

# NEWS RELEASE



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## **BHP BILLITON OPERATIONAL REVIEW FOR THE YEAR ENDED 30 JUNE 2014**

- **Strong operating performance delivered a 9% increase in Group production with annual records achieved across 12 operations and four commodities.**
- **Western Australia Iron Ore achieved a fourteenth consecutive annual production record as volumes increased to 225 Mt (100% basis), significantly exceeding initial full-year guidance. We now expect production of 245 Mt (100% basis) from the Pilbara in the 2015 financial year.**
- **Metallurgical coal production of 45 Mt exceeded full-year guidance as Queensland Coal achieved record production and sales volumes.**
- **Copper production increased to 1.7 Mt as an improvement in mill throughput and concentrator utilisation offset grade decline at a number of operations.**
- **Petroleum production increased by 4% to a record 246 MMBoe with an 18% increase in liquids volumes underpinned by significant growth at Onshore US and Atlantis.**
- **Six major projects were completed and another two projects achieved first production, including the Caval Ridge coal mine which was completed ahead of schedule and under budget in the June 2014 quarter.**

BHP Billiton Chief Executive Officer, Andrew Mackenzie, said: “Our focus on productivity has resulted in a significant improvement in operating performance at each of our major businesses this year, with a nine per cent<sup>1</sup> increase in Group production and record output at 12 operations. Western Australia Iron Ore and Queensland Coal annual production exceeded guidance, with both rising by more than 20 per cent as we delivered more tonnes from existing infrastructure and growth projects ahead of schedule. At Escondida, an increase in mill throughput and concentrator utilisation offset copper grade decline, while our Onshore US business delivered a 73 per cent increase in petroleum liquids production.

“We expect to maintain strong momentum and remain on track to generate Group production growth of 16 per cent<sup>1</sup> over the two years to the end of the 2015 financial year. In Petroleum, we are investing in our highest-return acreage while a broader improvement in productivity is expected to underpin stronger iron ore, copper and metallurgical coal volumes. We will remain focused on value over volume as we prioritise our brownfield development options and consider the next phase of portfolio simplification.”

Note: Unless specified otherwise: variance analysis relates to the relative performance of BHP Billiton and/or its operations during the 2014 financial year compared with the 2013 financial year or the June 2014 quarter compared with the March 2014 quarter; production volumes, sales volumes and capital and exploration expenditure from subsidiaries (which include Escondida, Jimblebar, BHP Billiton Mitsui Coal and our manganese operations) are reported on a 100 per cent basis; production volumes, sales volumes and capital and exploration expenditure from equity accounted investments (which include Antamina, Samarco and Cerrejón) and other operations are reported on a proportionate consolidation basis. Abbreviations referenced in this report are explained on page 14.

## Summary

### Operational performance

Production summary	JUN 2014 YTD	JUN 2014 QTR	JUN YTD14 vs JUN YTD13	JUN Q14 vs JUN Q13	JUN Q14 vs MAR Q14
Total petroleum production (MMboe)	246.0	64.7	4%	9%	6%
Copper (kt)	1,727.1	470.0	2%	2%	14%
Iron ore (kt)	203,564	56,643	20%	19%	15%
Metallurgical coal (kt)	45,078	11,886	20%	9%	4%
Energy coal (kt)	73,492	18,363	1%	(1%)	4%
Alumina (kt)	5,178	1,325	6%	5%	6%
Aluminium (kt)	1,174	276	(0%)	(11%)	(3%)
Manganese ores (kt)	8,302	2,255	(3%)	0%	25%
Manganese alloys (kt)	646	181	6%	(1%)	12%
Nickel (kt)	143.2	30.9	(7%)	(23%)	(9%)

Strong operating performance in the 2014 financial year delivered a nine per cent<sup>1</sup> increase in Group production as records were achieved across 12 operations and four commodities. Group production growth of 16 per cent<sup>1</sup> is expected over the two years to the end of the 2015 financial year.

