

BHP BILLITON LTD  
Form 6-K  
July 20, 2011

**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**

July 20, 2011

**BHP BILLITON LIMITED**

(ABN 49 004 028 077)

(Exact name of Registrant as specified in its charter)

**VICTORIA, AUSTRALIA**

(Jurisdiction of incorporation or organisation)

**BHP BILLITON PLC**

(REG. NO. 3196209)

(Exact name of Registrant as specified in its charter)

**ENGLAND AND WALES**

(Jurisdiction of incorporation or organisation)

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VICTORIA

UNITED KINGDOM

3000 AUSTRALIA

(Address of principal executive offices)

(Address of principal executive offices)

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

**Release Time**                **IMMEDIATE**

**Date**                         **20 July 2011**

**Number**                    **22/11**

**BHP BILLITON EXPLORATION AND DEVELOPMENT REPORT**

**FOR THE YEAR ENDED 30 JUNE 2011**

This report covers the Group's exploration and development activities for the June 2011 quarter. 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.

**Development**

During the 2011 financial year, BHP Billiton approved 11 major projects with a total investment value of US\$12.9 billion (BHP Billiton share). The progression of these projects into execution forms a meaningful component of the company's anticipated organic growth program that is expected to exceed US\$80 billion over the five years to the end of the 2015 financial year. Importantly, three major projects delivered first production in the twelve month period.

The 11 approved projects spanned the major ferrous, non-ferrous and energy product groups and included: Macedon (natural gas); WAIO Jimblebar Mine Expansion, WAIO Port Hedland Inner Harbour Expansion, WAIO Port Blending and Rail Yard Facilities and the Samarco Fourth Pellet Plant (all iron ore); Queensland Coal Daunia mine development, Queensland Coal Broadmeadow Life Extension and Queensland Coal Hay Point Stage Three Expansion (all metallurgical coal); Escondida Ore Access (copper); Hunter Valley Energy Coal (HVEC) RX1 Project; and the Ekati Misery Open Pit Project (diamonds). The three completed projects were the South Africa Coal Douglas-Middelburg Optimisation Project, the HVEC MAC20 Project (both energy coal) and Angostura Gas Phase II (natural gas).

Angostura Gas Phase II was completed in the recent quarter and delivered first gas on schedule and below budget. This project will no longer be reported in future Exploration and Development Reports.

Following the progression of the Jansen Potash Project into feasibility during the March 2011 quarter, BHP Billiton announced an additional US\$488 million pre-commitment to support development of the project in Saskatchewan, Canada.

Project And Ownership	Share Of Approved Capex US\$M	Initial	Production Capacity (100%)	Quarterly Progress
		Production Target Date		
Petroleum Projects				
Macedon (Australia) 71.43%	1,050	CY13	200 million cubic feet gas per day.	On schedule and budget. The overall project is 29% complete.
Gas				
Angostura Gas Phase II (Trinidad and Tobago) 45%	180	H1 CY11	280 million cubic feet gas per day.	First gas delivered on schedule and below budget. Refer to News Release dated 12 May 2011.
Gas				
Bass Strait Kipper (Australia) 32.5% - 50%	900	CY12 <sup>(a)</sup>	10,000 bpd condensate and processing capacity of 80 million cubic feet gas per day.	On revised schedule and budget. The overall project is 82% complete.
Gas/Gas Liquids				
Bass Strait Turrum (Australia) 50%	1,350	CY13	11,000 bpd condensate and processing capacity of 200 million cubic feet gas per day.	On revised schedule and budget. The overall project is 63% complete.
Gas/Gas Liquids				
North West Shelf CWLH Life Extension (Australia) 16.67%	245	CY11	Replacement vessel with capacity of 60,000 bpd oil.	On schedule and budget. The overall project is 94% complete.
Oil				
North West Shelf North Rankin B Gas Compression (Australia) 16.67%	850	CY13	2,500 million cubic feet gas per day.	On budget. Steady state production remains on track for CY13, despite a delay in first production to CY13 due to slower than expected progress on topside fabrication. The overall project is 69% complete.
LNG				
Minerals Projects				

