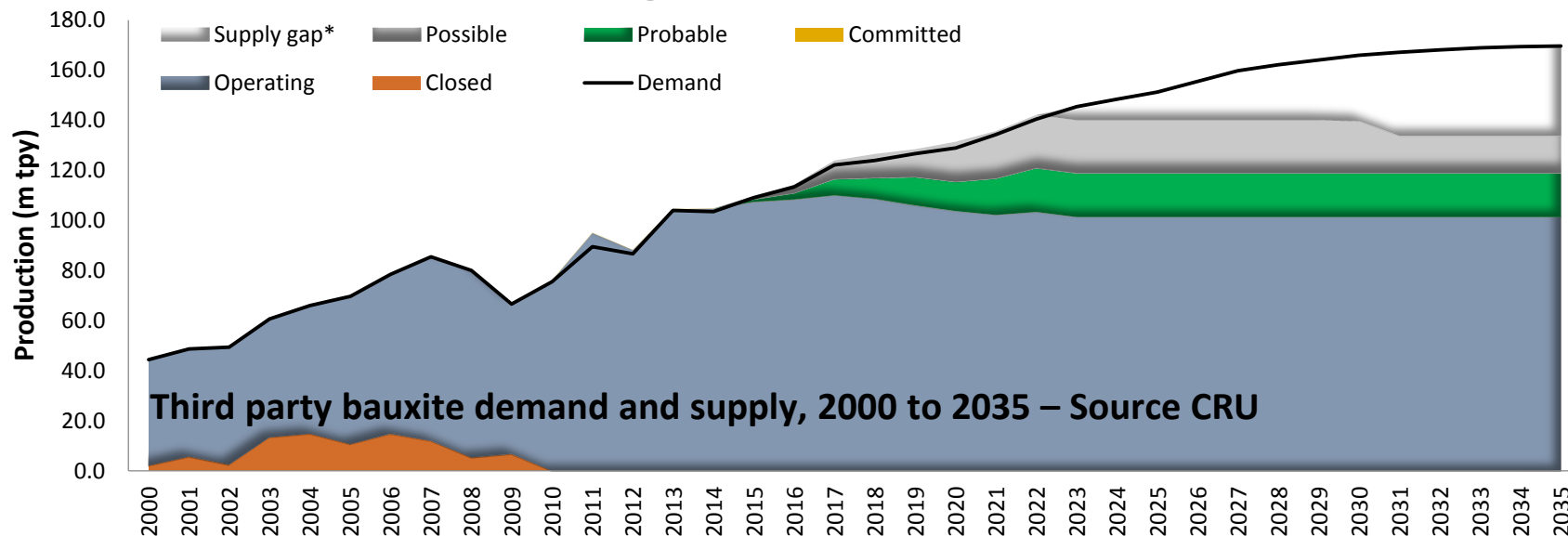
# Market Dynamics

- Bauxite demand essentially driven by long term aluminium growth
- Aluminium Growth and production outstripping virtually every other industrial metal
  - Global aluminium usage grew by 9% last year and is likely to grow by another 6.5% this year (source: Alcoa)
  - Reflects transformational shifts in the automotive sector with the light metal grabbing usage share from steel
  - However global production is now growing even faster, running at 6.4 percent over the first four months of the year (source: IAI)
  - China is the driver with annualised production rising by almost two million tonnes to 31.5 million since the start of January - Five Chinese aluminium producers in world top 11: (source: Platts)
- Alumina production also growing at significant rates in China

