

BHP BILLITON LTD  
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BHP BILLITON QUARTERLY REPORT ON  
EXPLORATION AND DEVELOPMENT ACTIVITIES

July 2001 - September 2001

This report covers exploration and development activities for the quarter ended September 30, 2001. Unless otherwise stated, BHP Billiton's interest in the projects referred to in this report is 100 per cent.

MINERALS DEVELOPMENT

Aluminium

Mozal 2 Expansion, Mozambique

**(BHP Billiton 47.11% interest)**

Construction work commenced on the 250,000 tonne per annum Mozal 2 aluminium smelter project in June 2001. At the end of September, piling was 40 per cent complete and work on the concrete foundations for buildings and equipment has commenced. Commitments totaling 58 per cent of budget have been made. The project, estimated cost US\$860 million (BHP Billiton share US\$405 million), is within budget and on schedule for initial production towards the end of 2003. BHP Billiton has a 47.11 per cent share of Mozal and manages the project.

**Base Metals**

Escondida Phase IV Expansion, Chile (BHP Billiton 57.5% interest) BHP Billiton and its joint venture partners in the Escondida copper mine in northern Chile continued development activities for the Escondida Phase IV development project during the quarter. The Phase IV expansion will increase ore processing capacity by 85 per cent resulting in an average copper production of 400,000 tonnes per annum (average total production of 1.2 million tonnes per year) over the first five years.

The development has an estimated capital cost of US\$1,045 million (BHP Billiton share US\$600 million). All major equipment purchases and contracting activities have been committed. Concrete and structural steel placement in the concentrator are well advanced and the setting of equipment has commenced in some areas. Project mechanical completion is on track for September 2002 with full production expected to be achieved by April 2003.

Tintaya Oxide Project, Peru (BHP Billiton 99.9% interest)

Construction of the Tintaya Oxide project continued during the quarter. The Oxide project will increase Tintaya production by 38 per cent with a cathode capacity of 34,000 tonnes per annum. The development has an estimated capital cost of US\$138 million. Bulk earthworks and concrete works are 95 per cent complete. Mechanical and structural installation works are well advanced, and piping and electrical installation have also recently started. The project is currently on schedule and on budget (US\$138 million). First cathode production is expected in early 2002 with full production to be achieved by mid 2002.

#### Carbon Steel Materials

Blackwater Integration Project, Queensland (BHP Billiton 50% interest)

The project involves the creation of a single mining entity combining the South Blackwater open cut operations with the Blackwater mine to produce an estimated 13.5 million tonnes of coking and thermal coal a year. BHP Billiton's equity in the project changed on 28 June 2001 as a result of the formation of the BHP Billiton Mitsubishi Alliance (BMA).

On 25 September 2001, the mines became a single entity on an industrial and operational basis. Commissioning is progressing well on the pre-strip fleet of 300-tonne dump trucks - a key project required to meet sales targets. These trucks have been commissioned some 17 weeks from date of order. A dragline has also been relocated on schedule as a complete unit some 35kms from the South Blackwater lease. A significant number of contracts have been let for the construction of the new industrial area at the mine site and work is progressing. The mining operation is on target to meet the project goal of 13.5 million tonnes of saleable coal. Total project capital remains on target of US\$64 million (BHP Billiton share US\$32 million).

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### Energy Coal

**San Juan Underground, New Mexico, USA (BHP Billiton 100% interest)** The project involves the development of an underground longwall mine at the San Juan thermal coal operations in New Mexico, USA. The mine will replace production from two of BHP Billiton's three existing surface mines. The project reached 60 per cent completion during the quarter. Three of the four portal entries were completed, the surface conveyor system erection was 80 per cent completed and the ventilation shaft was excavated to 270 feet (54 per cent complete). Underground mine development reached 47,000 feet (31 per cent complete). Approval of the prototype mining shields was achieved during September.

Project capital spending is on budget at US\$146 million. The completion of surface facilities is on schedule for March 2002. At present, underground development mining is approximately six weeks behind schedule.

### Mount Arthur North, New South Wales

**(BHP Billiton 100% interest)** The Mount Arthur North mine will be capable of producing up to 15 million tonnes of raw thermal coal per annum when full production is achieved in 2006. The Project is on schedule. Commitments for the quarter ended September 2001 total US\$99 million. Capital expenditure for the quarter was US\$7 million. The project has completed its third month of an anticipated 32-month construction period. Forecast costs to completion remain unchanged at US\$411 million.

During September the design has been frozen on the Coal Handling Plant. Engineering activities continue to focus on evaluating tenders for long lead-time items, earthworks and concrete designs, HV power reticulation and documentation for upcoming tender packages.

The Project Consent Agreement was signed on 5 September 2001 and is now registered with the New South Wales Industrial Relations Commission.

### PETROLEUM DEVELOPMENT

Echo Yodel, Australia (BHP Billiton 16.7%, non operated)

The Echo Yodel subsea tie-back project to the Goodwyn Alpha Platform remains on track with production expected to commence in early 2002. Yodel 4, the second and final well, was completed in September and hookup to the pipeline is planned for the end of the year. The production licence has been granted.

Laminaria Phase 2 development, Australia (BHP Billiton 32.6%, non operated)

The project, entailing two new infill subsea wells tied-back to the Northern Endeavour, is progressing as per schedule with the drill rig contract awarded in September. The spudding of the first well is planned for January 2002.

Liverpool Bay - Hamilton East Field, UK (BHP Billiton 46.1%, operated)

The Hamilton East single subsea gas well has been successfully drilled, tested and tied-back to the Hamilton North platform with first gas produced on 17 September 2001.

