

BHP BILLITON LTD  
Form 6-K  
July 27, 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

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July 25, 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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25 July 2006  
Number 24/06

BHP BILLITON QUARTERLY REPORT ON EXPLORATION  
AND DEVELOPMENT ACTIVITIES  
April 2006 - June 2006

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

During the quarter, the Board approved the development of the Shenzi oil and gas field in the Gulf of Mexico (USA) and the Koala Underground Project at the EKATI diamond operation (Canada). This brings to seven the total number of major projects approved during the 2006 financial year for an estimated cost of US\$5.1 billion (BHP Billiton share).

The Worsley Development Capital Projects (Australia) and the Rapid Growth Project 2 (Australia) were commissioned and the Escondida Sulphide Leach Project (Chile) achieved first production during the quarter.

Cost and capacity pressures continued during the final quarter of the 2006 financial year. Tight labour markets and shortages of equipment and supplies have driven up costs and in some instances impacted project schedules. Currency strength against the US dollar has added further pressure. Market conditions in Australia and the Gulf of Mexico are particularly tight and are impacting both existing projects and our plans to execute new growth projects in these regions. Specifically, the Ravensthorpe Nickel Project in Western Australia and the Atlantis South Development in the Gulf of Mexico are experiencing cost pressures more than 30 per cent in excess of approved budgets. As a result, a detailed review of the Ravensthorpe schedule and budget commenced during the quarter. The Atlantis South Development schedule remains under review following last year's hurricanes in the Gulf of Mexico. Assuming Atlantis first oil in quarter one of 2007, total production for the Petroleum Customer Sector Group for the 2007 financial year is expected to be in line with the 2006 financial year. Most other projects remain broadly on schedule with some minor delays being experienced in Australia.

#### 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. The project continues to experience cost and schedule pressure as a result of heated market conditions and additional quality assurance and regulatory certification processes in response to last year's Gulf of Mexico hurricane season. Cost pressures are likely to result in a capital cost increase of more than 30 per cent in excess of the currently approved budget. This 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, final integration work continued and US Coast Guard inspections of the facility were conducted in preparation for sail out. Drilling and completion of the development wells also continued. Overall project progress is approximately 80 per cent. The project schedule remains under review. A detailed review of cost estimates continues as the project schedule firms.

**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. The project is progressing as per schedule with all major construction contracts now awarded. BHP Billiton's share of

development costs, based on the operator's estimate, is approximately US\$250 million with first production expected by late 2008. The project cost and schedule are under review.

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, drilling of development wells began and fabrication of the platform piles and tendons also commenced at a construction yard in Texas, USA. 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. Vessel hull block and accommodation fabrication activities are continuing and the cutting, blasting and painting of topsides has commenced. Project costs are estimated at US\$600 million (BHP Billiton share approximately 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. All major contracts have now been awarded. Engineering and procurement activities continued during the quarter. 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. 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

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

The Worsley Alumina DCP was approved in May 2004 with a budget of US\$192 million (US\$165 million BHP Billiton share) and will increase alumina capacity by 250,000 tonnes per annum to 3.5 million tonnes per annum (100% basis). The project is now mechanically complete with commissioning in progress and additional production ramping up. As a result it will no longer be included in this report. The cost to completion is currently being finalised,

however is expected to be close to budget.

**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 continued during the quarter. Commissioning is expected to be completed in mid 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, leach pad irrigation continued with approximately 21 million tonnes of ore under irrigation. Performance testing of the desalination plant was completed and the solvent extraction and electrowinning plants are undergoing mechanical commissioning. First cathode was produced on 28 June 2006 and as a result this project will no longer be included in this report. Project costs are currently being finalised, however are expected to be close to the budget of US\$870 million (US\$500 million BHP Billiton share) excluding foreign exchange impacts of the stronger Chilean peso.