**Annualized Rate of Chinese Alumina Output and Y-o-Y Growth Rate**



# Alumina & Aluminium are both Driving Bauxite Demand

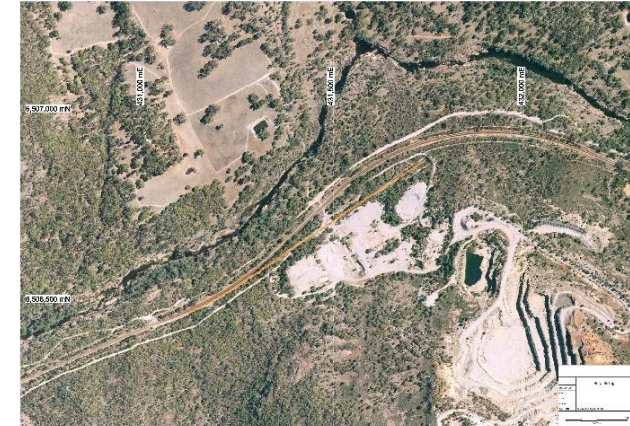
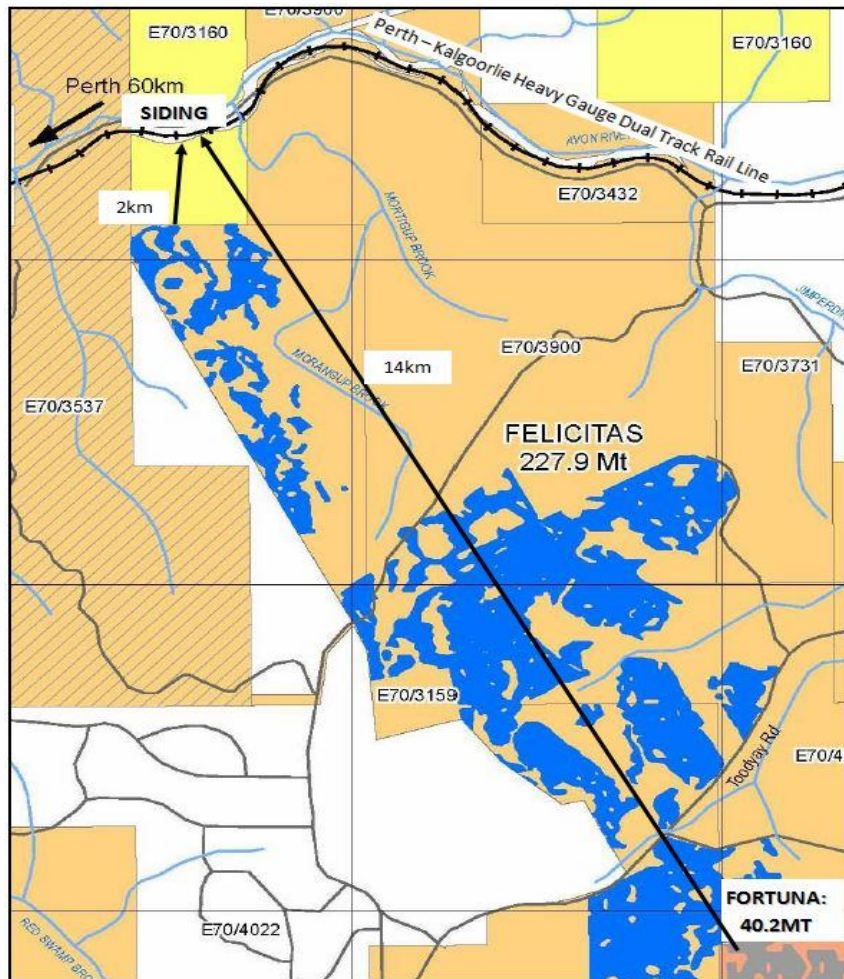


\*Note: Supply gap will be filled by the possible and speculative project which are expected to come on stream after 2022

- Market characterised by loss of Indonesian supply in Feb 2014 and increased alumina production
- Indonesian bauxite export ban has driven short term deficit however market has covered this loss – Gove, Malaysia, India and previously built up stocks have ensured supply is maintained
- Long term, new bauxite supplies will be needed
- Guinea and Vietnam are two potential sources of large scale bauxite supply
- Sovereign risk, lack of infrastructure, transport distance and cost from Guinea makes Australia a more attractive source of bauxite
- Market needs large long term supplies of consistent quality bauxite with high available Alumina to Reactive Silica ratios

# Infrastructure

- Large scale bauxite operation is 2-10Mtpa (outside existing operations)
- Bulk commodity and so requires bulk rail and port infrastructure
- BRL resources located close to rail facilities



