

Oil and natural gas extraction data

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Climate Accountability Institute
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BHP Billiton, Australia

www.bhpbilliton.com Melbourne

yellow column indicates original reported units

Investor-owned

Production / Extraction data

Year	Crude Oil & NGL			Natural Gas			Coal	
	Net production	Net production	Net production	Net production	Net production	Net production	Gross production	Gross production
	Thousand bbl /d	Million bbl /yr	Million tonnes/yr	Million cf/d	Million SCM/yr	Billion cf/yr	Million tons/yr	Million tonnes/yr

- 1950
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- 2016
- 2017
- 2018



1 cubic meter = 35.31

Year	BHP		LPG + ethane:	BHP	BHP	Coal
	million bbl /yr	million tonnes/yr				
1970	4.5			0.2	3.7	2.4
1971	35.0			239	8.4	2.6
1972	55.1	0.34		336	11.9	3.1
1973	57.0	0.45		507	17.9	3.2
1974	69.5	0.56		719	25.4	3.4
1975	69.2	0.60		919	32.5	3.6
1976	73.5	0.64		1,144	40.4	3.7
1977	76.0	0.73		1,329	46.9	4.2
1978	80.0	0.85		1,454	51.3	4.4
1979	79.3	0.94		1,632	57.6	4.8
1980	78.6	0.95		1,849	65.3	5.4
1981	74.0	0.89		2,318	81.9	6.0
1982	160.0			2,691	95.0	6.2
1983	180.0			2,512	88.7	6.8
1984	81.9	0.95		2,627	92.8	6.9
1985	90.8	0.93		2,684	94.8	7.2
1986	83.0	0.90		3,427	121.0	6.5
1987	83.0	0.86		3,713	131.1	8.4
1988	83.0	0.85		5,036	177.8	9.0
1989	82.0				175.0	4.2
1990	104.0				204.0	4.4
1991	310			511	186.5	4.8
1992	194			526	192.0	5.4
1993	306			508	185.4	6.0
1994	205			511	186.5	6.2
1995	205			545	198.9	6.8
1996	78.4	interpolated			213.3	6.9
1997	82.0	interpolated			227.5	7.2
1998	85.5	LPG + ethane			241.8	7.2
1999	89.1	million tonnes/yr			256.3	7.2
2000	79.78	0.682			261.8	7.2
2001	79.00	0.674			286.7	7.2
2002	74.3				278.2	7.2
2003	61.3				302.7	7.2
2004	52.2				326.1	7.2
2005	61.0				347.9	7.2
2006	57.30	19.9 percent NGLs			360.4	7.2
2007	56.69	20.2 percent NGLs			356.8	7.2
2008	68.17	15.8 percent NGLs		68.98	366.5	7.2
2009	77.5				362.8	7.2
2010	97.1				368.6	7.2
2011	91.9				405.1	7.2
2012	85.3				822.3	7.2
2013	90.1				874.3	7.2
2014	106.1				839.3	7.2
2015	124.6				786.6	7.2
2016	116.0				744.7	7.2
2017	97.1				667.8	7.2
2018	86.4				635.5	7.2

