

BHP BILLITON LTD  
Form 6-K  
January 25, 2006

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UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

**Form 6-K**

REPORT OF FOREIGN PRIVATE ISSUER  
PURSUANT TO RULE 13a-16 OR 15d-16  
UNDER THE SECURITIES EXCHANGE ACT OF 1934

January 24, 2006

**BHP Billiton**

**Limited**

..... (Translation of registrant's name into English) 180 Lonsdale Street Melbourne VIC 3000 Australia  
.....

(Address of principal executive office)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F:  Form 20-F  Form 40-F

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1):

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7):

Indicate by check mark whether the registrant by furnishing the information contained in this Form is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934:  Yes  No

If "Yes" is marked, indicate below the file number assigned to the registrant in connection with Rule 12g3-2(b): n/a

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24 January 2006  
Number 02/06

BHP BILLITON QUARTERLY REPORT ON EXPLORATION  
AND DEVELOPMENT ACTIVITIES  
October 2005 - December 2005

This report covers exploration and development activities for the quarter ended 31 December 2005. Unless otherwise stated, BHP Billiton's interest in the projects referred to in this report is 100 per cent, and references to project schedules are based on calendar years.

Industry wide, the supply side response to continued strong global demand for raw materials remains constrained by a shortage of people, equipment and supplies. This has led to tight labour markets and difficulty in sourcing construction and drilling plant and machinery, which in turn has led to rising input costs. Currency strength against the US dollar is also adding further pressure. These conditions, which are currently particularly acute in Australia and the Gulf of Mexico, continue to challenge the ability of BHP Billiton to deliver development projects to budget. Despite these pressures, all projects currently remain on or ahead of schedule, with the Atlantis South schedule under review following the recent hurricanes in the Gulf of Mexico.

During the quarter, the Board approved the Rapid Growth Project 3 expansion at Western Australia Iron Ore (Australia), the Third Pellet Plant expansion at Samarco (Brazil), the Stybarrow and NWS Angel Petroleum developments (both Australia) and the Alumar Refinery expansion (Brazil).

Atlantis South Development, Gulf of Mexico, USA (BHP Billiton 44%, non-operated)

In February 2005, BHP Billiton approved a revised budget of US\$1.1 billion for the development of the Atlantis South oil and gas reserves. The Atlantis South Development will have a gross nameplate daily capacity of 200,000 barrels of oil and 180 million cubic feet of natural gas. During the quarter, integration work continued on the Atlantis production facility at construction yards in Texas, USA. Preparation for drilling of the development wells commenced, as did installation of the flowlines that will connect the Atlantis production facilities to the Caesar and Cleopatra pipeline system. The recent hurricanes in the Gulf of Mexico have impacted the availability of equipment required to allow for completion on schedule in the third quarter of 2006. As a result, the project schedule remains under review.

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

In June 2005, BHP Billiton approved an expansion to the liquefied natural gas (LNG) processing facilities at the North West Shelf Project in Australia. The project includes the construction of a fifth liquefaction processing train with a gross annual capacity of 4.2 million tonnes, additional processing facilities and associated infrastructure. Engineering and procurement activities are continuing and construction of pre-assembly units has commenced. A number of major construction contracts were also awarded during the quarter. BHP Billiton's share of development costs, based on the operator's estimate, is approximately US\$250 million. First production is expected by late 2008.

Neptune Development, Gulf of Mexico, USA (BHP Billiton 35%, operated)

In June 2005, BHP Billiton approved the Neptune oil and gas development located in the Gulf of Mexico. The project includes the construction, installation and operation of a stand-alone platform and the associated subsea system with seven wells. The facility will have a gross nameplate daily capacity of 50,000 barrels of oil and 50 million cubic feet of gas. During the quarter, design, engineering and manufacture of the subsea equipment continued, whilst contractual activity focused on the finalisation of key offshore installation contracts. Development costs are estimated at US\$850 million (BHP Billiton share US\$300 million) with first production expected by the end of 2007.

Stybarrow Development, Australia (BHP Billiton 50%, operated)

In November 2005, BHP Billiton approved the Stybarrow oil field development located off the north-west coast of Australia. The project involves a subsea development and a Floating Production Storage and Offtake (FPSO) facility

capable of producing approximately 80,000 barrels of liquids a day (100% basis), which will be provided under a 10 year minimum service agreement. Detailed design is underway and major equipment and fabrication contracts have been placed. Project costs are estimated at approximately US\$600 million (BHP Billiton share approximately US\$300 million) and first production is expected during the first quarter of 2008.