Western Australia Iron Ore (WAIO) significantly exceeded initial full-year production guidance as the early commissioning of Jimblebar and our productivity agenda raised the capacity of our integrated supply chain. The ramp-up of Jimblebar to 35 Mtpa (100 per cent basis) is now expected before the end of the 2014 calendar year and will support a further 20 Mt increase in WAIO production to approximately 245 Mt (100 per cent basis) in the 2015 financial year. A low-cost option to expand Jimblebar to 55 Mtpa (100 per cent basis) and broader debottlenecking of the supply chain are expected to underpin further growth in capacity towards 270 Mtpa (100 per cent basis).

Metallurgical coal production exceeded full-year guidance as Queensland Coal achieved record production and sales volumes. This included first production from Caval Ridge, the successful ramp-up of Daunia and record production at Peak Downs, Saraji, South Walker Creek and Poitrel. Metallurgical coal production is forecast to increase by four per cent in the 2015 financial year to 47 Mt as the ramp-up of Caval Ridge is completed.

Escondida copper production increased by two per cent as an improvement in mill throughput and concentrator utilisation offset declining ore grades. With further improvements in productivity anticipated, Escondida is on track to produce approximately 1.27 Mt of copper in the 2015 financial year, while Group copper production is forecast to increase by five per cent<sup>2</sup> to 1.8 Mt.

Energy coal volumes were broadly unchanged in the 2014 financial year as a fifth consecutive production record at New South Wales Energy Coal and record volumes at Cerrejón were offset by lower production at South Africa Energy Coal and Navajo Coal. Energy coal production for the 2015 financial year is expected to remain broadly unchanged at 73 Mt.

Petroleum production of 246 MMboe marginally exceeded revised full-year guidance as liquids volumes in our Onshore US business increased by 23 per cent in the June 2014 quarter. Petroleum production is forecast to increase by five per cent<sup>2</sup> in the 2015 financial year to 255 MMboe with high-margin liquids volumes expected to increase by 16 MMboe. We remain confident that Onshore US will be strongly EBIT positive in the 2015 financial year as the liquids contribution is forecast to rise to approximately 40 per cent of total shale production.

Production guidance for the 2015 financial year is summarised in the table below.

<b>Production guidance</b>	<b>FY14<sup>2</sup></b>	<b>FY15e</b>	<b>% change</b>
Petroleum (MMboe)	243	<b>255</b>	5%
Copper (Mt)	1.7	<b>1.8</b>	5%
Iron ore (Mt)	204	<b>225</b>	11%
Metallurgical coal (Mt)	45	<b>47</b>	4%
Energy coal (Mt)	73	<b>73</b>	-

### **Major development projects**

At the end of the 2014 financial year, BHP Billiton had eight low-risk, largely brownfield major projects under development with a combined budget of US\$14.1 billion.

During the 2014 financial year we successfully completed six projects, namely: Macedon; North West Shelf North Rankin B Gas Compression; WAIO Jumblebar Mine Expansion; WAIO Port Blending and Rail Yard Facilities; Samarco Fourth Pellet Plant; and Caval Ridge. Caval Ridge was completed in the June 2014 quarter, ahead of schedule and under budget, and will not be reported in future Operational Reviews. Another two projects, Newcastle Third Port Stage 3 and Cerrejón P40, delivered first coal during the year.

A US\$212 million increase in the budget of the Escondida Oxide Leach Area project to US\$933 million has been approved. The project is now expected to be completed in the second half of the 2014 calendar year with no associated impact to production.

### **Corporate update**

BHP Billiton expects Underlying EBIT in the June 2014 half year to include additional charges in a range of approximately US\$0.9 billion to US\$1.3 billion related to: (1) impairments and mine site rehabilitation; and (2) redundancies and the closure of operations associated with our productivity agenda. Items include impairments (related to the Port of Vancouver and small Gulf of Mexico petroleum assets) and mine site rehabilitation costs in Petroleum and Potash, and the impairment of assets at South Africa Energy Coal. Redundancy costs will be recognised in our Coal, Iron Ore and Aluminium, Manganese and Nickel Businesses, while additional costs will be recognised following the closure of aluminium smelting activities at Bayside. This guidance will be updated should material information or events arise as the Company finalises its financial statements.