# Secure Supply of Economic Bauxite

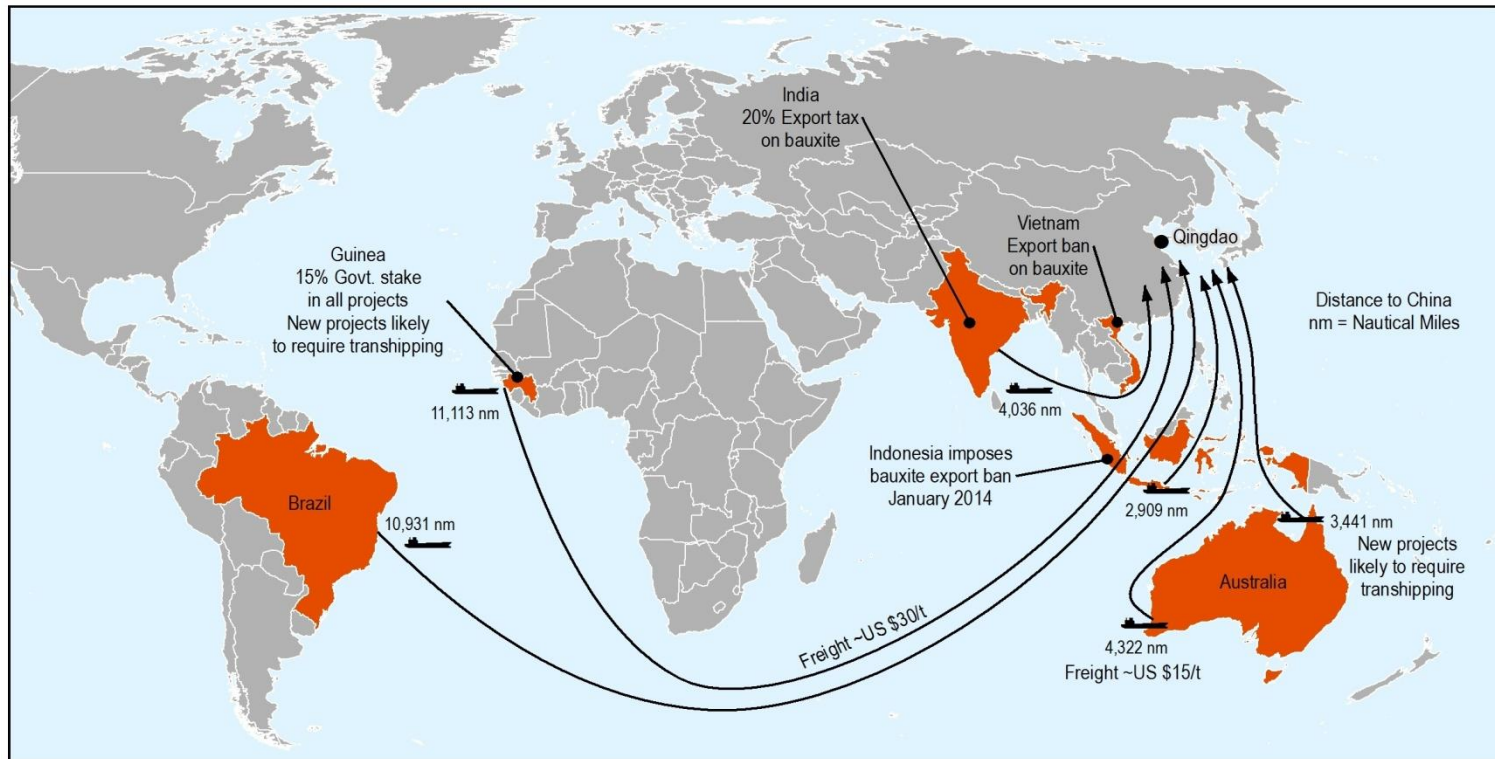
- 2014 – 107Mt alumina production (China 47%)
  - Requires 250-300Mt of bauxite
  - Average new refinery is 1-2Mtpa (2.5-6Mtpa bauxite)
- Customers want secure long term large scale supply
- Cost to refine - Determined by:
  - Low/High Temperature Digestion
  - Gibbsite/Boehmite/Diaspore
  - Energy and Caustic considerations
  - Logistics Costs
- Environment and energy considerations now important
- Darling Range Bauxite – 3 existing WA refineries in lowest 1/3 of producers by cost
- BRL Bauxite has good Value In Use (VIU) due to:
  - Gibbsite
  - Low Temperature Digestion with low Reactive Silica