North West Shelf Angel Development, Australia (BHP Billiton 16.67%, non-operated)

In December 2005, BHP Billiton approved the development of the North West Shelf Venture's Angel gas and condensate field off the north-west coast of Australia. The project involves the installation of the Venture's third major offshore production platform and associated infrastructure, including a new subsea 50 kilometre pipeline which will be tied into the North Rankin platform. Hydrocarbons will be produced through one processing unit with a gross daily capacity of up to 800 million standard cubic feet of gas and associated condensate. Detailed design commenced during the quarter and the topsides installation contract has been awarded. BHP Billiton's share of development costs, based on the operator's estimate, is approximately US\$200 million. The development is expected to be fully operational by the end of 2008.

## MINERALS DEVELOPMENT

### Aluminium

Worsley Development Capital Projects (DCP), Australia (BHP Billiton 86%)

The Worsley Alumina DCP were approved in May 2004 with a budget of US\$192 million (US\$165 million BHP Billiton share). The projects will increase alumina capacity by 250,000 tonnes per annum to 3.5 million tonnes per annum (100% basis). Construction activity is nearing completion. Commissioning will begin in the first quarter of 2006.

Alumar Refinery expansion, Brazil (BHP Billiton 36%)

The Alumar Refinery expansion was approved in December 2005 with a budget of US\$518 million (BHP Billiton share). The project includes upgrades to the existing production unit and duplication of the upgraded line and will increase alumina capacity by 2 million tonnes per annum to 3.5 million tonnes per annum (100% basis). Detailed engineering, procurement and construction of temporary site facilities commenced during the quarter. Commissioning is expected to be completed in mid calendar year 2008

### Base Metals

Escondida Sulphide Leach, Chile (BHP Billiton 57.5%)

The Escondida Sulphide Leach Project was approved in April 2004. The project will produce 180,000 tonnes (103,500 tonnes BHP Billiton share) of copper cathode per annum, utilising a bacterially assisted leaching process on low-grade run-of-mine ore from both the Escondida and Escondida Norte pits. The resulting solutions will then be treated in conventional solvent extraction and electrowinning plants. During the quarter, ore stacking continued with approximately 20 million tonnes of ore being delivered to the pad to date. Permanent power is now available on site and construction of the inoculation plant has commenced. Structural steel erection, piping and mechanical installation in the solvent extraction, electrowinning and desalination plants also continued during the quarter. A project budget of US\$870 million (US\$500 million BHP Billiton share) was approved by the Board. Production is scheduled to begin during the second half of 2006.

Spence, Chile

The Spence Project, approved in October 2004, will be a new open cut mine with associated plant facilities capable of producing 200,000 tonnes per annum of copper cathode through a combination of chemical and bacterial leaching. During the quarter, major equipment and bulk materials continued to arrive on site and mine pre-strip operations proceeded to schedule. Construction of the mine and administration infrastructure is complete. Concrete work in all areas of the process plant is almost complete and liner placement for the heaps and ponds is continuing. Mechanical and structural works have also commenced and all major construction contracts have been awarded. The project budget is US\$990 million. Production is scheduled to begin during the last quarter of 2006.

Carbon Steel Materials

Rapid Growth Project 2,

**Australia (BHP Billiton 85%)**

The Rapid Growth Project 2 (RGP2) was approved in October 2004 with a budget of US\$575 million (BHP Billiton share US\$489 million). The project comprises increases in mine, rail and port capacity through the development of Ore Body 18, purchase of additional rolling stock and a new car dumper at Finucane Island. Site activities are proceeding to schedule and construction activities continue to focus on preparation for initial commissioning activities. The project will increase installed capacity at Western Australian Iron Ore by 8 million tonnes per annum by the second half of 2006 (this will be offset by an 8 million tonnes per annum reduction in capacity due to the suspension of the Goldsworthy ship loading operations at Finucane Island in the third quarter of 2006, related to the Rapid Growth Project 3).

Rapid Growth Project 3,

**Australia (BHP Billiton 85%)**

The Rapid Growth Project 3 (RGP3) was approved in October 2005. The project will comprise expansions to mine, rail and port facilities. Installed capacity at Western Australian Iron Ore's Area C mine will increase by 20 million tonnes per annum by the fourth quarter of 2007, and the project will also deliver some latent capacity at the port to be utilised in future expansions. Initial engineering activities and early procurement works are proceeding to plan. Development costs are estimated at US\$1.5 billion (US\$1.3 billion BHP Billiton share).