<b>Additional charges to be recognised in the June 2014 half year (US\$ million)</b>	<b>EBITDA</b>	<b>EBIT</b>
Impairments and mine site rehabilitation	200 to 400	700 to 900
Redundancy and closure	200 to 400	200 to 400
<b>Total charges</b>	<b>400 to 800</b>	<b>900 to 1,300</b>

We continued to simplify our portfolio during the 2014 financial year with the successful completion of numerous transactions, including Jumblebar and Pinto Valley. In the last two years alone, the Group has completed transactions exceeding US\$6.7 billion in Australia, the United States, Canada, South Africa and the United Kingdom, including petroleum, copper, iron ore, coal, mineral sands, uranium and diamonds assets. We continue to actively study the next phase of simplification, including structural options, but we will only pursue options that maximise value for BHP Billiton shareholders.

## Marketing update

The average realised prices achieved for our major commodities are summarised in the table below. Iron ore shipments, on average, were linked to the index price for the month of shipment, with price differentials reflecting product quality. The majority of metallurgical coal and energy coal exports were linked to the index price for the month of shipment or sold on the spot market, with price differentials reflecting product quality.

Average realised prices <sup>3</sup>	H1 FY14	H2 FY14	FY14	FY13	FY14 vs FY13	H2 FY14 vs H2 FY13	H2 FY14 vs H1 FY14
Oil (crude and condensate) (US\$/bbl)	103	<b>102</b>	<b>102</b>	106	(4%)	(4%)	(1%)
Natural gas (US\$/Mscf)	3.81	<b>4.89</b>	<b>4.35</b>	3.76	16%	26%	28%
US natural gas (US\$/Mscf)	3.44	<b>4.75</b>	<b>4.10</b>	3.29	25%	35%	38%
LNG (US\$/Mscf)	14.63	<b>14.71</b>	<b>14.67</b>	14.82	(1%)	0%	1%
Copper (US\$/lb) <sup>4</sup>	3.36	<b>3.09</b>	<b>3.22</b>	3.40	(5%)	(4%)	(8%)
Iron ore (US\$/wmt, FOB)	112	<b>96</b>	<b>103</b>	110	(6%)	(18%)	(14%)
Hard coking coal (US\$/t)	142	<b>121</b>	<b>131</b>	163	(20%)	(22%)	(15%)
Weak coking coal (US\$/t)	116	<b>104</b>	<b>111</b>	129	(14%)	(19%)	(10%)
Thermal coal (US\$/t) <sup>5</sup>	74	<b>67</b>	<b>70</b>	81	(14%)	(15%)	(9%)
Alumina (US\$/t) <sup>6</sup>	291	<b>320</b>	<b>307</b>	302	2%	2%	10%
Aluminium (US\$/t)	1,996	<b>2,049</b>	<b>2,022</b>	2,160	(6%)	(4%)	3%
Manganese ore (US\$/dmu) <sup>6</sup>	4.90	<b>4.41</b>	<b>4.64</b>	4.83	(4%)	(14%)	(10%)
Manganese alloy (US\$/t)	952	<b>1,001</b>	<b>980</b>	1,042	(6%)	0%	5%
Nickel metal (US\$/t)	13,615	<b>16,391</b>	<b>14,925</b>	16,037	(7%)	4%	20%

At 30 June 2014, the Group had 350 kt of outstanding copper sales that were revalued at a weighted average price of US\$3.19 per pound. The final price of these sales will be determined in the 2015 financial year. In addition, 386 kt of copper sales from the 2013 financial year were subject to a finalisation adjustment in 2014. The provisional pricing and finalisation adjustments will increase earnings before interest and tax by US\$73 million in the 2014 financial year (2013 financial year: US\$303 million decrease; December 2013 half year: US\$196 million increase).