BHP coal production is detailed in coal worksheets

Total	na	4,110	na	na	na	12,960	-	2,940
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	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
88	BHP Billiton Group share of production														
89	Year ended 30 June														
90															
91															
92				2016		2015		2014							
93	Production volumes														
94	Crude oil and condensate ('000 of barrels)														
95	Australia	20,304	21,397												
96	United States	65,560	71,626												
97	Other ⁽¹⁾	4,715	5,559												
98	Total crude oil and condensate	90,579	98,582												
99	Natural gas (billion cubic feet)														
100	Australia	325.7	294.8												
101	United States	375.8	431.7												
102	Other ⁽²⁾	43.2	60.1												
103	Total natural gas	744.7	786.6												
104	Natural Gas Liquids⁽¹⁾ ('000 of barrels)														
105	Australia	7,645	7,214												
106	United States	17,772	18,681												
107	Other ⁽²⁾	43	101												
108	Total NGL⁽¹⁾	25,460	25,996												
109	Total production of petroleum products (million barrels of oil equivalent)⁽²⁾														
110	Australia	82.23	77.74												
111	United States	145.96	162.26												
112	Other ⁽²⁾	11.95	15.68												
113	Total production of petroleum products	240.14	255.68												
114	Average sales price														
115	Crude oil and condensate (US\$ per barrel)														
116	Australia	43.55	76.30												
117	United States	38.11	64.77												
118	Other ⁽²⁾	41.60	72.90												
119	Total crude oil and condensate	39.45	67.68												
120	Natural gas (US\$ per thousand cubic feet)														
121	Australia	3.90	4.88												
122	United States	2.16	3.27												
123	Other ⁽²⁾	3.20	4.00												
124	Total natural gas	2.83	3.77												
125	Natural Gas Liquids (US\$ per barrel)														
126	Australia	40.15	63.26												
127	United States	11.23	18.35												
128	Other ⁽²⁾	20.90	29.55												
129	Total NGL	38.54	44.72												
130	Total average production cost (US\$ per barrel of oil equivalent)⁽³⁾⁽⁴⁾														
131	Australia	6.12	7.08												
132	United States	6.08	7.73												
133	Other ⁽²⁾	13.29	13.32												
134	Total average production cost	6.46	7.88												
135	BHP Billiton Form 20-F, 2016, page 266														
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Forecast capital expenditure⁽¹⁾ for FY2014 and FY2015 for continuing operations

● Petroleum and Potash
● Copper
● Iron Ore
● Coal
● Aluminium, Manganese and Nickel

BHP AnnRpt 2013

2.2 Petroleum

The table below details Petroleum's historical net crude oil and condensate, natural gas and natural gas liquids production, primarily by geographic segment, for each of the three years ended 30 June 2017, 2016 and 2015. We have shown volumes of marketable production after deduction of applicable royalties, fuel and flare. We have included in the table average production costs per unit of production and average sales prices for oil and condensate and natural gas for each of those periods.

	BHP Group share of production		
	Year ended 30 June		
	2017	2016	2015
Production volumes			
Crude oil and condensate ('000 of barrels)			
Australia	18,658	20,307	21,397
United States	52,877	65,558	71,626
Other ⁽²⁾	4,850	4,714	5,559
Total crude oil and condensate	76,385	90,579	98,582
Natural gas (billion cubic feet)			
Australia	345.7	325.6	294.8
United States	285.3	375.9	431.7
Other ⁽²⁾	36.8	43.2	60.1
Total natural gas	667.8	744.7	786.6
Natural gas liquids⁽¹⁾ ('000 of barrels)			
Australia	7,423	7,646	7,214
United States	13,152	17,771	18,681
Other ⁽²⁾	119	43	101
Total NGL⁽¹⁾	20,694	25,460	25,996
Total production of petroleum products (million barrels of oil equivalent)⁽²⁾			
Australia	83.5	82.2	77.8
United States	113.7	146.0	162.2
Other ⁽²⁾	11.2	12.0	15.7
Total production of petroleum products	208.4	240.2	255.7

BHP Billiton AnnRpt 2017, page 247.

2.3 Production

2.3.1 Petroleum

The table below details Petroleum's historical net crude oil and condensate, natural gas and natural gas liquids production, primarily by geographic segment, for each of the three years ended 30 June 2013, 2012 and 2011. We have shown volumes of marketable production after deduction of applicable royalties, fuel and flare. We have included in the table average production costs per unit of production and average sales prices for oil and condensate and natural gas for each of those periods.

