

Monday, 8 July 2013

## ASX release

# PFS confirms attractive financial returns for Pisolite Hills project

### Highlights

- Consulting engineer GHD Limited has updated the mining and costing aspects of the pre-feasibility study (PFS) for the company's Pisolite Hills Mine and Port project (Pisolite Hills) on western Cape York in far North Queensland.
- The updated PFS has confirmed the technical and economic feasibility of Pisolite Hills as a 7.5 million dry product tonnes per annum (Mtpa) bauxite mine producing high-quality, export-grade bauxite over a life of 14 years, based on a 134 Mt<sup>1</sup> bauxite resource.
- Pisolite Hills is an attractive standalone project with a capital cost of \$396 million; an FOB cash operating cost, at full production, of approximately \$23 per tonne of product bauxite (excluding royalties); and an internal rate of return of 25.6%
- The Bauxite Hills project (approximately 50 km north-west of the Pisolite Hills project), with a 60 Mt<sup>2</sup> bauxite resource, will continue to be evaluated and progressed and is likely to be considered as a second stage development once Pisolite Hills is in production. Development of Bauxite Hills in conjunction with Pisolite Hills will bring significant synergistic benefits.
- Cape Alumina continues to lead the Cape Alumina Consortium which is bidding for the world-class Aurukun bauxite project on western Cape York, approximately 50 km south of Weipa.

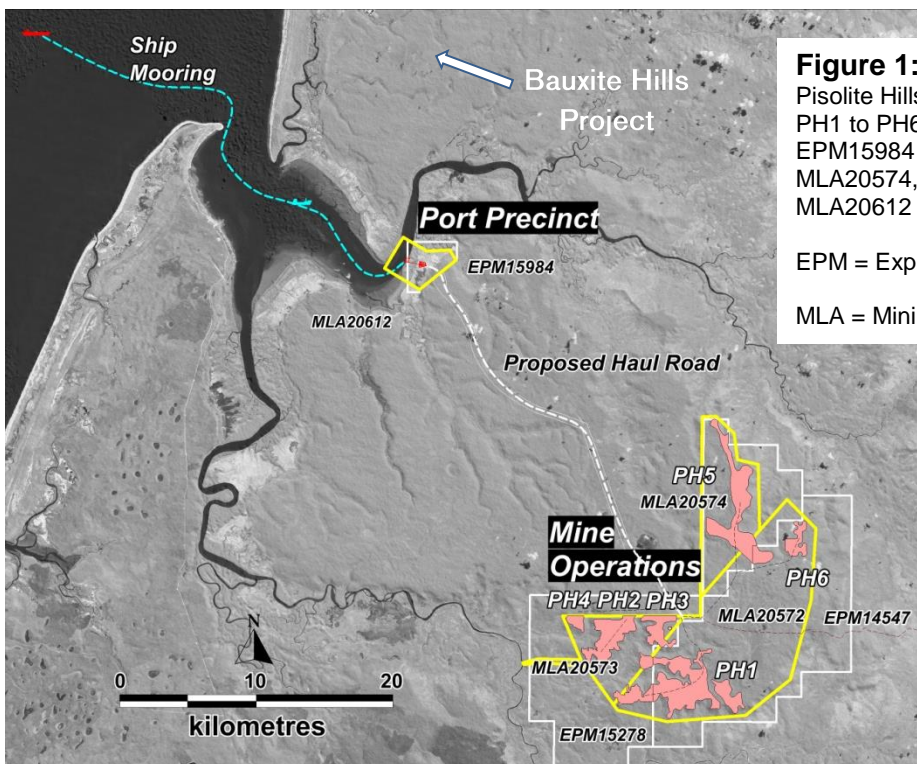
### 1. Pisolite Hills Project Overview

- Pisolite Hills is located approximately 50 km north-east of Weipa on western Cape York, Queensland, and is between 2.8 and 15 kilometres from the Wenlock River.
- The 134 Mt<sup>1</sup> bauxite resource for Pisolite Hills includes over 67% of resources at measured or indicated categories.
- On the 2nd of October 2012, the Queensland Government declared Pisolite Hills a 'significant project for which an Environmental Impact Statement (EIS) is required' under section 26 (1) (a) of the State Development and Public Works Organisation Act 1971.
- The final Terms of Reference for the EIS were released in December 2012.
- It is proposed that Pisolite Hills would commence production at 2.5 million tonnes per annum (Mtpa) of dry beneficiated bauxite building to 7.5 Mtpa over 2 years.