## Petroleum and Potash

### Production

	JUN 2014 YTD	JUN 2014 QTR	JUN YTD14 vs JUN YTD13	JUN Q14 vs JUN Q13	JUN Q14 vs MAR Q14
Crude oil, condensate and natural gas liquids (MMboe)	106.1	28.9	18%	23%	6%
Natural gas (bcf)	839.3	215.0	(4%)	0%	6%
Total petroleum production (MMboe)	246.0	64.7	4%	9%	6%

**Total petroleum production** – Petroleum production increased by four per cent in the 2014 financial year to 246 MMboe and included strong performance from Onshore US, which delivered a 73 per cent increase in liquids volumes. Petroleum production is forecast to increase by five per cent<sup>2</sup> in the 2015 financial year to 255 MMboe as continued growth at Onshore US contributes to a 16 MMboe increase in total liquids production. Conventional volumes for the 2015 financial year are forecast to remain broadly unchanged, consistent with prior guidance.

Total petroleum production (MMboe)	Total
<b>2014 financial year</b>	<b>246</b>
Less: divested assets	(3)
<b>Adjusted 2014 financial year</b>	<b>243</b>
Forecast change in liquids volumes	16
Forecast change in gas volumes	(4)
<b>2015 financial year</b>	<b>255</b>

**Crude oil, condensate and natural gas liquids** – Crude oil, condensate and natural gas liquids production increased by 18 per cent in the 2014 financial year to 106 MMboe. Onshore US liquids production increased by 23 per cent in the June 2014 quarter and we expect to carry strong momentum into the 2015 financial year as shale liquids volumes are forecast to increase by over 17 MMboe in the period. We remain confident that Onshore US will be strongly EBIT positive in the 2015 financial year as the liquids contribution is forecast to rise to approximately 40 per cent of total shale production.

In our conventional business, a near doubling of production at Atlantis was achieved ahead of prior guidance as the early completion of two production wells brought forward volumes into the 2014 financial year. While production at Pyrenees declined by 12 per cent as a result of major maintenance, volumes recovered strongly in the second half of the financial year following the completion of five new production wells.

**Natural gas** – Natural gas production declined by four per cent in the 2014 financial year to 839 bcf. The delivery of first gas from Macedon partially offset lower demand at Bass Strait and natural field decline at Haynesville.

## Projects and Onshore US capital expenditure

Project and ownership	Capital expenditure (US\$m)	Initial production target date	Capacity	Progress
North West Shelf Greater Western Flank-A (Australia) 16.67% (non-operator)	400	CY16	To maintain LNG plant throughput from the North West Shelf operations.	On schedule and budget. The overall project is 80% complete.
Bass Strait Longford Gas Conditioning Plant (Australia) 50% (non-operator)	520	CY16	Designed to process approximately 400 MMcf/d of high-CO <sub>2</sub> gas.	On schedule and budget. The overall project is 33% complete.

In the 2014 financial year, approximately 75 per cent of Onshore US drilling and development expenditure of US\$4.2 billion was invested in the Eagle Ford, with the majority focused on our Black Hawk acreage.

Onshore US 2014 financial year (2013 financial year)		Liquids focused areas (Eagle Ford and Permian)	Gas focused areas (Haynesville and Fayetteville)	Total
Capital expenditure	US\$ billion	3.6 (3.9)	0.6 (0.9)	4.2 (4.8)
Production	MMboe	51.9 (33.4)	56.2 (65.8)	108.1 (99.2)
Production mix	Natural gas	36% (42%)	100% (100%)	69% (80%)
	Natural gas liquids	22% (23%)	- (-)	11% (8%)
	Crude and condensate	42% (35%)	- (-)	20% (12%)

## Petroleum exploration

There were no exploration or appraisal wells drilled during the June 2014 quarter. Petroleum exploration expenditure for the 2014 financial year was US\$600 million, of which US\$369 million was expensed. Activity for the period was largely focused on the Gulf of Mexico and Western Australia.

## Potash

Project and ownership	Investment (US\$m)	Scope	Progress
Jansen Potash (Canada) 100%	2,600	Investment to finish the excavation and lining of the production and service shafts, and to continue the installation of essential surface infrastructure and utilities.	The overall project is 30% complete and on budget.