# Efficient Logistics

- Typical Bauxite Project >70% logistics cost
  - Mining Costs US\$2-10/t
  - Local Transportation US\$5-20
  - Port/Shipping Costs US\$15-40
- Distance to market, vessel size and availability on route key to shipping costs
- Australian projects have a significant logistics advantage over African/Atlantic bauxite options

## Global bauxite supply logistics



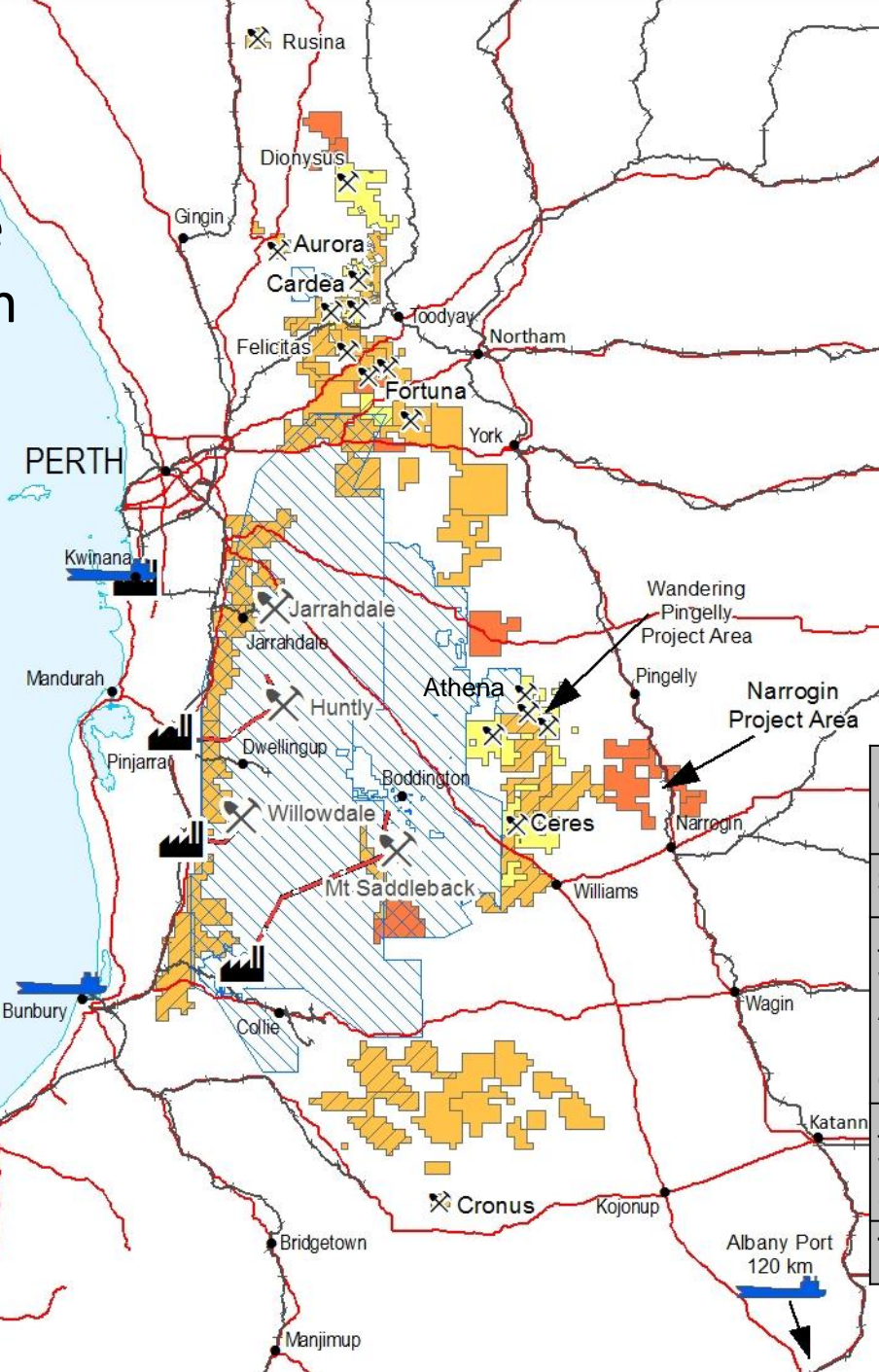


# BRL – Why we are positioned favourably

- ✓ Demand from China will require multiple new long term bauxite sources
- ✓ Australia is logical supply source
- ✓ BRL has a large resource base of efficient bauxite (BRL and JV partners ~400Mt)
- ✓ Infrastructure – Use of existing infrastructure means low capital entry
- ✓ Location – Large Bauxite/Alumina producing region with great logistics and close to mining centre of excellence
- ✓ Product – Gibbsite with low reactive silica and low Boehmite
- ✓ Company – Large tenement area and large resource base