<sup>1</sup> The 134.6 Mt of *in-situ* bauxite at Pisolite Hills is expected to yield 88.9 Mt (20.1 Mt Measured + 39.5 Mt Indicated + 29.3 Mt Inferred) of bauxite on a dry-product basis at average beneficiated grades of 53.1% Al<sub>2</sub>O<sub>3</sub> and 12.3% SiO<sub>2</sub> (7.5% reactive silica at 150 degrees Celsius).

<sup>2</sup> Combined Inferred Resources at Bauxite Hills total 60.2 Mt of *in-situ* bauxite to yield 41.3 Mt of bauxite on a dry-product basis at average beneficiated grades of 51.6% Al<sub>2</sub>O<sub>3</sub> and 9.6% SiO<sub>2</sub>.

- The shallow, free digging bauxite averages 2.4m, and ranges up to 6m in thickness, with an average overburden depth of 0.4m resulting in very low strip ratios.
- The proposed mine fleet includes front-end loaders and mine trucks, to load and transport the raw bauxite to the beneficiation plant, and road trains to transport the bauxite product to Port Musgrave.
- Run of mine raw bauxite will be washed in three 650 tonne per hour beneficiation plants which incorporate crushing, sizing, screening and conveying.
- Transshipping of the bauxite product is a key value driver for the operation and the use of 6,000 to 10,000 tonne barges, loading 71,000 tonne Panamax or 166,000 tonne Cape-size vessels, has been incorporated in the design.



**Figure 1: Map of Pisolite Hills**  
Pisolite Hills mine and port project area showing PH1 to PH6, EPM14547, EPM15278 and EPM15984 (outlines shown in white), and MLA20574, MLA20572, MLA20573 and MLA20612 (outlines shown in yellow).  
EPM = Exploration Permit for Minerals.  
MLA = Mining Lease Application

**Figure 2: Transshipment using self-unloading barges**



## 2. Operating and Capital Costs

- Site cash operating and transshipment costs, at full production, are estimated to be approximately \$23 to \$24 per product tonne FOB excluding royalties.
- Capital costs are estimated to be \$396 million assuming contract transshipment.

## 3. Further Optimisation Potential

- Opportunities to significantly reduce costs include:
  - The implementation of contract mining, beneficiation, and infrastructure ownership and operation which could significantly reduce capital costs.
  - Synergies attributable to operating the project in conjunction with the Bauxite Hills project could significantly reduce operating costs as well as the capital cost per tonne of annual production. These synergies include:
    - No additional river dredging required (already undertaken for Pisolite Hills);
    - Common use of barging and transshipment operations in the Ducie River; and
    - Common infrastructure such as airstrip, electricity generation, and other facilities;
    - Optimisation of the workforce and management across two operations
- These opportunities are subject to further investigation and evaluation. Further optimisation work (including resource optimisation) will be undertaken to improve the project economics.

