# BAUXITE NEWS

BRL

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# Welcome banners hung out for Bauxite Resources recent China visit

# 热烈欢迎澳大利亚铝矾土资源公司代表团

A delegation of four members from Bauxite Resources Limited (BRL) visited China in mid April to further their knowledge and follow up on bauxite Direct Shipping Ore (DSO) and alumina refinery enquiries.

BRL has had several direct enquiries from foreign companies, as well as indirect approaches through WA's Dept of Industry and Resources (DOIR) in Shanghai.

The Bauxite delegation consulted with senior Beijing government officials at the National Development and Reform Commission (NDRC) concerning Chinese foreign investment in Australia, specifically their attitude to bauxite and alumina investments by Chinese companies which was favorably received.

Executive Chairman, Luke Atkins, and two directors, Rob Nash and Neil Lithgow, together with project and infrastructure manager, Kevin Woodthorpe, spent ten days visiting several refineries and smelters in two of the major Chinese alumina producing regions.

The visits were coordinated through DOIR enquiries and referrals.

The team travelled south from Shanghai to Nanning and saw first hand the bauxite mining that feeds a newly commissioned beneficiation plant and alumina refinery.

This billion dollar project delivers 1.6mt p/a of alumina, took two years to construct and is one of many new

developments in the Chinese bauxite, alumina and aluminium industries.

The Yankuang Group in Jining, hung out the red welcome banners for the Bauxite delegation. Their aluminium smelter is one of the largest operations in the Shandong Province.

The BRL team were able to explain the benefits of Darling Range bauxite and found the various refinery /smelter operators very open about their future plans.

Yankuang Group make Bauxite Resources welcome at their smelter in Jining, Shandong Province





Mr Liangang Li, Sinomining with Mr Luke Atkins, BRL.

#### **Bauxite Resources meets Minmetals in China**

Mr Luke Atkins, Executive Chairman of Bauxite Resources Ltd, met with Mr Liangang Li, President of Sinomining International Ltd, a subsidiary of Minmetals, one of China's largest metals and minerals trading groups.

The Bauxite delegation visited the Yinhai Aluminium Corporation smelter, and the De-

bao refinery in which Minmetals has a 33% interest.

China is currently projected to import 31 million tonnes p/a of bauxite in 2008 which, until early April 2008, was the projected figure for 2012, and was the amount of their entire bauxite consumption in 2006 (both imported and locally sourced).

# Key Points Bauxite Resources Limited (BRL) visits China to:

- FOLLOW UP ON
   APROACHES MADE TO BRL
   AND WA DOIR REPRESENTATIVES IN CHINA RE
   BAUXITE OFFTAKE & ALUMINA REFINERY ENQUIRIES
- VISIT REFINERIES AND SMELTERS
- INCREASE BRL'S KNOWL-EDGE AND UNDERSTANDING OF THE CHINESE MARKET
- CONSULT WITH NDRC TO ASCERTAIN BEIJING'S ATTI-TUDE TO FOREIGN BAUXITE & ALUMINA INVESTMENT
- MEET WITH CHINESE CON-SULTANTS TO EXPLAIN THE BENEFITS OF DARLING RANGE BAUXITE
- MEET WITH CHINESE BASED WESTERN CORPORATE ADVISORS

#### Inside this issue:

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#### **PRESS REPORTS**

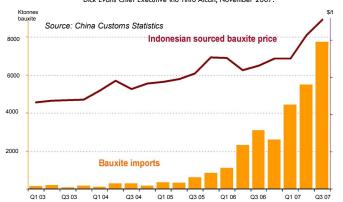
"Consumption of Aluminium in China is estimated to have increased by 40% in 2007, driven by strong growth in industrial production, ongoing urbanisation and rising incomes. China is estimated to have accounted for around a third of total world consumption in 2007, followed by Western Europe (18%), the United States (15%), and Japan (6%)." ABARE March 2008 Commodity Report Antaike, China.