North West Shelf expansion, Australia (BHP Billiton 16.67%, non operated)

The construction of the fourth liquefaction processing train has commenced and work on the foundations began in September. Construction of the workforce accommodation village in Karratha has begun, with the first stage due to be finished and occupied before the end of 2001. All long lead items have been committed with further contracts for mechanical erection on-plot and heavy lift crange works to be awarded soon. Front end engineering design is continuing for the 42-inch second trunkline with major tenders for linepipe and pipelay contracts currently under review.

Ohanet Development, Algeria (BHP Billiton 45%, joint operating organisation comprising SONATRACH/BHP Billiton)

The Ohanet development consists of the development of four gas/condensate reservoirs in the Illizi Basin in southern Algeria under a Risk Service Contract with SONATRACH. Three dimensional seismic data acquisition across all reservoirs was completed in June 2001 and the data is currently being processed and utilised in reservoir engineering for the development. The development drilling program has commenced and facilities engineering is approaching 80 per cent completion. Most major construction sub-contracts have been award. First production is scheduled for third quarter of 2003.

ROD Integrated Development, Algeria (BHP Billiton 35.1%, joint operating entity comprising SONATRACH/BHP Billiton)

The ROD Integrated Development involves the development of six satellite oil fields in the Berkine Basin in eastern Algeria under a Production Sharing Contract with SONATRACH. The formal gazettal of the Exploitation Licences for the first five fields was received in July 2001. In addition, the RAR discovery was declared commercial in September 2001 and an application for an Exploitation Licence has been made. All drilling contracts have been awarded and civil engineering for the drilling campaign is well underway. The first contract for the long lead engineering items has been awarded and the other is imminent. It is anticipated that the Engineer-Procure-Construct (EPC) contract for the production facilities will be awarded in the fourth quarter 2001. First production is scheduled for 2003.

Typhoon, Gulf of Mexico, USA (BHP Billiton 50%, non operated)

The Typhoon oilfield started production on 31 July. Production from Typhoon is reported in the BHP Billiton Production report.

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## MINERALS EXPLORATION

The Exploration Group of BHP Billiton Minerals continued to carry out global grass-roots exploration for key commodities of interest to the company.

The Junior Alliance Program (third party alliances and joint ventures) has been greatly enhanced following the merger of BHP and Billiton. This program emphasises the use of distinctive capabilities and innovative commercial investments to gain the widest possible exposure to the results of third party-funded exploration.

The two FALCON™ systems are continuing to fly extensive campaigns in Africa and the Americas.

#### PETROLEUM EXPLORATION

Exploration and appraisal wells drilled during the quarter or in the process of drilling as at 30 September 2001.

| <u>WELL</u>     | <u>LOCATION</u>                         | <u>B H P B i l l i t o n</u><br><u>EQUITY</u> | <u>STATUS</u>  |
|-----------------|---|---|--|
| Atlantis-3      | Green Canyon Block 743, Gulf of Mexico  | 44%, Operator - BP                            | Encountered hydrocarbon bearing reservoirs. For more information see News Release of 11 October. |
| Atlantis-3 ST   | Green Canyon Block 743, Gulf of Mexico  | 44%, Operator - BP                            | For information see News Release of 11 October.  |
| Boris-1         | Green Canyon Block 282, Gulf of Mexico  | 50% BHP Billiton operator                     | Well reached total depth and was sidetracked updip.  |
| East Pilchard-1 | VIC/L9, Bass Strait, Australia          | 50%,<br>Operator - Esso Australia Resources   | Cased and Suspended.   |
| Frampton-1      | Green Canyon 872, Gulf of Mexico        | 44% BHP Billiton Operator                     | Plugged & Abandoned.<br>For more information see News Release of 11 October.                     |
| Gnome-1         | Atwater Valley Block 18, Gulf of Mexico | 50% BHP Billiton Operator                     | Drilling ahead.  |
| Ika Marin-1     | Tolo Block, Gabon                       | 40.12% BHP Billiton Operator                  | Drilling ahead.  |

|             |  |                           |  |
|-------------|--|---------------------------|--|
| Kairi-1     | Trinidad Block 2(c)                    | 45% BHP Billiton Operator | Plugged & Abandoned. For more information see News Release of 20 August.           |
| Mad-Dog-4   | Green Canyon Block 782, Gulf of Mexico | 23.9%, Operator - BP      | Plugged back and Sidetracked. For more information see News Release of 11 October. |
| Mad-Dog-4ST | Green Canyon Block 782, Gulf of Mexico | 23.9%, Operator - BP      | See News Release of 11 October.  |

Expenditure

Information related to exploration expenditure will be included in the first quarter BHP Billiton profit report, to be released on 7 November 2001.

MINERALS COMPETENCE AND RESPONSIBILITY

The following statements apply in respect of the information in this report that relates to any stated Mineral Resources or Ore Reserves.

- The information is based on and accurately reflects information compiled by the person named under each relevant section of the report
- Each named person is either a Corporate Member or Fellow of The Australasian Institute of Mining and Metallurgy or the Australian Institute of Geoscientists, or a Recognized Mining Professional under the ASX listing rules, and is a full-time employee of a member company of the BHP Billiton Group;

Each named person has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he or she is undertaking to qualify as a Competent Person as defined in the 1999 Edition of the "Australasian Code for Reporting of Mineral Resources and Ore Reserves". Each named person consents to the inclusion in the report of the matters based on their information in the form and context in which it appears.

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Further news and information can be found on our Internet site: [www.bhpbilliton.com](http://www.bhpbilliton.com)

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The BHP Billiton Group is headquartered in Australia