Samarco Third Pellet Plant Project, Brazil (BHP Billiton 50%)

The Samarco Third Pellet Plant Project was approved in October 2005. The project will increase annual iron ore pellet production capacity by 7.6 million tonnes to 21.6 million tonnes per annum (100% basis). The new facilities will include additional mining capacity and a new concentrator at the Germano site, a 400 kilometre slurry pipeline from Germano to Ponte Ubu and a third pellet plant, additional stockyard and enhanced shiploading capacity at the Ponta Ubu site. Detailed engineering, procurement and initial construction activities have commenced. The project budget is US\$1.18 billion (US\$590 million BHP Billiton share). Production is scheduled to commence during the first half of 2008.

Stainless Steel Materials

Ravensthorpe Nickel Project, Australia

The Ravensthorpe Nickel Project was approved in March 2004. The project includes the development of a mine, treatment plant and associated infrastructure near Ravensthorpe in Western Australia. The Ravensthorpe processing plant will produce a mixed nickel-cobalt hydroxide intermediate product (MHP). Engineering, procurement, off site fabrication and infrastructure activities are all proceeding to schedule. On site, thickener and tank construction is well advanced and the acid plant construction is proceeding to schedule. Following a review of project costs completed in August 2005, a revised budget of US\$1,340 million was approved. The first shipment of MHP remains on schedule for the second quarter of 2007.

#### Yabulu Extension Project, Australia

The Yabulu Extension Project was approved in March 2004. The metal refining section of the Yabulu refinery near Townsville in Queensland is being expanded to process up to 220,000 tonnes of MHP. This additional processing capacity will increase refinery production to 76,000 tonnes of nickel and 3,500 tonnes of cobalt. Engineering and procurement activities continue to proceed to schedule, work is underway on the two major vertical packages and structural steel fabrication has commenced. Following a review of project costs completed in August 2005, a revised budget of US\$460 million was approved. First nickel metal production from the expanded Yabulu refinery is on schedule for the third quarter of 2007.

#### PETROLEUM EXPLORATION

Exploration and appraisal wells drilled during the quarter or in the process of drilling as at 31 December 2005.

WELL	LOCATION	BHP BILLITON EQUITY	STATUS
Mad Dog Deep	Gulf of Mexico, Green Canyon 826	23.9% BHP Billiton; BP operator	Hydrocarbons encountered.  Plugged and abandoned.
Blackbeard West	Gulf of Mexico, South Timbalier Block 168	5% BHP Billiton; Exxon operator	Drilling ahead.
Cascade-2	Gulf of Mexico, Walker Ridge 206	50% BHP Billiton and operator	Hydrocarbons encountered.  Plugged and abandoned.
Knotty Head 1	Gulf of Mexico, Green Canyon 512	25% BHP Billiton; Unocal operator	Hydrocarbons encountered.  See News Release of 20 December 2005. Sidetrack drilling ahead.
Bonsai	Gulf of Mexico, Atwater Valley 398	34% BHP Billiton; BP operator	Hydrocarbons encountered.

			Plugged and abandoned.
Puma-2	Gulf of Mexico, Green Canyon 206	33.3% BHP Billiton; BP operator	Temporarily suspended. Rig currently in shipyard for repairs.
Everest	Gulf of Mexico, Atwater Valley 272	34% BHP Billiton; BP operator	Drilling ahead.
Brecknock-2	Western Australia, Browse Basin WA-32-R	8.33% BHP Billiton; Woodside operator	Hydrocarbons encountered.  Plugged and abandoned
Calliance-1	Western Australia, Browse Basin WA-32-R	20% BHP Billiton; Woodside operator	Hydrocarbons encountered.  Plugged and abandoned
Davan-1	UK North Sea, Block 9 / 5a-4	35% BHP Billiton; Total operator	Drilling ahead.

### MINERALS EXPLORATION

BHP Billiton continued to pursue global exploration opportunities for key commodities of interest utilising both in-house capabilities and the Junior Alliance Programme.

Exploration continued on diamond targets in Canada, Angola and Botswana; on porphyry copper targets in Chile, Peru and the Democratic Republic of Congo; and on nickel targets in Australia. Exploration for iron ore, coal and bauxite was undertaken in a number of regions including Australia, Brazil and West Africa.

### EXPLORATION EXPENDITURE

During the six months ended 31 December 2005, BHP Billiton spent US\$99 million on minerals exploration, of which US\$96 million was expensed, and US\$251 million on petroleum exploration, of which US\$123 million was expensed.

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

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BHP Billiton Plc Registration number 3196209

Registered in Australia  
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The BHP Billiton Group is headquartered in Australia

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## SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

BHP Billiton Limited

Date: 24 January 2006

By: Karen Wood

Name: Karen Wood

Title: Company Secretary