#### NEWS

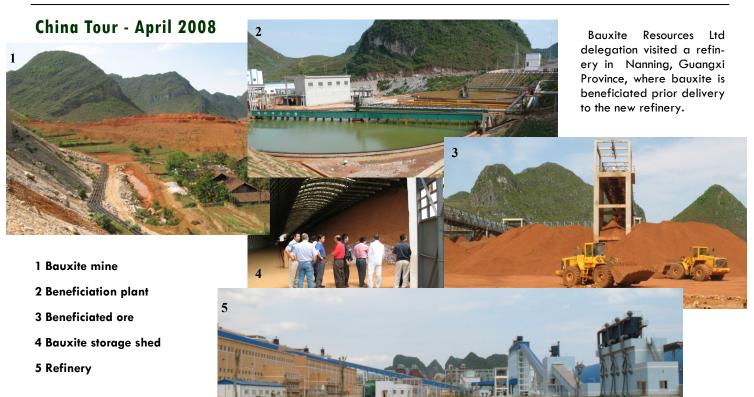
# CHINA — The Force Shaping the Bauxite Market

"China's growth in alumina output is largely dependent on imported bauxite"

Dick Evans Chief Executive Rio Tinto Alcan, November 2007.



- China's bauxite consumption continues to grow as more refineries come on stream.
- China's bauxite price rose 30% in the first six weeks of 2008.
- China's growth in alumina output is dependent on imported bauxite.
- China's consumption of aluminium grew by approx 40% in 2007.



#### Chinese Bauxite Facts:

- CHINESE BAUXITE PRODUCES AN ALUMINIUM OXIDE HYDROXIDE AL(OH)3
- TYPICAL CHINESE BAUXITE REQUIRES A BAYER-SINTER OR HYBRID PROCESS
- BAYER-SINTER PROCESS REQUIRES:

HIGHER TEMP +

**HIGHER PRESSURE** 

= HIGHER COSTS

#### Chinese bauxite vs Darling Range bauxite

The quality, quantity and availability of bauxite within China remain the major areas of uncertainty for the development of Chinese refineries.

China is estimated to have around 720m tonnes, Guinea 7.4b tonnes, Australia 5.7b tonnes, Brazil 2.0b tonnes and 1.9b tonnes in Jamaica (CRU Report 2007).

Bauxite occurs in three forms, gibbsite, boehmite and diaspore. West Austra-

lian bauxite is gibbsite, an aluminium hydroxide, while both bohmite and diaspore are aluminium-oxide hydroxide.

Chinese bauxite is predominantly diasporic in nature, this has a different crystalline structure to gibbsite and requires both significantly higher temperatures for dehydration and higher pressures for digestion.

The traditional Bayer processing techniques was found

inadequate and in the 1970s Chalco developed the Bayer-Sinter hybrid technology to process their diasporic bauxite, a method that is more labour intensive and requires 30-40 GJ of energy per tonne alumina in comparison to 11 GJ/tonne for the Bayer process.

The Bayer-Sinter technique also results in large amounts of leached residue. Recent press reports tell of process closures because of red mud disposal problems.

# **BRL Recruitment Update**

BRL has secured the services of Kevin Woodthorpe as Proiect and Infrastructure Manager.

Mr. Woodthorpe has a range of commercial experience that includes direct involvement with energy markets and utilities in Europe, New Zealand and Australia,



Mr Kevin Woodthorpe

including establishing compliance process for the European Union Emissions Trading Scheme (EUETS) and New South Wales Greenhouse Certificate Abatement Scheme (NGAC).

Mr. Woodthorpe joins BRL from Gindalbie Metals Ltd where he was a senior consultant.

As Project and Infrastructure Manager, Mr. Woodthorpe will be concentrating on the potential of a Direct Shipping Ore (DSO) of bauxite.

This will entail overseeing the essential studies for the proposed DSO and dealing with all the necessary consultants, government and regulatory bodies, and land access issues.