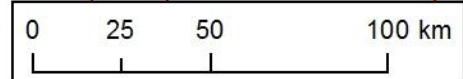


# BRL Darling Range Resources Location & Distribution



- Mine (Bauxite)
- Prospect
- Resource
- Towns
- Ports
- Alumina refinery
- Bauxite conveyor
- Railways
- Roads
- Alcoa/BHP bauxite State Agreement areas
- Tenement under application
- BRL 100% bauxite rights
- BAJV Pty Ltd bauxite JV
- HD Mining bauxite JV

Bauxite Ownership	Resource	Tenement Holdings
Solely BRL	40.2Mt	732km <sup>2</sup>
Joint Venture with Bauxite Alumina JV (Yankuang Group)	268.5Mt	4,365km <sup>2</sup>
Joint Venture with HD Mining & Investments	87.8Mt	744km <sup>2</sup>
<b>Total</b>	<b>396.5Mt</b>	<b>5,841km<sup>2</sup></b>



# BRL's Bauxite Projects - Fortuna

- BRL 100% tenement - 40.2Mt resource –not constrained by drilling
- ~14 km from rail siding ~ 100km by existing dual gauge rail line to Kwinana Port
- Completed Fortuna Concept Study by AMC and Level 2 Springtime baseline studies
- Completed level 2 baseline studies Level 2 Flora, Vegetation and Fauna Baseline. No TEC or PECs. Small number of flora and fauna of conservation significance, however it is likely populations may also exist outside the project footprint
- Opportunity to co-operate with BRL/Yankuang JV Felicitas Project on Infrastructure to rail (conveyors, crushing and rail loading) → Reduce CAPEX and OPEX
- **Recent activities**
  - **Follow-up of environmental studies**
  - **Commenced community engagement**
  - **Engaged with port, rail providers to examine development options for trans-loading at KBT**