During the June 2014 quarter, BHP Billiton allowed the exclusivity agreement for Terminal 5 at the Port of Vancouver (US) to lapse. Our development schedule at Jansen provides us with the flexibility to consider a broad range of port and rail options.

## Copper

### Production

	JUN 2014 YTD	JUN 2014 QTR	FY14 vs FY13	JUN Q14 vs JUN Q13	JUN Q14 vs MAR Q14
Copper (kt)	1,727.1	470.0	2%	2%	14%
Lead (t)	188,026	46,165	(12%)	(31%)	(3%)
Zinc (t)	109,935	29,116	(14%)	(37%)	50%
Silver (koz)	34,804	8,509	(11%)	(27%)	(3%)
Uranium oxide concentrate (t)	3,988	1,044	(2%)	(6%)	8%

**Copper** – Total copper production increased by two per cent in the 2014 financial year to 1.7 Mt as planned. Total copper production is forecast to increase by five per cent<sup>2</sup> in the 2015 financial year to 1.8 Mt.

Escondida copper production increased by two per cent in the 2014 financial year to 1.2 Mt as an improvement in mill throughput and concentrator utilisation offset declining ore grades. With further improvements in productivity anticipated, Escondida is on track to produce approximately 1.27 Mt of copper in the 2015 financial year. A power outage throughout Northern Chile in July 2014 and a six-day maintenance shutdown at the Laguna Seca concentrator will impact production in the September 2014 quarter. Commissioning of Organic Growth Project 1 is scheduled for the June 2015 quarter.

Pampa Norte copper production of 233 kt for the 2014 financial year was unchanged from the prior period. Production is forecast to remain at a similar level in the 2015 financial year as higher grades and recoveries at Spence offset declining grades and recoveries at Cerro Colorado. A 12-day maintenance shutdown at Cerro Colorado and tertiary crusher maintenance at Spence is expected to impact production in the September 2014 quarter.

Record mining rates at Olympic Dam underpinned an 11 per cent increase in copper production in the 2014 financial year to 184 kt. While an annualised production rate of 219 kt in the June 2014 quarter indicates the degree of improvement achieved in the existing underground operation, volumes in the 2015 financial year are expected to remain broadly unchanged as a result of the current smelter maintenance program which is expected to be completed early in the September 2014 quarter. A major smelter maintenance campaign is scheduled to commence in the June 2015 quarter.

Antamina achieved records for mill throughput and copper production in the 2014 financial year. Average copper grades at Antamina in the 2015 financial year are expected to remain at a similar level to the June 2014 quarter, leading to lower copper production, consistent with the mine plan.

**Lead/silver** – Lead and silver production decreased by 12 per cent and 11 per cent, respectively, in the 2014 financial year as lower average ore grades at Cannington were partially offset by a record mining rate.

**Zinc** – Total zinc production decreased by 14 per cent in the 2014 financial year and reflected lower grades at Antamina, consistent with the mine plan.

**Uranium** – The production of uranium oxide concentrate was broadly unchanged in the 2014 financial year.

## Projects

Project and ownership	Capital expenditure (US\$m)	Initial production target date	Capacity	Progress
Escondida Oxide Leach Area Project (Chile) 57.5%	933	H2 CY14	New dynamic leaching pad and mineral handling system. Maintains oxide leaching capacity.	Budget and schedule revised. Challenges associated with civil engineering works have been resolved. The overall project is 93% complete.
Escondida Organic Growth Project 1 (Chile) 57.5%	3,838	H1 CY15	Replaces the Los Colorados concentrator with a new 152 ktpd plant.	On schedule and budget. The overall project is 79% complete.
Escondida Water Supply (Chile) 57.5%	3,430	CY17	New desalination facility to ensure continued water supply to Escondida.	On schedule and budget. The overall project is 12% complete.



