

BHP BILLITON LTD  
Form 6-K  
October 21, 2004

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SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

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FORM 6-K

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

For the Date of

21 October 2004

BHP Billiton Limited

ABN 49 004 028 077

180 Lonsdale Street

Melbourne Victoria 3000

Australia

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	<input checked="" type="checkbox"/>		Form 40-F	<input type="checkbox"/>
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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	<input type="checkbox"/>		No	<input checked="" type="checkbox"/>
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If "Yes" is marked, indicate below the file number assigned to the registrant in connection with Rule 12g3-2(b):

Date 21 October 2004  
Number 33/04

BHP BILLITON QUARTERLY REPORT ON EXPLORATION  
AND DEVELOPMENT ACTIVITIES

July 2004 - September 2004

This report covers exploration and development activities for the quarter ended 30 September 2004. Unless otherwise stated, BHP Billiton's interest in the projects referred to in this report is 100 per cent, and references to quarters are based on calendar years.

Of the 14 projects that were under construction during the quarter, 10 are within original Board approved expenditure limits and are tracking on or ahead of schedule. The exceptions are the Mad Dog Development, the ROD Integrated Development, Minerva and Dendrobium.

PETROLEUM DEVELOPMENT

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

The commissioning period for the fourth liquefaction processing train has been successfully completed with start-up achieved at the end of August 2004 and first significant LNG production having occurred by the end of September 2004. Board approved capital expenditure is US\$247 million. This project is now fully operational and will no longer be included in this report.

Mad Dog Development, Gulf of Mexico, USA (BHP Billiton 23.9%, non-operated)

BHP Billiton announced its sanction of the Mad Dog field in February 2002, approving up to US\$335 million for the development of this Gulf of Mexico oil and gas field. The sanctioned facility had been designed to a daily capacity of 80,000 barrels of crude oil and 40 million cubic feet of natural gas. Capacity of the facility has been increased to 100,000 barrels of oil per day, and the project's forecast budget has, as a consequence been increased to US\$368 million, a 10 per cent increase over the original budget. During the quarter, the topsides were successfully installed on the hull, and offshore hook-up and commissioning commenced. The project remains on schedule for first production by the end of 2004.

Greater Angostura Development, Trinidad (BHP Billiton 45%, operated)

In March 2003, BHP Billiton approved US\$327 million for the first development phase of the Angostura oil and gas field off the northeast coast of Trinidad. The project has a nameplate capacity of 100,000 barrels of oil equivalent per day. During the quarter, fabrication of onshore facilities continued, including oil storage tanks, pipelines and associated infrastructure. The remaining offshore facilities are being completed and offshore pipeline installation is in progress. The development drilling program in the Angostura field continues, 12 wells have been drilled and another 10 are still to be drilled. The project remains on budget and on schedule for first oil production by the end of 2004.

ROD Integrated Development, Algeria (BHP Billiton 36.04%, joint operating entity comprising BHP Billiton/SONATRACH)

The ROD Integrated Development consists of the development of six satellite oilfields in the Berkine Basin in eastern Algeria. The project will produce 80,000 barrels of Saharan Blend crude oil per day, with associated gas being reinjected into the reservoir together with water to provide pressure support to the reservoir. The development drilling has been concluded and a total of 34 development wells are currently available for production operations. First oil is expected for fourth quarter 2004 and the project is expected to be delivered within the original budget. BHP Billiton's share is US\$192 million.

Minerva, Australia (BHP Billiton 90%, operated)

In May 2002, BHP Billiton approved the Minerva gas field project in the offshore Otway Basin in Victoria. The final part of the Minerva development, the gas plant, is now approaching completion. Construction is well advanced and pre-commissioning has started. All other parts of the Minerva Development are now ready to produce, with the Minerva 3 and 4 wells completed, onshore and offshore flowlines installed, and all tie-ins made from the wellhead through to the gas plant. Initial production is expected in the fourth quarter of 2004, and BHP Billiton's share of capital expenditure is US\$150 million. This was revised in the March 2004 quarter.

Caesar/Cleopatra Transportation Systems, Gulf of Mexico, USA (BHP Billiton interest in Caesar pipeline, 25%; interest in Cleopatra pipeline, 22%. Non-operated)

BHP Billiton acquired a 25 per cent interest in the Caesar oil pipeline and a 22 per cent interest in the Cleopatra gas pipeline, which will transport production from the Mad Dog and Atlantis fields to pipelines closer to shore. During the quarter, commissioning equipment was set up on the Mad Dog platform with preparatory flushing operations commencing at the end of August. The project is expected to be delivered within the budget of US\$132 million and on schedule to begin operation with first production at third-party facilities, in advance of first hydrocarbon production from Mad Dog and Atlantis.

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

BHP Billiton completed full capital allocation for the Atlantis project in February 2003. Our share of total project expenditure for this Gulf of Mexico oil and gas field is US\$1.1 billion. The sanctioned facility is designed to produce at a daily rate of up to 150,000 barrels of crude oil and 180 million cubic feet of natural gas. During the quarter, the hull was launched from the dry dock, following a brief delay due to an approaching hurricane. All major deck floats have been completed on the topsides. The development drilling campaign has commenced. The project remains on budget and on schedule for first production in the third quarter of 2006.

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## MINERALS DEVELOPMENT

### Aluminium

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

The Worsley Alumina Development Capital Projects was approved in May 2004 with a budget of US\$192 million (US\$165 million BHP Billiton share). The project will increase alumina capacity by 250,000 tonnes per annum

(215,000 tonnes per annum BHP Billiton share) to a capacity of 3.5 million tonnes per annum (3.01 million tonnes per annum BHP Billiton share). Engineering and procurement activities are continuing. Construction work is progressing in a number of areas with the main piling work complete and civil work nearing completion. Commissioning of the DCP is scheduled for the first quarter of 2006.