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Worsley Efficiency & Growth (Australia)	2,995	Q1 CY12	1.1 million tpa of additional alumina.	Budget and schedule review completed. See News Release dated 24 June 2011. The overall project is 78% complete.
86%				
Alumina				
Antamina Expansion (Peru)	435	Q4 CY11	Increases ore processing capacity to 130,000 tpd.	On schedule and budget. The overall project is 56% complete
33.75%				
Copper				
Escondida Ore Access (Chile)	319	Q2 CY12	The relocation of the in-pit crushing and conveyor infrastructure provides access to higher grade ore.	On schedule and budget. The overall project is 43% complete.
57.5%				
Copper				
EKATI Misery Open Pit Project (Canada)	323	CY15	Project consists of a pushback of the existing Misery open pit which was mined from 2001 to 2005.	Approval announced. See News Release dated 9 May 2011.
80%				
Diamonds				

Project And	Share Of Approved	Initial Production	Production Capacity (100%)	Quarterly Progress
Ownership WAIO RGP5 (Australia)	4,800	H2 CY11	Scope review completed and integrated into subsequent expansion approvals that will increase WAIO capacity to 220 million tpa.	First production achieved on schedule, ramp up underway. The overall project is 98% complete.
85%				
Iron Ore				
WAIO Jumblebar Mine	3,300 <sup>(b)</sup>	Q1 CY14	Increases mining and processing capacity to 35 million tpa with incremental debottlenecking opportunities to 55 million tpa.	On schedule and budget. The overall project is 11% complete.
Expansion				
(Australia)				
96%				
Iron Ore				
WAIO Port Hedland	1,900 <sup>(b)</sup>	H2 CY12	Increases total inner harbour capacity to 220 million tpa with debottlenecking opportunities to 240 million tpa.	On schedule and budget. The overall project is 30% complete.
Inner Harbour				
Expansion				
(Australia)				
85%				
Iron Ore				
WAIO Port Blending	1,400 <sup>(b)</sup>	H2 CY14	Optimises resource and enhances efficiency across the WAIO supply chain.	On schedule and budget. The overall project is 9% complete.
and Rail Yard Facilities				
(Australia)				
85%				
Iron Ore				
Samarco Fourth Pellet	1,750	H1 CY14	Increases iron ore pellet production capacity by 8.3 million tpa to 30.5 million tpa.	Approval announced. See News Release dated 29 April 2011.
Plant				
(Brazil)				
50%				
Iron Ore				
Daunia (Australia)	800	CY13	Greenfield mine development with capacity to produce 4.5 million tpa of export metallurgical coal.	On schedule and budget. The overall project is 11% complete.
50%				
Metallurgical Coal				

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Broadmeadow Life Extension (Australia)	450	CY13	Increases productive capacity by 0.4 million tpa and extends life of the mine by 21 years.	On schedule and budget. The overall project is 32% complete.
50%				
Metallurgical Coal				
Hay Point Stage Three Expansion (Australia)	1,250 <sup>(b)</sup>	CY14	Increases port capacity from 44 million tpa to 55 million tpa and reduces storm vulnerability.	On schedule and budget. The overall project is 20% complete.
50%				
Metallurgical Coal				
RX1 Project (Australia)	400	H2 CY13	Increases run-of-mine thermal coal production by approximately 4 million tpa.	On schedule and budget. The overall project is 26% complete.
100%				
Energy Coal				

**Substantial increase to Base Metals Ore Reserves and Mineral Resources**

BHP Billiton today announced a 129 per cent increase in the Mineral Resource surrounding the Escondida mining complex, comprising a 40 per cent increase at Escondida and initial reporting of Mineral Resources for the Pampa Escondida and Pinta Verde prospects. This significant increase follows an extensive four year, US\$381m (100% basis) brownfield exploration program, and entrenches Escondida's position as the world's leading copper mine for decades to come.

In addition, BHP Billiton's Antamina JV announced an increase to its estimated Ore Reserves and Mineral Resources during the second half of the 2011 financial year. At 30 June 2011, Mineral Resources have increased 32 per cent.