	BHP Billiton Group share of production		
	Year ended 30 June		
	2013	2012	2011
Production volumes			
Crude oil and condensate ('000 of barrels)			
Australia	25,922	31,145	40,447
United States	38,724	30,824	30,157
Other ⁽²⁾	7,866	9,232	9,987
Total crude oil and condensate	72,512	71,201	80,591
Natural gas (billion cubic feet)			
Australia	276.13	249.97	274.74
United States	489.03	456.69	49.09
Other ⁽²⁾	109.11	115.60	81.23
Total natural gas	874.27	822.26	405.06
Natural Gas Liquids⁽¹⁾ ('000 of barrels)			
Australia	7,927	7,943	7,962
United States	9,575	5,744	1,980
Other ⁽²⁾	37	398	1,341
Total NGL⁽¹⁾	17,539	14,085	11,283
Total production of petroleum products (million barrels of oil equivalent)⁽²⁾			
Australia	79.87	80.75	94.20
United States	129.80	112.69	40.32
Other ⁽²⁾	26.09	28.90	24.86
Total production of petroleum products (million barrels of oil equivalent)⁽²⁾	235.76	222.34	159.38

BHP Billiton AnnRpt 2013

Cell: I9

Comment: Rick Heede:

History (wikipedia: en.wikipedia.org/wiki/BHP_Billiton):

"BHP Billiton was created in 2001 through the merger of the Australian Broken Hill Proprietary Company Limited (BHP) and the Anglo-Dutch Billiton plc. The result is a dual-listed company. The Australian-registered BHP Billiton Limited, which is the majority partner, has a primary listing on the Australian Securities Exchange and is the largest company in Australia measured by market capitalisation. The UK-registered BHP Billiton Plc has a primary listing on the London Stock Exchange and is a constituent of the FTSE 100 Index. It had a market capitalisation of approximately £39.6 billion as of 23 December 2011, making it the 9th-largest company on the London Stock Exchange.

Broken Hill Proprietary Company: The Broken Hill Proprietary Company Limited, BHP Co. Ltd., BHP, also known as "the Big Australian", was incorporated in 1885, operating the silver and lead mine at Broken Hill in western New South Wales, Australia. The Broken Hill group floated on 10 August 1885. The first consignment of Broken Hill ore (48 tons, 5 cwt, 3grs) was smelted at the Intercolonial Smelting and Refining Company's works at Spotswood, Melbourne.

The resulting 35,605 ounces of silver raised a lot of interest when exhibited at the City of Melbourne Bank in Collins St. Some sceptics asserted the promoters were merely using silver from somewhere else, to ramp up the shares...Another shareholder, the dominating W.R. Wilson had had to lend [William Jamieson, General Manager] a new suit so he could take the first prospectus, printed at Silverton near Broken Hill on 20 June 1885, to Adelaide to start the float process.

The company began petroleum exploration in the 1960s with discoveries in Bass Strait, an activity which became an increasing focus. BHP began to diversify offshore in a variety of projects. One project was the Ok Tedi copper mine in Papua New Guinea, where the company was successfully sued by the indigenous inhabitants because of the environmental degradation caused by the mine operations. BHP had better success with the giant Escondida copper mine in Chile (57.5% owned) and the Ekati Diamond Mine in northern Canada.

Billiton: Billiton was a mining company whose origins stretch back to 29 September 1860, when the articles of association were approved by a meeting of shareholders in the Groot Keizerhof hotel in The Hague, the Netherlands. Two months later, the company acquired the mineral rights to the tin-rich Billiton (Belitung) and Bangka Islands in the Netherlands Indies archipelago, off the eastern coast of Sumatra. Billiton's initial business forays included tin and lead smelting in the Netherlands, followed in the 1940s by bauxite mining in Indonesia and Suriname. In 1970, Shell acquired Billiton and accelerated the scope of progress of this growth. The tin and lead smelter in Arnhem, the Netherlands, was shut down in the 1990s. In 1994, South Africa's Gencor Ltd. acquired the mining division of Billiton excluding the downstream metal division. Billiton was divested from Gencor in 1997. Bhp Billiton remains one of the largest companies listed on the Johannesburg Stock Exchange (JSE, sharecode bil) in South Africa by market capitalisation. In 1997, Billiton Plc became a constituent of the FTSE 100 Index in the UK.

