

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

September 2001 - December 2001

This report covers exploration and development activities for the quarter ended 31 December 2001. Unless otherwise stated, BHP Billiton's interest in the projects referred to in this report is 100 per cent.

MINERALS DEVELOPMENT

Aluminium

Mozal II Expansion, Mozambique (BHP Billiton 47.11% interest)

Construction work on the 253,000 tonne per annum Mozal II aluminium smelter project continued during the quarter and remains on schedule for initial production towards the end of 2003. On site, piling is nearing completion, concrete foundations are progressing to plan and at the end of December 2001, overall construction progress had reached nine per cent. The erection of first structural steel is scheduled for January 2002. Commitments totalling over 65 per cent of the project budget of US\$860 million (BHP Billiton share US\$405 million) have been made and the project remains within budget.

BHP Billiton manages the project on behalf of the shareholders in Mozal S.A.R.L. who are BHP Billiton 47.11 per cent, Mitsubishi Corporation 25 per cent, IDC (South Africa) 24.04 per cent and the Government of Mozambique 3.85 per cent.

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 annum) over the first five years.

The development has an estimated capital cost of US\$1,045 million (BHP Billiton share US\$600 million). The first major milestone of the project has been achieved with the commencement of commissioning of the new Laguna Seca tailings facility. The installation of major mechanical equipment has commenced which includes the SAG mill and ball mills as well as flotation cells. At the end of December 2001 the project was over 50 per cent complete. 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 capacity 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 practically complete. Mechanical and structural installation works are 95 per cent complete, and piping and electrical installation is well advanced. Pre-commissioning activities have started and all operational personnel have been hired. The first acid deliveries were received in December. The project is currently on schedule and on budget. First cathode production is expected in mid 2002 with full production to be achieved by mid 2002.

Carbon Steel Materials

Blackwater Integration Project, Queensland, Australia (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 per year. A new fleet of eight 300-tonne haul trucks was commissioned on schedule in November 2001, and further mining equipment including dozers and coal haulers were ordered for delivery during 2002. A new haul road linking the two mines was completed in December 2001. Construction of a new industrial facility is progressing on schedule for completion in April 2002. Various other smaller infrastructure projects have been completed on schedule and within budget.

The annualised sales rate for the period July to December 2001 reached 13.3 million tonnes per annum. Ramp up will continue in the March 2002 quarter. Total project capital remains on target of US\$64 million (BHP Billiton share US\$32million).

Dendrobium Coal Project, New South Wales, Australia

The Dendrobium Mine will be a low cost underground longwall operation capable of producing 5.2 million tonnes per annum (mtpa) of raw coal resulting in 2.6mtpa of coking coal and 1mtpa of thermal coal. The main customer for the coking coal is the BHP Steel Port Kembla steelworks located only seven kilometres from the mine site. New South Wales Government approval was received in late November 2001, seven months ahead of schedule. Construction activities are underway on critical path items.

The capital forecast and longwall startup schedule remains unchanged at US\$151 million and May 2005 respectively.

Energy Coal

San Juan Underground, New Mexico, USA

The project involves the development of an underground longwall mine at the San Juan energy coal operations in New Mexico, USA. The mine will replace production from two of BHP Billiton's three existing surface mines. The project reached 88 per cent completion by the end of December 2001. The longwall compatibility test has been completed and the majority of the longwall equipment has been received ahead of schedule. Surface facilities are on schedule for completion in March 2002. The shaft excavation, including the bottom station, has been completed. The concrete lining for the shaft bottom station will be complete by early February 2002. Longwall startup is forecast for August 2002 with full production expected by the end of 2002. Project spending is on budget at US\$146 million, with US\$127 million committed at the end of December.

Mount Arthur North, New South Wales, Australia

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. Commitments during the quarter ending December 2001 were US\$54 million, with total commitments at December 2001 of US\$153 million. Capital expenditure for the quarter was US\$14 million. The Project is on schedule and has completed its sixth month of an anticipated 32-month construction period. Project costs remain unchanged at US\$411 million.

In the December 2001 quarter detailed design and engineering reached 45 per cent completion. All long lead-time items have been ordered and critical path activities are in place or being finalised. Major contract construction work, i.e. earthworks, mine pre-development and infrastructure, is progressing.

#### Stainless Steel Materials

Gag Island, Indonesia (BHP Billiton 75% interest)

Following extensive deliberation and in the absence of resolution of a forestry issue, Falconbridge has decided not to pursue further involvement in the Gag Island Nickel Project.

Falconbridge had signed a joint venture agreement with BHP Billiton in June 2000 conditional on the satisfaction of a number of matters including the resolution of the forestry issue with the Indonesian Government.

The Gag Island Nickel Project has been held in 'care and maintenance' status since early 2000 following introduction by Indonesia in 1999 of a law prohibiting open pit mining in areas designated as 'Protection Forest' and the subsequent reclassification of extensive areas of Indonesia, including Gag Island, as Protection Forest.

With the continued absence of a resolution to the forestry issue PT Gag Nickel, the joint venture vehicle between BHP Billiton and Aneka Tambang, is seeking a suspension of the Gag Contract of Work and will review its options going forward.

#### PETROLEUM DEVELOPMENT

Bream Gas Pipeline, Australia (BHP Billiton 50%, non operated)

During the quarter approval was announced for the construction of the Bream gas pipeline in Bass Strait. The new pipeline will allow the production of gas reserves from the Bream reservoir and will also access and accelerate the production of around 30 million barrels of hydrocarbon liquids (BHP Billiton share 15 million barrels) over a 10-year period. The 46-kilometre pipeline will run from the Bream A platform in Bass Strait, cross the Gippsland coast near Paradise Beach and continue a further five kilometres underground to an existing pipeline upstream of the joint venture's gas and crude oil processing plant at Longford. Construction of the onshore section of the pipeline commenced in December 2001. The gross cost will be around A\$200 million (BHP Billiton share A\$100 million). First gas/liquids are expected to flow mid 2003.