## Iron Ore

### Production

	JUN 2014 YTD	JUN 2014 QTR	JUN FY14 vs JUN FY13	JUN Q14 vs JUN Q13	JUN Q14 vs MAR Q14
Iron ore (kt)	203,564	56,643	20%	19%	15%

**Iron ore** – Iron ore production increased by 20 per cent in the 2014 financial year to a record 204 Mt, exceeding initial full-year guidance by more than eight per cent. Total iron ore production is forecast to increase by 11 per cent in the 2015 financial year to 225 Mt.

Western Australia Iron Ore production of 225 Mt (100 per cent basis) represents a fourteenth consecutive annual record and was underpinned by the early commissioning of Jimblebar and our productivity agenda, which raised the capacity of our integrated supply chain. Production from the Wheelarra Joint Venture, which was previously processed through Newman, was permanently connected to the Jimblebar processing hub during the period. The spare capacity created at Newman is now being utilised by existing operations. The ramp-up of Jimblebar to 35 Mtpa (100 per cent basis) is now expected before the end of the 2014 calendar year.

In the 2015 financial year WAIO production is expected to increase by a further 20 Mt to approximately 245 Mt (100 per cent basis). Yet another year of record performance will be supported by additional productivity gains despite the tie-in of shiploaders 1 and 2 during the period. A low-cost option to expand Jimblebar to 55 Mtpa (100 per cent basis) and broader debottlenecking of the supply chain are expected to underpin further growth in capacity towards 270 Mtpa (100 per cent basis).

Samarco production of 22 Mt (100 per cent basis) was broadly unchanged in the 2014 financial year. The fourth pellet plant was commissioned in the March 2014 quarter and the ramp-up to 30.5 Mtpa (100 per cent basis) is expected before the end of the 2015 financial year.

### Major increase in Mineral Resource at Western Australia Iron Ore

BHP Billiton also confirms a 13 per cent increase in the Mineral Resource at WAIO compared to the previous 30 June 2013 estimate (Table 2). The increase reflects the inclusion of 500 km of infill drilling and revised resource estimates that have continued to delineate orebodies primarily with Brockman (67 per cent of the increase) and Marra Mamba (33 per cent of the increase) ore types, with changes after consideration of mining depletion in the 2014 financial year. BHP Billiton ownership averages 88 per cent but varies between 85 per cent and 100 per cent. Information pertaining to the orebodies that contribute to the increase in Mineral Resource is contained in Appendix 1.

WAIO is located within the Pilbara region of Western Australia. The geology of the region, comprising the Hamersley and North East Pilbara Provinces, has been extensively studied and is well documented based on extensive mapping, exploratory drilling and mining. The Hamersley Group forms the central part of the Mt Bruce Supergroup and contains two iron bearing stratigraphic sequences, with major bedded ores hosted by the Brockman Iron Formation and Marra Mamba Iron Formation. The Nimingarra Iron Formation in the North East Pilbara, hosts the Yarric-Nimingarra iron ore deposits. Another important iron bearing sequence is the Marillana Formation which is a detrital derived Channel Iron Deposit currently mined at Yandi.

WAIO Mineral Resources contain the ore types: BKM – Brockman, CID – Channel Iron Deposits, MM – Marra Mamba and NIM – Nimingarra.

Mineral Resource estimates are largely based upon three metre samples obtained from 140 millimetre Reverse Circulation (RC) drill holes and to a lesser extent 0.3 metre to three metre samples obtained from HQ3 and PQ3 type Diamond Drill holes and three metre samples obtained from 140 millimetre open Percussion holes.

RC and Percussion samples are either riffle or static cone split whereas diamond core is typically sampled as a whole. Samples are crushed to 90 per cent minus 2.8 millimetres and then pulverised to 95 per cent minus 0.16 millimetres. Pulp (200 grams) is then used for chemical analysis by X-Ray Fluorescence (XRF) for Fe, SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, P, MnO, CaO, K<sub>2</sub>O, MgO, S and TiO<sub>2</sub> and Robotic Thermo-Gravimetric Analysis (ROBTGA) for Loss on Ignition (LOI).