Throughout the 1990s and beyond, Billiton Plc experienced considerable growth. Its portfolio included aluminium smelters in South Africa and Mozambique, nickel operations in Australia and Colombia, base metals mines in South America, Canada and South Africa, coal mines in Australia, Colombia and South Africa, as well as interests in operations in Brazil, Suriname, Australia (aluminium) and South Africa (titanium minerals and steel and ferroalloys).

In 2001 Billiton Plc merged with the Broken Hill Proprietary Company Limited (BHP) to form BHP Billiton.

2001 to 2011: In March 2005, BHP Billiton announced a US\$7.3 billion agreed bid for another mining company, WMC Resources, owners of the Olympic Dam copper, gold and uranium mine in South Australia, nickel operations in Western Australia and Queensland, and a fertiliser plant also in Queensland. The takeover achieved 90% acceptance on 17 June 2005, and 100% ownership was announced on 2 August 2005, achieved through compulsory acquisition of the last 10% of the shares.

On 8 November 2007, BHP Billiton announced it was seeking to purchase rival mining group Rio Tinto Group in an all-share deal. The initial offer of 3.4 shares of BHP Billiton stock for each share of Rio Tinto was rejected by the board of Rio Tinto for "significantly undervaluing" the company. It was unknown at the time whether BHP Billiton would attempt to purchase Rio Tinto through some form of hostile takeover; however, CEO Marius Kloppers met with many of Rio's shareholders following the announcement and reiterated that the offer for Rio was "compelling" and that BHP Billiton is very "patient". A formal hostile bid of 3.4 BHP Billiton shares for each Rio Tinto share was announced on 6 February 2008. The bid was withdrawn on 25 November 2008 due to a global recession.

In August 2010, BHP Billiton made a hostile takeover bid worth \$40 billion for the Potash Corporation of Saskatchewan. The bid came after BHP's first bid, made on 17 August, was rejected as being undervalued. This acquisition marked a major strategic move by BHP outside hard commodities and commenced the diversification of its business away from resources with high exposure to carbon price risk (coal, petroleum, iron ore). The takeover bid was opposed by the Government of Saskatchewan under Premier Brad Wall. On 3 November, Canadian Industry Minister Tony Clement announced the preliminary rejection of the deal under the Investment Canada Act, giving BHP Billiton 30 days to refine their deal before a final decision was made.

2011 to present: On 22 February 2011 BHP announced that it paying cash \$4.75 billion to Chesapeake Energy Corp. for all of the company's Fayetteville shale assets which include 487,000 acres (1,970 km²) of mineral rights leases and 420 miles (680 km) of pipeline located in north central Arkansas in the United States. The wells on the mineral leases are currently producing about 415 million cubic feet of natural gas per day. BHP plans to spend \$800 million to \$1 billion a year over 10 years to develop the field and triple production. On 14 July 2011, BHP Billiton announced that it would acquire Petrohawk Energy of the United States for approximately \$12.1 billion in cash, considerably expanding its shale natural gas resources."

Cell: J35

Comment: Rick Heede:

Natural gas delivered for 1969-1970 from Broken Hill Proprietary Company Ltd (1971) Annual Report, p. 27. This is the first year gas production is reported.

Cell: E36

Comment: Rick Heede:

Crude oil production for 1970 from Broken Hill Proprietary Company Ltd (1971) Annual Report, p. 27. This is the first year oil production is reported.

Cell: F37

Comment: Rick Heede:

Liquid petroleum gas and ethane production for 1974-81 from BHP (1982) Annual Report, p. tk.

Note: BHP separately reports liquid petroleum gas and ethane in tonnes. Thus column "F" notes LPG plus ethane. Column "E" reports crude oil production plus LPG + ethane converted to bbl.

Cell: E39

Comment: Rick Heede:

Crude oil production for 1971-73 from Broken Hill Proprietary Company Ltd and subsidiaries (1974) Annual Report, p. tk.

Cell: I39

Comment: Rick Heede:

Natural gas delivered for 1971-73 from Broken Hill Proprietary Company Ltd and subsidiaries (1974) Annual Report, p. tk.