### Base Metals

#### Escondida Norte, Chile (BHP Billiton 57.5%)

The development of the Escondida Norte pit, located approximately 5 kilometres north of the existing Escondida mining operations, was approved in June 2003. Pre-mine waste stripping continued during the quarter, using both contractor and Escondida equipment, with a fourth truck-shovel fleet commencing during September 2004. Total material movement in the pre-mine to the end of September 2004 was 82.7 million tonnes. Project development during the period involved the completion of the mine fleet maintenance workshop, completion of the crusher retaining structure, continued construction of the overland conveyor alignment and the crusher foundation area and near completion of the electrical power distribution. Overall project progress is approximately 48 per cent complete with pre-mine development, design and construction activities on track to meet first ore delivery to the crusher in the fourth quarter of 2005. Development costs are estimated at US\$400 million (BHP Billiton share US\$230 million).

#### 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. Detailed engineering and procurement activities are continuing. Construction development is underway including temporary roads, construction offices, fuelling station and employee camp expansions. Development costs are estimated at US\$870 million (US\$500 million BHP Billiton share) and production is scheduled to begin during the second half of 2006.

### Carbon Steel Materials

#### Dendrobium Coal Project, Australia

The Dendrobium Mine will be a low cost underground longwall operation capable of producing 5.2 Mtpa of raw coal (3.6 Mtpa of clean coal). The mine surface facilities, ventilation shaft, washery upgrade and Kemira Valley Rail Coal Loading facilities have been successfully commissioned. Construction activities associated with the thermal drier are well underway and process commissioning of the first module has commenced. The majority of the project's remaining work is related to the underground drivage required to install and commission the longwall. All mining units have passed through the zone where difficult mining conditions had been experienced and are producing at expected rates. A review of project costs has been completed and, primarily as a result of those previous mining conditions, the project cost is expected to be approximately US\$200 million, an increase of around 18 per cent above the original budget. We continue to expect longwall commencement in the middle of 2005.

### Diamonds and Specialty Products

#### Panda Underground Project, EKATI Diamond Mine, Canada (BHP Billiton 80%)

The Panda Underground Project, approved in May 2004, is a 2,600 tonnes per day sub-level retreat mine that will deliver approximately 4.6 million tonnes of ore and 4.7 million carats of high value Panda diamonds to the EKATI process plant over a 6 year production life. Construction activities associated with the mine surface facilities, first ventilation shaft, and underground development are well underway. Overall project progress is approximately 42 per

cent complete. The capital cost of the project is expected to be US\$182 million (BHP Billiton share US\$146 million), with first ore production on schedule for early 2005.

### 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 and procurement activities are proceeding on schedule. The construction camp has been opened and good progress is being made on the access roads and bulk earthworks contracts. Funding has been secured from the State and Federal government for community infrastructure and the services necessary to support the implementation of a locally based workforce. The capital cost for the project is expected to be US\$1.05 billion, with the first shipment of MHP from Ravensthorpe expected by the second quarter of 2007.

#### Yabulu Extension Project, Australia

The Yabulu Extension Project was approved in March 2004. The metal refining section of the QNI 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 are proceeding on schedule. The capital cost for the project is expected to be US\$350 million, with first nickel metal production from the expanded Yabulu refinery expected by late 2007.

### PETROLEUM EXPLORATION

Exploration and appraisal wells drilled during the quarter or in the process of drilling as at 30 September 2004.

<u>WELL</u>	<u>LOCATION</u>	<u>BHP BILLITON EQUITY</u>	<u>STATUS</u>
Indian	Australia, WA-271-P/WA-255-P Carnarvon Basin	20% BHP Billiton; Woodside operator	Plugged and abandoned. Dry hole.
Stickle - 2 & 3 side track	Australia, WA-12-R Carnarvon Basin	71.43% BHP Billiton operator	Hydrocarbons encountered. See News@BHP Billiton release of 13 August 2004.
Joseph - 1	Gulf of Mexico, High Island Block 10L	20% BHP Billiton; Shell operator	Drilling ahead.
Shenzi-3 & side track	Gulf of Mexico, Green Canyon 653	44% BHP Billiton operator	Hydrocarbons encountered in Shenzi-3. Sidetrack well

			drilling ahead.
Starlifter-1	Gulf of Mexico, West Cameron 77	30.95% BHP Billiton; Newfield operator	Encountered gas. Well completed as future producer.
Rhino	Philippines, SC-41 Sandakan Basin	28.1% BHP Billiton; Unocal operator	Plugged and abandoned. Dry hole.

MINERALS EXPLORATION

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

The mini-bulk sample results on the BHP Billiton Qilalugaq property near Repulse Bay, Nunavut, Canada have been received. Diamonds were recovered from four separate samples, although none of the samples contained values that would be expected to be economic.

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EXPLORATION EXPENDITURE

During the quarter, BHP Billiton spent US\$26 million on minerals exploration, all of which was expensed, and US\$61 million on petroleum exploration, of which US\$30 million was expensed.

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Further information on BHP Billiton can be found on our Internet site:

<http://www.bhpbilliton.com>

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Registered in Australia  
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Registered in England and Wales  
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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  
/s/ KAREN WOOD

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Karen Wood  
Title: Company Secretary  
Date:

21 October 2004