Resource estimation is typically performed by Ordinary Kriging (OK) interpolation which uses search criteria consistent with geostatistical models separately developed for both Fe and associated deleterious elements such as SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub> and P according to the appropriate geological controls. To a lesser extent some deposits contributing Inferred Resources have been estimated using Inverse Distance Weighted (IDW) interpolation or Cross Sectional Area of Influence techniques reflecting data density.

Mineral resources have been classified considering data density, data quality, geological continuity and/or complexity, estimation quality, weathering zones and proximity to the water table (Table 1).

**Table 1. Nominal drill grid spacing for WAIO Mineral Resource category**

<b>Classification</b>	<b>BKM</b>	<b>CID</b>	<b>MM</b>	<b>NIM</b>
Measured (average)	50x50 metres	50x50 metres	50x50 metres	30x30 metres
Indicated (average)	150x50 metres	150x50 metres	150x50 metres	120x60 metres
Inferred (maximum)	1200x100 metres	1200x100 metres	1200x100 metres	1200x120 metres

Typically a 54 per cent Fe cut-off is used for resource reporting of Marra Mamba and Brockman Iron Formations, a 52 per cent Fe cut-off is used for Channel Iron Deposits and a 50 per cent Fe cut-off for operational areas within the Nimingarra Formation. These cut-offs employed for the Pilbara Mineral Resources estimates are based on break-even economic analysis and assumed open pit extraction and processing by crushing and screening. It is reasonable to consider that all material above the Mineral Resource cut-off grade would be eligible for sale, either now or in the future as indicated by WAIO strategic mine planning.

**Table 2. Mineral Resources (inclusive of Ore Reserves) (100%)<sup>7</sup>**

As at 30 June 2014

As at 30 June 2013

Commodity	Ore Deposit	type	Measured Resources					Indicated Resources					Inferred Resources					Total Resources					Total Resources					BHP Billiton interest				
			Mt	% Fe	% P	% SiO <sub>2</sub>	% Al <sub>2</sub> O <sub>3</sub>	% LOI	Mt	% Fe	% P	% SiO <sub>2</sub>	% Al <sub>2</sub> O <sub>3</sub>	% LOI	Mt	% Fe	% P	% SiO <sub>2</sub>	% Al <sub>2</sub> O <sub>3</sub>	% LOI	Mt	% Fe	% P	% SiO <sub>2</sub>	% Al <sub>2</sub> O <sub>3</sub>	% LOI	Mt		% Fe	% P	% SiO <sub>2</sub>	% Al <sub>2</sub> O <sub>3</sub>
<b>Iron Ore</b>																																
<b>WAIO</b>	BKM	1,300	62.2	0.12	3.9	2.4	4.1	4,200	59.9	0.14	4.9	2.5	6.2	9,200	59.0	0.14	5.4	2.8	6.6	15,000	59.5	0.14	5.1	2.7	6.3	13,000	59.6	0.14	5.2	2.7	6.1	88
	CID	960	56.1	0.05	6.4	2.0	10.9	430	56.7	0.06	6.1	2.1	10.3	790	54.9	0.06	6.6	3.0	11.0	2,200	55.8	0.05	6.4	2.3	10.8	2,400	55.7	0.05	6.4	2.4	10.9	
	MM	360	61.9	0.07	3.2	1.8	6.0	870	60.7	0.07	3.8	2.1	6.7	5,100	59.6	0.07	4.5	2.3	7.2	6,400	59.9	0.07	4.3	2.2	7.0	5,400	59.9	0.07	4.4	2.2	6.9	
	NIM	10	59.0	0.08	10.1	1.2	3.8	120	61.6	0.06	8.0	1.1	1.7	70	60.5	0.05	9.9	1.2	1.7	200	61.1	0.06	8.8	1.2	1.8	190	61.0	0.06	8.9	1.2	1.9	

Additional information is contained in Appendix 1.

## Coal

### Production

	JUN 2014 YTD	JUN 2014 QTR	JUN FY14 vs JUN FY13	JUN Q14 vs JUN Q13	JUN Q14 vs MAR Q14
Metallurgical coal (kt)	45,078	11,886	20%	9%	4%
Energy coal (kt)	73,492	18,363	1%	(1%)	4%

**Metallurgical coal** – Metallurgical coal production increased by 20 per cent in the 2014 financial year to a record 45 Mt, exceeding full-year guidance. Metallurgical coal production is forecast to increase by four per cent in the 2015 financial year to 47 Mt as the ramp-up of Caval Ridge is completed.

