

BHP BILLITON PLC  
Form 6-K  
October 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

October 24, 2006

**BHP BILLITON LIMITED**

**(ABN 49 004 028 077)**

(Exact name of Registrant as specified in its charter)

**VICTORIA, AUSTRALIA**

(Jurisdiction of incorporation or organisation)

**180 LONSDALE STREET, MELBOURNE, VICTORIA**

**3000 AUSTRALIA**

(Address of principal executive offices)

**BHP BILLITON PLC**

**(REG. NO. 3196209)**

(Exact name of Registrant as specified in its charter)

**ENGLAND AND WALES**

(Jurisdiction of incorporation or organisation)

**NEATHOUSE PLACE, VICTORIA, LONDON,**

**UNITED KINGDOM**

(Address of principal executive offices)

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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 [x] 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 October 2006

Number 28/06

BHP BILLITON QUARTERLY REPORT ON EXPLORATION  
AND DEVELOPMENT ACTIVITIES  
July 2006 - September 2006

This report covers exploration and development activities for the quarter ended 30 September 2006. 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.

Whilst the majority of BHP Billiton's projects remain broadly on schedule and budget, tight labour markets and shortages of equipment and supplies continue across the industry. These issues are particularly acute in Western Australia and the Gulf of Mexico and continue to impact costs and schedules.

**PETROLEUM DEVELOPMENT**

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. During the quarter, the facility sailed to its offshore field location and was permanently installed with all of its 12 mooring lines connected. Six development wells were drilled and two were completed as at the end of September. This development will have a gross nameplate daily capacity of 200,000 barrels of oil and 180 million cubic feet of natural gas. A detailed review of cost estimates continues as the project's schedule becomes more certain. Capital cost pressures are likely to result in a capital cost increase of more than 30 per cent in excess of the currently approved budget.

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. Civil engineering work is almost complete ahead of the scheduled mobilisation of the mechanical installation contractor on

site. BHP Billiton's share of development costs, based on the operator's recently revised estimate, has increased by 20 per cent to US\$300 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 seven well subsea system. 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, batch setting operations for five new development wells were completed and fabrication of the hull and topsides continued at construction yards in Texas and Louisiana respectively. 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 with a gross daily capacity of approximately 80,000 barrels of liquids, which will be provided under a 10 year service agreement. During the quarter, the first subsea system was received and drilling of the first well commenced. Topsides fabrication in Singapore is progressing on schedule. Project costs are estimated at US\$600 million (BHP Billiton share US\$300 million). 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. During the quarter, fabrication of the jacket and topsides commenced. 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.

Shenzi Development, Gulf of Mexico, USA (BHP Billiton 44%, operated)

In June 2006, BHP Billiton approved the development of the Shenzi oil and gas field located in the Gulf of Mexico. The project includes the construction, installation and operation of a stand-alone platform and the associated subsea system. Initial field development will consist of seven producing wells and the full field development is expected to have up to 15 wells. The facility will have a gross nameplate daily capacity of 100,000 barrels of oil and 50 million cubic feet of gas. During the quarter drilling of the development wells commenced as did fabrication of the topsides and hull. Gross costs for the full field development through 2015 are estimated at US\$4.4 billion (BHP Billiton share US\$1.94 billion) with first production expected by mid 2009.

## MINERALS DEVELOPMENT

### Aluminium

Alumar Refinery expansion, Brazil (BHP Billiton 36%, non-operated)

The Alumar Refinery expansion was approved in December 2005 with a budget of US\$518 million (BHP Billiton share)

and an expected commissioning date of mid 2008. The project includes upgrades to the existing production unit and duplication of the upgraded line. Alumina capacity will increase by 2 million tonnes per annum to 3.5 million tonnes per annum. Detailed engineering is now 50 per cent complete.

#### Base Metals

Spence, Chile (BHP Billiton 100%)

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, the mine pre-strip was completed on schedule. Low grade oxide mineralisation continued to be placed on the dump leach pad and oxide ore is now available to feed the crusher. Electrical and plant piping installation is nearing completion and pre-commissioning testing is continuing with the project on schedule to commence production in the current quarter. The project remains within the budget of US\$990 million excluding the foreign exchange impacts of a stronger Chilean peso.