Cell: E47

Comment: Rick Heede:

Crude oil production for 1974-81 from BHP (1982) Annual Report, p. tk.

Note: BHP separately reports liquid petroleum gas and ethane in tonnes. Thus column "F" notes LPG plus ethane. Column "E" reports crude oil production plus LPG + ethane converted to bbl.

Cell: I47

Comment: Rick Heede:

Natural gas delivered in 1974-81 from BHP (1982) Annual Report, p. tk. Units in million cubic meters per year.

Cell: E48

Comment: Rick Heede:

Oil production for 1982 and 1983 is not reported numerically, nor easily in graphic form, but as cumulative production over 1974 through 1983, showing cumulative production of ~1,720 million barrels by 1983. While this does not square with previously reported numeric data (see our column above), this is the only data we have for 82-83. Natural gas is not reported in any form for 1982-83. Note: the data shown in this column for 1970-1983 totals 1,092 million bbl, 628 million bbl less than BHP's cumulative production referenced above. Source: BHP (1984) Annual Report, bar graph of cumulative oil and condensate production 1974-1983, p. 15.

Cell: E51

Comment: Rick Heede:

Crude oil production for 1984 and 1985 from BHP (1989) Annual Report, p. 25. Note: we add LPG and ethane to crude oil production for both years:

1984: 75 million bbl plus (0.95 million tonnes LPG+ethane) = 81.9 million bbl;

1985: 84 million bbl plus (0.93 million tonnes LPG+ethane) = 90.8 million bbl.

Cell: D52

Comment: Rick Heede:

Oil and condensate production and natural gas SALES (production is not reported) 1986-1990 from BHP (1991) AnnRpt 1990, p. 32.

Cell: F54

Comment: Rick Heede:

LPG and ethane production for 1984-1988 from BHP (1989) Annual Report, p. 25.

Cell: I54

Comment: Rick Heede:

Natural gas delivered for 1984-1988 from BHP (1989) Annual Report, p. 25.

Cell: D57

Comment: Rick Heede:

Oil and gas production 1991-1995 from BHP (1996) AnnRpt 1995, p. 21. Units in thousand bbl per day.

Cell: H57

Comment: Rick Heede:

Oil and gas production 1991-1995 from BHP (1996) AnnRpt 1995, p. 21. Units in million cf/d.

Cell: E65

Comment: Rick Heede:

Crude oil production for 1999 from BHP Annual report for 2001, financial addendum, p. 83, on the unaudited reserves statement.

Cell: I65

Comment: Rick Heede:

Natural gas production in BHP (2002) Annual Report for 2001, Financial Addendum, unaudited reserves statement, p. 147. This reported data also shows 2000 production 258.8 Bcf (vs 262 Bcf reported in the main section of the same annual report, which is explained as a matter of timing of production vs sales.

Cell: E66

Comment: Rick Heede:

Crude oil production for 2000 and 2001 in BHP (2001) Annual Report for 2001, p. 36 shows oil and condensate production for 2000: crude and condensate 79.784 million bbl, LPG as 0.682 million tonnes, and gas as 238.63 Bcf;
2001: Crude and condensate 79 million bbl, LPG as 0.674 million tonnes, and gas at 261.83 Bcf.

Cell: I66

Comment: Rick Heede:

The BHP (2001) Annual Report, p. 24 shows oil and condensate production as 79 million bbl, LPG as 0.674 million tonnes, and gas at 261.83 Bcf. Page 36 shows gas production in 2000 at 238.63 Bcf.

Cell: E68

Comment: Rick Heede:

Annual oil and gas production 2002-2004 from BHP (2001-2004) Quarterly reports. BHP provides poor data on production in its annual reports (e.g., 2004 rpt has three years of oil and gas data, but one datum for coal (metallurgical only) for 2004: no production table is presented in the AnnRpt appendix.

Cell: M70

Comment: Rick Heede:

Energy Coal, AnnRpt2004, p. 20: operating mines in 2004: Queensland Coal, Illewarra Coal (Aus), Ingwe (RSA), Hunter Valley, PT Arutman (Indonesia), New Mexico Coal, Cerrejon (Colombia).