**Mineral Resources Escondida (100%)<sup>(5)</sup>**

As at 30 June 2011													As at 30 June 2010							
Commodity	Deposit <sup>(d)</sup>	Ore Type	Measured Resource				Indicated Resource				Inferred Resource				Total Resource		Total Resource		BHP Billiton interest%	
			Millions of dry metric tonnes	% TC	metric tonnes	% TC	Millions of dry metric tonnes	% TC	metric tonnes	% TC	Millions of dry metric tonnes	% TC	metric tonnes	% TC	Millions of dry metric tonnes	% TC	Millions of dry metric tonnes	% TC		
<b>Copper</b>																				
	Escondida <sup>(e)</sup>	Sulphide and sulphide leach	2,937	0.75	2,883	0.57	5,725	0.53	11,544	0.59	8,356	0.61	57.5							
		Oxide	78	0.74	74	0.87	31	0.64	183	0.76	152	0.80								
		Mixed	74	0.91	79	0.66	68	0.52	221	0.70										
	Pampa Escondida <sup>(f)</sup>	Sulphide			1,585	0.60	5,793	0.44	7,378	0.47			57.5							
	Pinta Verde <sup>(g)</sup>	Oxide	12	0.78	39	0.69	52	0.55	103	0.63			57.5							
		Sulphide	1	0.58	10	0.59	61	0.44	72	0.46										

**Mineral Resources Antamina (100%)<sup>(h)</sup>**

																						As at 30 June 2010			
Measured Resource		Indicated Resource				Inferred Resource				Total Resource				Total Resource											
Millions of dry metric tonnes	% Cu	% Zn	g/t Ag	% Mo	Millions of dry metric tonnes	% Cu	% Zn	g/t Ag	% Mo	Millions of dry metric tonnes	% Cu	% Zn	g/t Ag	% Mo	Millions of dry metric tonnes	% Cu	% Zn	g/t Ag	% Mo	Millions of dry metric tonnes	% Cu	% Zn			
130	0.91	0.15	7.3	0.03	761	0.94	0.13	9.0	0.03	531	0.79	0.11	9.2	0.02	1,422	0.88	0.13	8.9	0.02	1,160	0.92	0.15			
57	0.72	1.57	13.4	0.01	258	0.84	1.97	14.2	0.01	177	0.54	1.33	9.7	0.00	492	0.72	1.69	12.5	0.01	288	0.95	1.74			

**Ore Reserves Antamina (100%)<sup>(i)</sup>**

As at 30 June 2011													As at 30 June 2010									
Commodity	Deposit	Ore Type	Proved Ore Reserve				Probable Ore Reserve				Total Ore Reserve				Total Ore Reserve				BHP Billiton interest%			
			Millions of dry metric tonnes	% Cu	% Zn	g/t Ag	% Mo	Millions of dry metric tonnes	% Cu	% Zn	g/t Ag	% Mo	Millions of dry metric tonnes	% Cu	% Zn	g/t Ag	% Mo	Millions of dry metric tonnes		% Cu	% Zn	g/t Ag



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amina	Sulphide																					
Cu only	95	1.07	0.16	8.3	0.03	485	0.95	0.14	8.9	0.03	580	0.97	0.15	8.8	0.03	516	1.06	0.20	9.5	0.03	33.7	
Sulphide																						
Cu-Zn	43	0.81	1.82	14.8	0.01	180	0.83	2.00	14.4	0.01	223	0.83	1.97	14.5	0.01	161	1.03	2.00	17.5	0.01		

BHP Billiton Exploration and Development Report for the year ended 30 June 2011

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## Minerals Exploration

Greenfield exploration continued on copper targets in South America, Mongolia and Zambia; nickel and copper targets in Australia and diamond targets in Canada. Exploration for iron ore, potash, uranium and manganese was undertaken in a number of regions including Australia, Asia, Africa and the Americas.

For the 2011 financial year, BHP Billiton spent US\$683 million on minerals exploration, of which US\$577 million was expensed.

## Petroleum Exploration

Exploration and appraisal wells drilled during the quarter or in the process of drilling as at 30 June 2011.