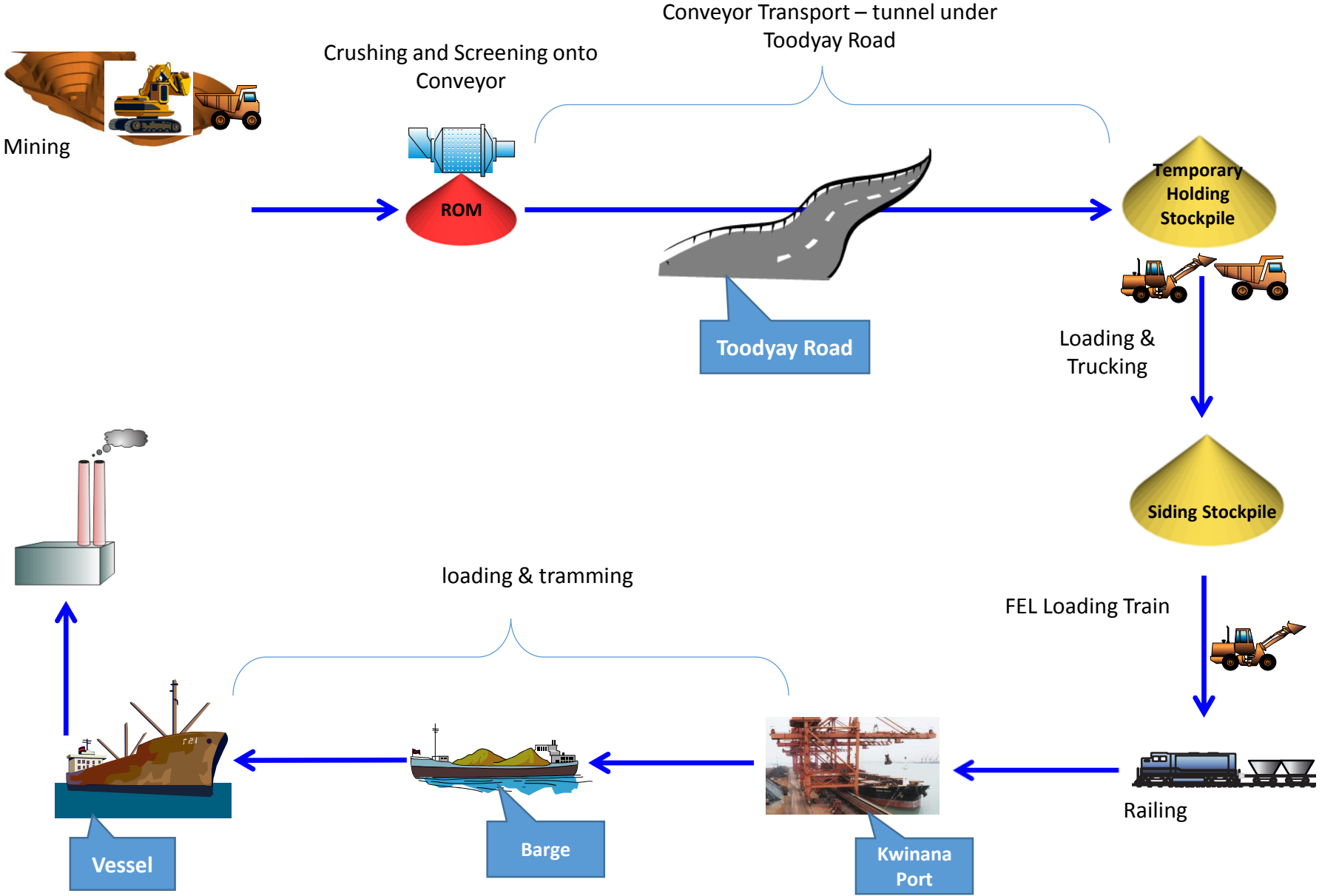
# BRL's Bauxite Projects - Fortuna

- Rail capacity on line for Fortuna development to Perth however some restrictions closer to port (12km)
- Scoping study targeted trans-shipment due to KBT2 capacity constraints and need for larger ships
- Require conversion of exploration access agreements to mining agreements
- Working with Port and Rail providers to design solution with large scale cost efficient capacity
- Port Privatisation process will have an impact on timing
- Proximity to Infrastructure – will result in significant reduction in CAPEX requirements compared to project without existing infrastructure
- Timeline to production will be impacted by Port access and approvals process