## 4. Project Economics

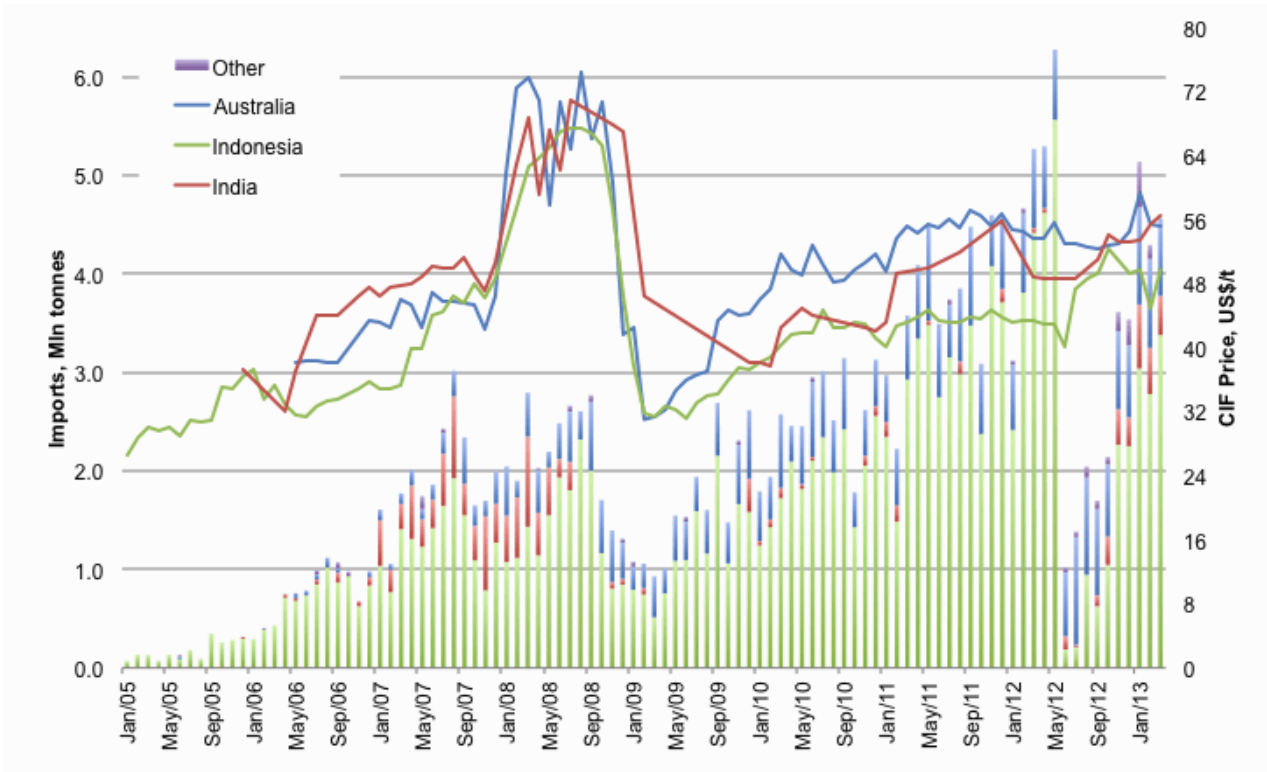
Based on analysis at long-term FOB bauxite prices at USD\$45 per tonne, and an exchange rate of 0.85 (AUD/USD), the Pisolite Hills project shows a Net Present Value of \$273 and an Internal Rate of Return of 25.6%. The project is commercially attractive and will provide a significant return to Cape Alumina. Further information on the development of Pisolite Hills will be released to the ASX over the coming months.

## 5. International Bauxite Market

- Indonesian and Australian exports of bauxite to China have grown dramatically over the past six years to meet increasing demand.
- Prices have strengthened and remain firm.
- Indonesia's 20% export tax (applied since July 2012) has added about US\$4-5/t to the cost of Indonesian bauxite.
- Indonesia has legislated to ban bauxite exports from 12 January 2014.
- The higher alumina content of Cape York bauxite provides a pricing premium when compared to Indonesian bauxite prices.



**Figure 3: Historical volumes and prices of bauxite into China**



Source: CM Group

**About Cape Alumina**

Cape Alumina is Australia's leading pure-play bauxite company, evaluating one of the country's largest undeveloped, export-quality bauxite deposits.