Well	Location	BHP Billiton Equity	Status
Deep Blue-1	Green Canyon Gulf of Mexico GC 723	31.875% (Noble operator)	Temporarily suspended Hydrocarbons encountered
Mad Dog North-1	Green Canyon Gulf of Mexico GC 738	23.9% (BP operator) <sup>(k)</sup>	Drilling ahead
Ho Vang-1	Western Trough Vietnam Block 29	50% (Operator)	Plugged and abandoned Dry hole
Bao Dom May-1	Western Trough Vietnam Block 28	50% (Operator)	Drilling ahead <sup>(l)</sup>
Argus-2	Browse Basin Australia AC/RL 8	40% (Woodside operator)	Drilling ahead
Jurjur-1	Sabah Malaysia Block N	60% (Operator)	Drilling ahead

Petroleum exploration expenditure for the 2011 financial year was US\$557 million, of which US\$404 million was expensed.

(a) Facilities ready for first production pending resolution of mercury content.

(b) Excludes announced pre-commitment funding.

(c) Competent Person O. Cortés (MAusIMM).

The statement of Mineral Resources is presented on a 100 per cent basis and is based on information compiled by the above named Competent Person and relates to Mineral Resources estimates as at 30 June 2011. Mr. Cortés is a full time employee of Teck Resources Ltd (at the time of estimation Mr. Cortés was a full time employee of Escondida), has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as a Competent Person as defined in the JORC Code, and he is a member of the Australasian Institute of Mining & Metallurgy (AusIMM). The Competent Person consents to the inclusion in this report of the matters based on their information in the form and context in which it appears.

(d) %TCu per cent total copper.

- (e) **Escondida** The increase in Mineral Resource tonnes from 2010 is largely due to step-out and infill drilling results, and partly due to updated metal prices. Ore type classification has changed from process type to mineralisation style, combining Sulphide Mill and Sulphide Leach categories.
- (f) **Pampa Escondida** Pampa Escondida is a newly discovered porphyry copper deposit of hypogene mineralisation (chalcopyrite-bornite) that is located at depth between the Escondida and Escondida Norte mines. It has been developed by 260,000m of drilling, most of which is in a regular 150x150m grid that averages 1,400m in depth. Eighty per cent of the Inferred Resources is categorised as being Interpolated Resources and are within a drilling grid up to 300x300m.
- (g) **Pinta Verde** Pinta Verde is a newly declared Mineral Resource, based on a resource estimated from more than 76,500m of drilling. It is located 4km to the north of the Escondida mine, forming the western extension of the Zaldivar deposit, and is being evaluated as potential leach feed to the Escondida Oxide or Sulfide Leach facilities. The Pinta Verde deposit is an enriched and partially oxidised deposit overlying very low-grade hypogene mineralisation.
- (h) **Competent Person** Jhon Espinoza (MAusIMM).  
The statement of Mineral Resources is presented on a 100 per cent basis, is reported as being inclusive of Ore Reserves, and is based on information compiled by the above named Competent Person and relates to Mineral Resources estimates as at 30 June 2011. Mr. Espinoza is a full time employee of BHP Billiton. Mr. Espinoza has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as a Competent Person as defined in the JORC Code, and he is a member of the Australasian Institute of Mining & Metallurgy (AusIMM). The Competent Person consents to the inclusion in this report of the matters based on their information in the form and context in which it appears.
- (i) **Antamina** The increase in Mineral Resource tonnes from 2010 are due to incorporation of data obtained from over 150,000 meters of additional core drilling and the application of revised prices.
- (j) **Competent Person** Luis Lozada (MAusIMM).  
The statement of Ore Reserves is presented on a 100 per cent basis and is based on information compiled by the above named Competent Person and relates to Ore Reserves estimates as at 30 June 2011. Mr. Lozada is a full time employee of Compañía Minera Antamina S.A. Mr. Lozada has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as a Competent Person as defined in the JORC Code, and he is a member of the Australasian Institute of Mining & Metallurgy (AusIMM). The Competent Person consents to the inclusion in this report of the matters based on their information in the form and context in which it appears.
- (k) BHP Billiton is operator of the well.
- (l) Well completed subsequent to 30 June 2011. The well was a dry hole and will be plugged and abandoned. Well costs through 30 June 2011 will be expensed in the financial year 2011 results.  
Further information on BHP Billiton can be found at: [www.bhpbilliton.com](http://www.bhpbilliton.com)

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Members of the BHP Billiton Group which 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: July 20, 2011

By: Jane McAloon  
Name: Jane McAloon  
Title: Group Company Secretary