Percent production (energy coal), 4thQ 2004:

RSA: 64.3 percent; heating value: 4470 - 7400 kcal/kg

USA: 17.4 percent; heating value: 4800 - 5300 kcal/kg

Australia: 10.2 percent; heating value: 6270 kcal/kg

Colombia: 8.0 percent; heating value: 6200 kcal/kg.

Metallurgical coal: production at BMP, BHP Matsui, and Illawarra (all Australia?)

Calorific values from 6930 to 7650 kcal/kg.

Source: BHP (2005) AnnRpt 2004, pp. 180-187.

Cell: E71

Comment: Rick Heede:

Oil & Gas Journal OGJ100 2006 and 2008, oil and natural gas production.

Cell: I72

Comment: Rick Heede:

BHP Billiton Annual Rpt 2008, page 48, gas production in Bcf. OGJ data is nearly identical.

Cell: M74

Comment: Rick Heede:

BHP-Billiton Annual report 2008, p. 51 and 97. Metallurgical coal comprises ~30 percent of total. In 2008, metallurgical coal of 35.191 million tonnes, and energy coal of 80.868 million tonnes (70 percent of total).

Cell: E75

Comment: Rick Heede:

Annual report 2010, Crude Oil & condensate + NGLs. Page 50.

Cell: D77

Comment: Rick Heede:

BHP AnnRpt 2013, Table 2.3. Group share of production, crude and condensate PLUS NGLs. See Table 2.3 below.

Cell: I77

Comment: Rick Heede:

BHP AnnRpt 2013, Table 2.3. Group share of production.

Cell: D80

Comment: Rick Heede:

BHP Billiton AnnRpt 2015, page 95. Crude oil and condensate plus NGLs, 2014 and 2015.

Cell: I80

Comment: Rick Heede

CAI confirmed CDP data in BHP Billiton AnnRpt 2015, page 95. Production chiefly in Australia (295 Bcf) and USA (432 Bcf).

Paul Griffin: <http://www.bhpbilliton.com/~media/bhp/documents/investors/annual-reports/2015/bhpbillitonannualreport2015.pdf?la=en>

Cell: D82

Comment: Rick Heede:

BHP Billiton Form 20-F for FY 2016, page 266. Crude oil and condensate 90.579 Mb, plus NGL 25.46 Mb. Of crude, 2.30 Mb in Australia, 65.6 Mbin USA, and 4.7 Mb in other (Pakistan, Algeria, Trinidad and Tobago, and UK).

Cell: I82

Comment: Rick Heede:

BHP Billiton 20-F page 266: 744.7 Bcf, of which 376 Bcf USA and 326 Bcf Australia, and e43 Bcf other.(algeria, Pakistan, Trinidad and Tobago, and UK.

Cell: D83

Comment: Rick Heede:

BHP Annual Report 2017, 296 pp.

Petroleum production, page 247: 76.385 Mb crude oil & condensate, plus 20.694 Mb NGL.

Of crude: 18.7 Mb in Australia, 52.9 Mb in US, and 4.9 Mb other[Algeria, Pakistan (divested 31Dec15), Trinidad and Tobago, and the United Kingdom.].

Cell: I83

Comment: Rick Heede:

BHP Annual Report 2017, 296 pp.

Natural gas production, page 247: 667.8 Bcf, of which 346 Bcf Australia, 285 Bcf US, and 37 Bcf other [Algeria, Pakistan (divested 31Dec15), Trinidad and Tobago, and the United Kingdom).

Cell: D84

Comment: Rick Heede:

BHP

BHP Operational Review for the Year Ended 30 June 2018, Excel Version, 18 July 2018. Crude Oil, Condensate, and NGL, 86.429 Mb.

Cell: I84

Comment: Rick Heede:

BHP Operational Review for the Year Ended 30 June 2018, Excel Version, 18 July 2018. Natural gas: 635.5 Bcf.