#### Carbon Steel Materials

Rapid Growth Project 3,

#### **Australia (BHP Billiton 85%, operated)**

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. Engineering is essentially complete, and all major orders and contracts have now been let. Construction at Area C is currently focused on concrete works and the first new rail sidings are now operational. The demolition of the old Goldsworthy facilities in Port Hedland, together with the upgrade of the associated berth commenced on 1 September as planned. 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%, non-operated)

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 Ponta Ubu, a third pellet plant, additional stockyard and enhanced ship loading capacity at the Ponta Ubu site. Detailed engineering is 70 per cent complete and all major equipment procurement and construction contracts have been awarded. Construction activities are continuing at Germano, Ubu and on the pipeline. 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.

#### Diamonds and Specialty Products

Koala Underground Project, Canada (BHP Billiton 80%, operated)

In June 2006, BHP Billiton approved the development of the third underground mine at the EKATI diamond mine in Canada. In addition to the mine development, the investment provides for mine ventilation systems, an underground

conveyor connecting to the existing Panda underground conveyor and minor surface infrastructure and mobile equipment. The project will deliver a total of 10.6 million dry tonnes of ore to the process plant and recover 9.8 million carats of high quality Koala diamonds over an 11 year period. During the quarter, underground tunnelling continued and construction of the surface dewatering and mine ventilation facilities were initiated. Procurement is well advanced and engineering is proceeding to schedule. Total development costs are estimated at US\$250 million (BHP Billiton share US\$200 million). First production is expected in the last quarter of 2007.

#### Stainless Steel Materials

Ravensthorpe Nickel Project, Australia

#### **(BHP Billiton 100%)**

In August 2005, a revised budget of US\$1,340 million was approved for the Ravensthorpe Nickel Project. 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). A detailed review of the cost estimate and delivery schedule is continuing, however as previously reported, cost pressures are likely to result in a capital cost increase of more than 30 per cent in excess of the currently approved budget. Engineering and procurement activities are now finalised and construction progress is approximately 60 per cent complete. The construction focus is now on mechanical, piping and electrical installation with 2,000 people currently working on site. The second autoclave has been installed. Pre-commissioning and commissioning activities are progressing and mining operations have commenced with the first blast occurring in September 2006.

Yabulu Extension Project, Australia

#### **(BHP Billiton 100%)**

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. Overall project progress is approximately 81 per cent complete. Following a review of project costs completed in August 2005, a revised budget of US\$460 million was approved. The project is on schedule and commissioning will start ahead of delivery of feed from Ravensthorpe.

#### PETROLEUM EXPLORATION

Exploration and appraisal wells drilled during the quarter or in the process of drilling as at 30 September 2006.

WELL	LOCATION	BHP BILLITON EQUITY	STATUS
Blackbeard West-1	Gulf of Mexico, South Timbalier Block 168	5% BHP Billiton; Exxon operator	Temporarily abandoned. Hydrocarbons encountered.
Puma-2	Gulf of Mexico, Green Canyon Block 821 / 866	33.3% BHP Billiton; BP operator	Operations temporarily suspended, rig released.
Ouachita-1			

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	Gulf of Mexico, Green Canyon Block 376	16.875% BHP Billiton; Amerada Hess operator	Plugged and abandoned. Dry hole.
Kingbird-1	Trinidad & Tobago, Block 3(a)	30% BHP Billiton and operator	Hydrocarbons encountered. Well not tested.
Ruby-1	Trinidad & Tobago, Block 3(a)	25.5% BHP Billiton and operator	Drilling ahead.
Brecknock-3	Browse Basin Western Australia WA-32-R	8.33% BHP Billiton; Woodside operator	Plugged and abandoned. Successful appraisal.
Pemberton-1	Dampier Sub-Basin Western Australia WA-28-P	16.66% BHP Billiton; Woodside operator	Plugged and abandoned. Hydrocarbons encountered.
Huntsman East-1	Beagle Sub-Basin Western Australia WA-297-P	10.23% BHP Billiton; Woodside operator	Plugged and abandoned. Dry hole.

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.

Grassroots exploration continued on diamond targets in Angola and Canada; on copper targets in Mexico, Mongolia and the Democratic Republic of Congo; and on nickel targets in Australia and Russia. Exploration for iron ore, coal and bauxite was undertaken in a number of regions including Australia, Brazil and West Africa.

During the quarter, BHP Billiton spent US\$51 million on minerals exploration, all of which was expensed. Petroleum exploration expenditure was US\$79 million, of which US\$65 million was expensed.

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 Limited ABN 49 004 028 077**

Registered in Australia  
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**BHP Billiton Plc Registration number 3196209**

Registered in England and Wales  
Registered Office: Neathouse Place London SW1V 1BH United  
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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 and BHP Billiton Plc

Date: 24 October 2006

By: Karen Wood

Name: Karen Wood

Title: Group Company Secretary