**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 mine pre-strip operations proceeded to schedule and the first low grade oxide mineralisation was placed on the dump leach pad. Liner placement for the heaps and ponds was effectively completed with hydrostatic testing continuing. Major mechanical and structural erection works were completed and electrical and plant piping installation continued. Initial pre-commissioning testing commenced with electrical rooms and sub stations being energised. Site wide communication was achieved between control rooms and electrical switch rooms. The project remains within the budget of US\$990 million excluding foreign exchange impacts of the stronger Chilean peso. Production is on schedule 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. The project comprises increases in mine, rail and port capacity through the development of Ore Body 18 (OB 18), purchase of additional rolling stock and a new car dumper at Finucane Island. Site activities are essentially complete. First ore was railed from OB 18 on 7 May 2006. Wet commissioning of the new car dumper also started during the quarter as planned. 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). As this project has successfully been completed it will no longer be included in this report. The cost of completion is currently being finalised however is expected to be in line with the budget of US\$575 million (BHP Billiton share US\$489

million).

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. Engineering and procurement activities are nearing completion, with initial construction activities 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 Ponta Ubu and a third pellet plant, additional stockyard and enhanced shiploading capacity at the Ponta Ubu site. Detailed engineering and procurement are proceeding and construction activities have commenced 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. 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**

The Ravensthorpe Nickel Project was approved in March 2004 and following a review of project costs completed in August 2005, a revised budget of US\$1,340 million was authorised. The project continues to experience cost and schedule pressure as a result of the heated market in Western Australia. Cost pressures are likely to result in a capital cost increase of more than 30 per cent in excess of the currently approved budget. A detailed review of both the cost estimate and delivery schedule commenced during the quarter. 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 and procurement activities are now over 98 per cent complete and construction continues to ramp up with more than 1,700 people now working at site. Erection of structural steel is well advanced and mechanical and piping works are in progress. The first autoclave has been installed and the second is awaiting transport to site.

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. Overall project progress is 64 per cent. Following a review of project costs completed in August 2005, a revised budget of US\$460 million was approved. Project delivery 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 June 2006.

WELL	LOCATION	BHP BILLITON EQUITY	STATUS
Blackbeard West-1	Gulf of Mexico, South Timbalier Block 168	5% BHP Billiton; Exxon operator	Drilling ahead.
Puma-2 & 3	Gulf of Mexico, Green Canyon Block 821 / 866	33.3% BHP Billiton; BP operator	Puma 2 recommenced operations early April, currently drilling ahead. Puma 3 is temporarily suspended.
Ouachita-1	Gulf of Mexico, Green Canyon Block 376	16.875% BHP Billiton; Amerada Hess operator	Drilling ahead.
Kingbird-1	Trinidad & Tobago, Block 3(a)	30% BHP Billiton and operator	Spudded mid June, currently drilling ahead.
Dixon-2	Dampier Sub-Basin Western Australia WA-9-R	16.66% BHP Billiton, Woodside operator	Successful appraisal. Plugged & suspended.
Brecknock-3	Browse Basin Western Australia WA-32-R	8.33% BHP Billiton, Woodside operator	Spudded early June, currently drilling ahead.
Pemberton-1	Dampier Sub-Basin Western Australia WA-28-P	16.66% BHP Billiton, Woodside operator	Spudded mid June. Wireline logging completed. Results being evaluated.

#### 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, Canada and the Democratic Republic of Congo (DRC); on copper targets in Chile, Mongolia, DRC and North America; and on nickel targets in Australia, Canada and

Africa. Exploration for iron ore, coal and bauxite was undertaken in a number of regions including Australia, South America and Africa.

During the quarter BHP Billiton also announced an alliance with MMC Norilsk Nickel, Russia's largest mining and metals company, to explore and develop mineral resources in the Russian Federation. This represents an important step for BHP Billiton and significant diversification of our geographical base.

#### EXPLORATION EXPENDITURE

During the year ended 30 June 2006, BHP Billiton spent US\$295 million on minerals exploration of which US\$214 million was expensed. Capitalised exploration included US\$76 million for the Caroona (Australia) exploration licence.

Petroleum exploration expenditure was US\$447 million. The amount expensed was US\$318 million including US\$41 million of exploration expenditure previously capitalised.

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**

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**The BHP Billiton Group is headquartered in Australia**







## 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: 25 July 2006

By: Karen Wood

Name: Karen Wood

Title: Company Secretary