# Scoping Study Product Flow

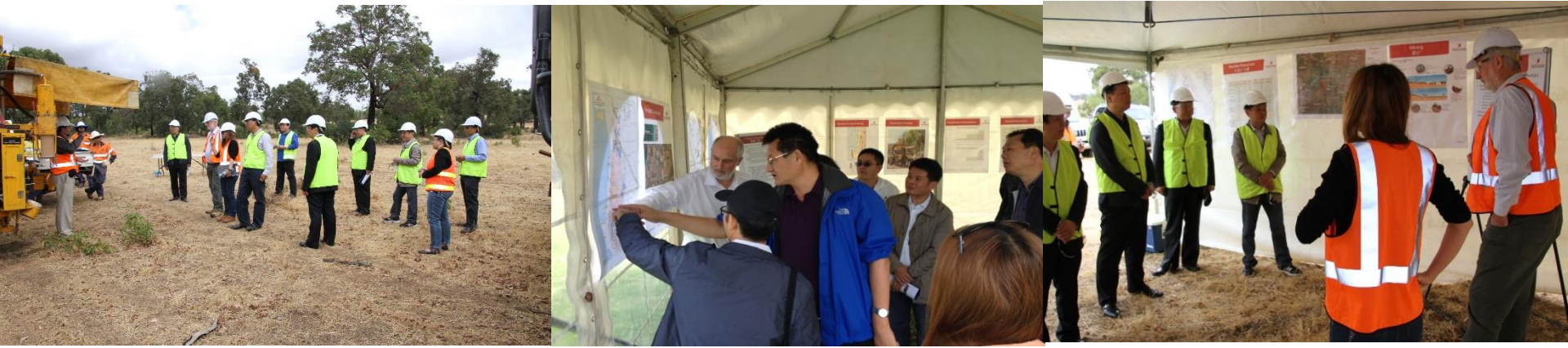
Source AMC Consultants



# BRL's Bauxite Projects - Felicitas

## Bauxite Alumina Joint Venture (BAJV) with Yankuang Resources (YK)

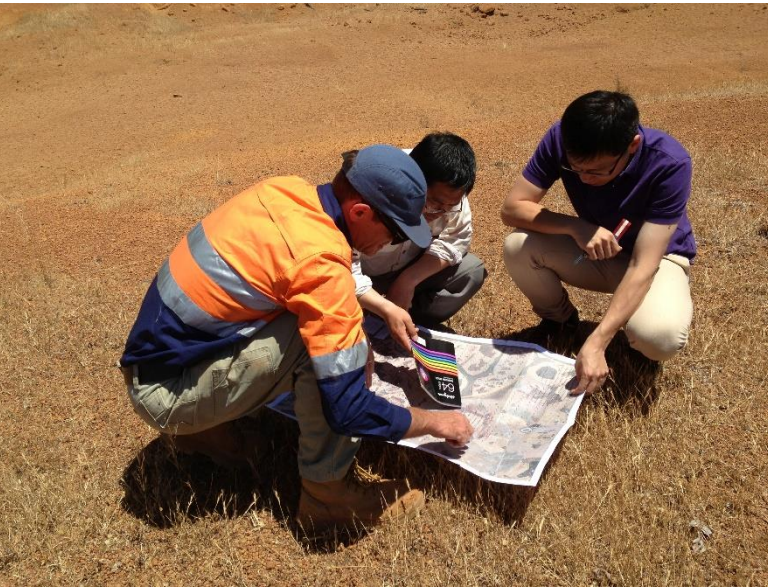
- Bauxite and Alumina rights
- YK to fund 70% of all bauxite exploration costs for 70% bauxite resource
- Felicitas Resource currently 228Mt of which over 50% in Measured category with further exploration upside
- Rail facilities located ~2km from northern end of deposit
- JV completed Rail, Environmental baseline and initial mine planning studies
- Contractual negotiations underway to determine development timing



# BRL's Bauxite Projects – Athena & Dionysus

## HD Mining Joint Venture

- JV with Shandong Geological Institute
- HD fund 100% of exploration and feasibility works to earn up to 60% interest
- Identified 87.8Mt of refinery grade bauxite resource with further exploration resource upside
- Two distinct projects Athena and Dionysus as part of a project pipeline
- Projects are favourably located near rail infrastructure
- Working towards BFS on one deposit as part of development strategy



# Opportunities and Threats

- ✓ Offer a large scale bauxite resource (largest resource base in Australia outside S32, Rio & Alcoa)
- ✓ Close to existing infrastructure – Rail and Port
- ? Trans-loading development, port privatisation and some rail capacity constraints
- ✓ Efficient Bauxite to process (Gibbsite, Low Reactive Silica and favourable  $AvAl_2O_3:RxSiO_2$  ratios) – significant proportion of lowest cost productions sourced from Darling Range Bauxite
- ? Lower available alumina levels than Guinea
- ✓ Long term forecast for aluminium/alumina usage growth is strong → demand for bauxite
- ? Will large scale developments in Africa/Indonesia/Malaysia fill this void
- ? Challenging economic conditions for explorers & JV's not moving as fast as intended – possible due to funding constraints in China
- ✓ Company well funded to progress to investment decision



# BRL – Strategy

- ✓ Develop pipeline of projects to supply demand from China for both bauxite and alumina
- ✓ Initial development (subject to further studies, approvals and FID) of Fortuna/Felicitas projects
- ✓ Clarify capacity constraints with respect to rail
- ✓ Develop port option for the large scale trans-shipment of bauxite in Cape/Panamax vessels
- ✓ Resolve the proposed development options under the BAJV with Yankuang with a view of moving this world scale bauxite project ahead in the near term.
- ✓ Continue the evaluation and development of the HD Mining Joint Venture to position the Athena and Dionysus deposits into pipeline bauxite projects
- ✓ Evaluate other investment opportunities in resources sector