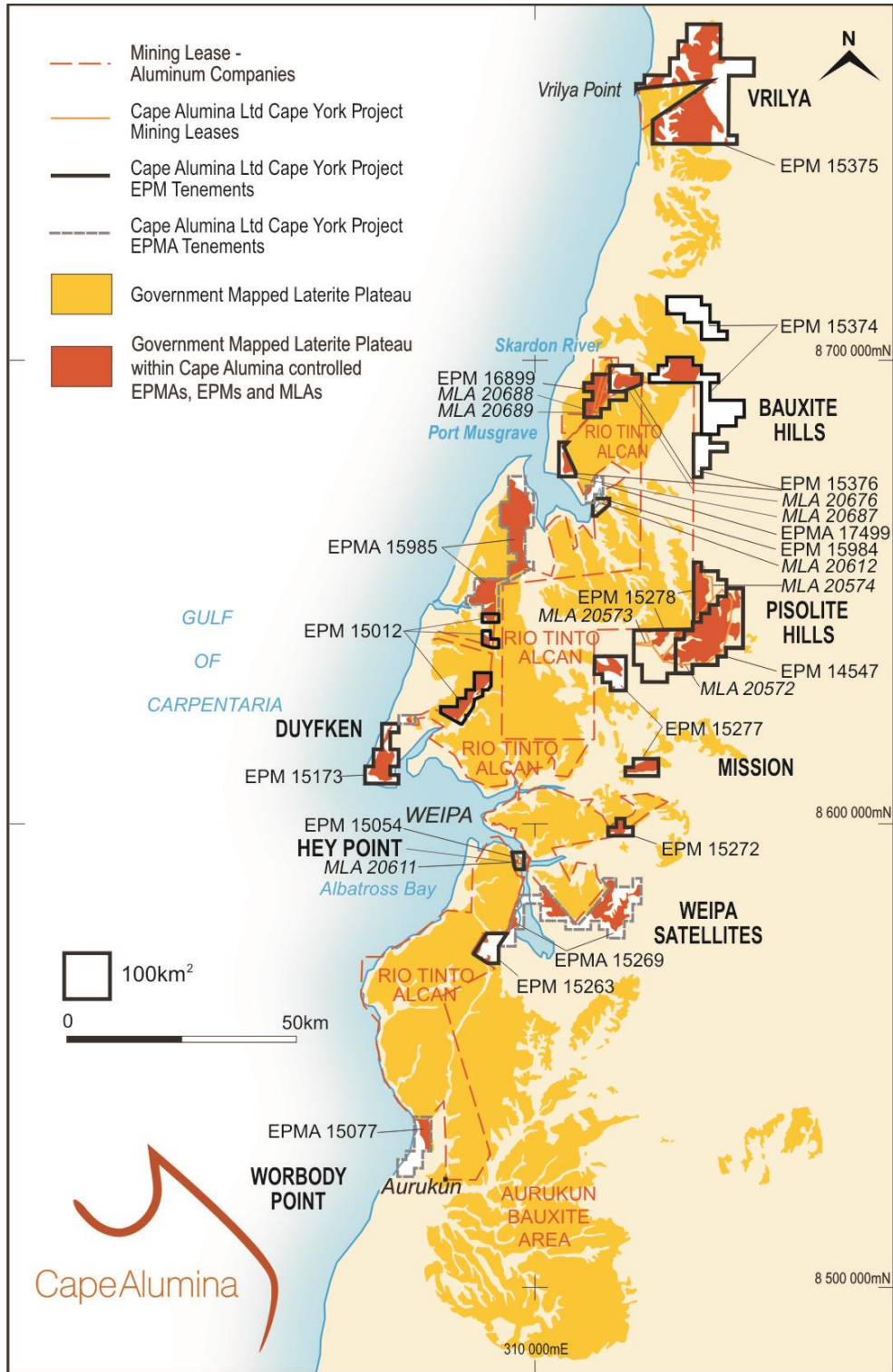
The Company's Pisolite Hills project has been declared a Project of State Significance by the Queensland Government.

The Company is leading the Cape Alumina Consortium, which includes Noble Group Limited and Qube Bulk Pty Ltd and has been invited to tender for the development of the Aurukun bauxite project by the Queensland Government. It is reported that the Aurukun tenements contain 674 million tonnes of dry *in situ* bauxite grading 52.9% Al<sub>2</sub>O<sub>3</sub> and 8.0% reactive SiO<sub>2</sub> (this is not a JORC resource; refer the Aurukun Bauxite Project Reappraisal, dated 1982 by Aurukun Associates).

Brisbane-based, the company controls approximately 1,900 km<sup>2</sup> of exploration tenements in the world-renowned western Cape York bauxite province. This is the largest tenement holding in the region outside the Rio Tinto Alcan (RTA) mining leases (see Figure 4).



**Figure 4: Cape Alumina’s tenements on western Cape York,**



## About western Cape York bauxite

Key features of the bauxite resources defined at Cape Alumina's project areas and exploration tenements within the Weipa region, which are expected to have positive implications for potential project economics, include:

- Very shallow, free-digging bauxite with minimal overburden thickness and very low strip ratios, which suggests that mining costs will be low;
- Very close to coastal waters and international shipping routes, potentially lowering transport capital and operating costs; and
- High alumina content compared to other Australian bauxite provinces (outside the Weipa region) – the lower bauxite to alumina ratio reduces overall shipping and refinery input costs.

### COMPETENT PERSON'S STATEMENT

Technical information about ore resources relating to Cape Alumina contained in this report has been compiled by Neil McLean who is a Principal Advisor to Cape Alumina Limited and a Fellow of the Australasian Institute of Mining and Metallurgy (F. AusIMM) with more than five years of relevant experience in the style of mineralisation being reported and qualifies as a Competent Person as defined by the Australasian Code for Reporting of Minerals, Resources and Reserves. Neil McLean consents to the inclusion in this report of the matters based on the information in the form and context in which it appears.

**More information:**

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