#### **Exploration Report**

Following an initial review of CSR Pacminex data, **Exploration Manager Peter** Bleakley, has been busy conducting an initial review of historical exploration and resource data made by Vam Ltd and Project Mining Corporation Ltd.

Mr. Bleakley is preparing an exploration program utilizing both these sources of historical data.

BRL is primarily focusing on potential bauxite resources close to existing infrastructure. The initial target generation phase will be expanded during the June Quarter and move on to include a program planning phase and, depending on regulatory approvals and suitable supervising of personnel, commencement drilling.

Red mud

disposal

Seed hydrate

collection

Source: CRU 2003

## West Australian **Darling Range Bauxite** Specifications:

- Av.Al<sub>2</sub>O<sub>3</sub> 30-40%
- **LOW REACTIVE SILICA 1-3%**
- HIGH COMPONENT OF **GIBBSITE**
- LOW IMPURITIES
- DIGESTATION -
  - LOW TEMP~143°C
  - LOW PRESSURE 240KPA

**LOWER PRODUCTION COSTS** 

LESS ENERGY NEEDS



Google Earth image showing part of Tenement E70/3064 with surface bauxite

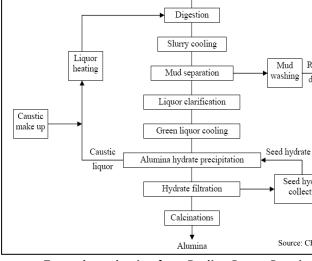
# **Beneficiation of Darling Range Bauxite**

Beneficiation is the process bauxite ore is passed through to remove contaminants and upgrade the ore.

The process occurs before the initial grinding phase and can pass through several options. These include:

- Size separation;
- Magnetic separation;
- Floatation and aravity separation; and
- Combinations of ahove

The objective of beneficiation is to reduce freight handling costs and improve process efficiency. The more contaminants eliminated, the higher the ore grade and in turn the lower the freight charges.



To produce alumina from Darling Range Bauxite, the BAYER PROCESS as illustrated above is used.

Bauxite

Grinding

Hatch has been appointed by BRL to act as advisers on beneficiation options and techniques.

Chinese **Beneficiation** Plant Visited by **BRL** 



## **Future forecasts** What the wires report:

- **Chinese Official says** China needs to explore overseas bauxite resources. Canberra (Dow Jones)
- China needs to explore overseas bauxite resources as domestic reserves can't meet the strong demand, said a senior industry official - 20 April 2008. Beijing (Dow Jones)
- China's imports of bauxite may reach 31 million metric tons this year if the country's importers can fully use its current production capacity. Beijing (Dow Jones)

#### BAUXITE RESOURCES LIMITED — ASX CODE BAU

Bauxite Alumina Aluminium

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**Bauxite Resources Limited** was founded in May 2006 for the purpose of securing tenements over land deemed prospective for bauxite mineralisation. It listed on the ASX on 22 October 2007 after closing its A\$7.5 million IPO early and oversubscribed.

The Company is looking to establish itself in the bauxite and alumina industries in Western Australia and is the only ASX-listed junior explorer in the highly prospective Darling Range. This area produces approximately 17% of the world's alumina and is home to Alcoa's Huntly Mine, the largest producing bauxite mine in the world.

To date the Company has applied for 32 tenements in the three project areas of North Darling Range (Muchea), South Darling Range and Kimberley. Bauxite Resources is primarily focused on defining a sustainable, economic bauxite resource through an ongoing intensive exploration program. The Company will then look to develop a bauxite export operation by direct shipping and to further assess potential resources with a view to the development of an alumina refinery.

For more information please visit our website at www.bauxiteresources.com.au



1. Beneficiation Plant, 2. NDRC visit, 3. East Hope Group meeting, 4. Smelter visit, 5. Chalco visit, 6. Messrs Lithgow & Atkins Tiananmen Sq, Beijing, 7. Yinhai Aluminium visit, 8. East Hope Group, 9. Yankuang Group presentation. 10. Shanghai skyline