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

First gas and condensate from the Echo Yodel subsea tie-back project to the Goodwyn Alpha platform flowed on 24 December at a production flowrate of 350 million standard cubic feet per day (MMcf/d). The project was completed three months ahead of target schedule and within budget.

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

The project entails two new infill subsea wells tied-back to the Northern Endeavour. All equipment has arrived in Darwin and further integrated testing is planned. The spudding of the first well is planned for mid January. The

increased production is scheduled to commence in mid 2002.

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

The construction of the fourth liquefaction processing train is progressing on schedule with foundation work 24 per cent complete. The first stage of the workforce accommodation has also been completed. It is expected that the contracts for onsite mechanical erection and offsite civil works will be awarded in January 2002. The second trunkline project is now in its execution phase following the completion of front end engineering design. The procurement contract for linepipe has been let and it is expected that the contract for pipelay will be awarded in January 2002. First production is scheduled for mid 2004.

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 (RSC) with SONATRACH, the national hydrocarbons company. The project will provide a 20 million cubic metres per day gas treatment facility fed by 47 production wells, 32 of which will be new.

By the end of December 2001 a total of eight new wells had been drilled and completed and one existing well had been re-completed. Facilities engineering is 90 per cent complete and significant volumes of bulk materials have been delivered to site.

The first equipment items have been installed on site. Pipelaying and welding for each of the two major in-field gathering pipelines is well underway and work has commenced on the export pipelines. All major construction sub-contracts have been awarded and all sub-contractors are now active at site. First production remains scheduled for the third calendar quarter 2003.

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

The ROD Integrated Development consists of the development of six satellite oilfields in the Berkine Basin in eastern Algeria, to be executed under a production sharing contract (PSC) with SONATRACH. The project will produce 80,000 barrels of Sahara Blend crude oil per day, with associated gas being reinjected into the reservoir together with water to provide pressure support to the reservoir. 36 development wells will be required, 10 of which will be recompletions of wells already drilled.

Drilling of the first development well commenced in November 2001 following upgrading of the drilling rig, at end-December 2001 the rig was working on the second development well. Contracts for the long lead engineering items have been awarded. The technical evaluation of potential contractors for the EPC (Engineer/Procure/Construct) contract for the production facilities was completed in the fourth calendar quarter of 2001 and commercial bids will be received in late January 2002. First production is scheduled for 2003.

## MINERALS EXPLORATION

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

The Junior Alliance Program (third party alliances and joint ventures) has delivered significant encouragement this quarter with exploration success through Minotaur Resources Ltd, in South Australia, and Ivanhoe Mines Ltd, in Mongolia. 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 and an alliance deal has been signed with Grenfell N.L. to maximise the exposure of FALCON™ to projects in Australia.

### PETROLEUM EXPLORATION

Exploration and appraisal wells drilled during the quarter or in the process of drilling as at 31 December 2001.

<u>WELL</u>	<u>LOCATION</u>	<u>BHP Billiton EQUITY</u>	<u>STATUS</u>
97/24 A-1	UK Block 74/24	50% BHP Billiton Operator	P&A
Atlantis-3 ST/1	Green Canyon Block 743, Gulf of Mexico	44% Operator - BP	P&A. Oil encountered
Boris-1	Green Canyon Block 282, Gulf of Mexico	50% BHP Billiton Operator	P&A. Oil and gas discovery
Boris-S/T#1	Green Canyon Block 282, Gulf of Mexico	50% BHP Billiton Operator	P&A. Oil and gas discovery
Boris-S/T#2	Green Canyon Block 282, Gulf of Mexico	50% BHP Billiton Operator	P&A. Oil and gas discovery
Boris-S/T#3	Green Canyon Block 282, Gulf of Mexico	50% BHP Billiton Operator	Temporarily abandoned. Oil and gas discovery
Mad Dog-4	Green Canyon Block 782, Gulf of Mexico	23.9% Operator - BP	P&A. Oil encountered

Paris Carver	Green Canyon Block 601, Gulf of Mexico	50% BHP Billiton. Marathon operated initial well	P&A. No hydrocarbons found
Gnome-1	Atwater Valley Block 18, Gulf of Mexico	50% BHP Billiton Operator	P&A
Canteen-1	Trinidad Block 2(c)	45% BHP Billiton Operator	Temporarily abandoned. Oil and gas discovery, tested 3,660 barrels (bbl) oil/day.
Crapaud-1	Trinidad Block 2(ab)	50% BHP Billiton Operator	At end of quarter had reached 3,700 feet.
Kairi-2	Trinidad Block 2(c)	45% BHP Billiton Operator	At the end of the period drilling had intersected the reservoir section.
Ika Marin-1	Tolo Block, Gabon	40.12% BHP Billiton Operator	P&A. Dry
Iona-1	Block 21, Angola	30%, BHP Billiton Operator	Drilled during September quarter. P&A. Dry
Phrixus-1	AC/P30, Browse Basin, Australia	70% BHP Billiton Operator	P&A

#### EXPLORATION EXPENDITURE

Information related to exploration expenditure will be included in the half year BHP Billiton Profit Report, to be released on 14 February 2002.

#### 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 Recognised 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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