Queensland Coal achieved record production and sales volumes in the 2014 financial year, supported by strong performance across all operations. This included first production from Caval Ridge, the successful ramp-up of Daunia and record production at Peak Downs, Saraji, South Walker Creek and Poitrel. A sustainable increase in truck and wash-plant utilisation rates underpinned a further improvement in productivity across the business.

Illawarra Coal production declined by five per cent in the 2014 financial year to 7.5 Mt. An extended outage at the Dendrobium mine impacted performance, primarily in the September 2013 quarter.

As a result of continued weakness in coal prices, persistent strength of the Australian dollar and the recognition of redundancy and restructuring charges, Queensland Coal was marginally EBIT positive during the second half of the 2014 financial year.

**Energy coal** – Energy coal production of 73 Mt in the 2014 financial year was broadly unchanged from the prior period as planned. Another year of robust performance was underpinned by a fifth consecutive annual production record at New South Wales Energy Coal and record volumes at Cerrejón. Extended outages at both a local utility and the Richards Bay Coal Terminal led to lower production at South Africa Energy Coal, while Navajo Coal production declined following the permanent closure of three of the five power units at the Four Corners Power Plant.

Energy coal production for the 2015 financial year is expected to remain broadly unchanged at 73 Mt. A drought in the La Guajira region of Colombia is expected to constrain Cerrejón production for the remainder of the 2014 calendar year given the requirement to manage dust emissions. The port expansion associated with the Cerrejón P40 project is currently being commissioned, although operational issues are expected to constrain capacity at approximately 35 Mtpa (100 per cent basis) in the medium term.

### Projects

Project and ownership	Capital expenditure (US\$m)	Initial production target date	Capacity	Progress
Caval Ridge (Australia) 50%	1,870 <sup>8</sup>	CY14	Greenfield mine development to produce an initial 5.5 Mtpa of export metallurgical coal.	First coal achieved in Q2 CY14, ahead of schedule and under budget. The overall project is 100% complete.
Hay Point Stage Three Expansion (Australia) 50%	1,505 <sup>8</sup>	CY15	Increases port capacity from 44 Mtpa to 55 Mtpa and reduces storm vulnerability.	On revised schedule and budget. The overall project is 87% complete.
Appin Area 9 (Australia) 100%	845	CY16	Maintains Illawarra Coal's production capacity with a replacement mining domain and capacity to produce 3.5 Mtpa of metallurgical coal.	On schedule and budget. The overall project is 67% complete.

## Aluminium, Manganese and Nickel

### Production

	JUN 2014 YTD	JUN 2014 QTR	JUN YTD14 vs JUN YTD13	JUN Q14 vs JUN Q13	JUN Q14 vs MAR Q14
Alumina (kt)	5,178	1,325	6%	5%	6%
Aluminium (kt)	1,174	276	0%	(11%)	(3%)
Manganese ores (kt)	8,302	2,255	(3%)	0%	25%
Manganese alloys (kt)	646	181	6%	(1%)	12%
Nickel (kt)	143.2	30.9	(7%)	(23%)	(9%)

**Alumina** – Alumina production increased by six per cent in the 2014 financial year to a record 5.2 Mt. The Efficiency and Growth project at Worsley reached nameplate capacity during the year and annual production records were achieved at both the Worsley and Alumar refineries.

**Aluminium** – Aluminium production in the 2014 financial year was unchanged at 1.2 Mt. Production records at both Hillside and Mozal were offset by lower volumes at Alumar following the phased suspension of 103 kt (BHP Billiton share) of annualised capacity during the 2014 financial year. The final potline at Bayside was closed in June 2014, although the cast house will be supplied by our Hillside smelter as we continue to assess its future.

**Manganese ores** – Despite achieving record production in the June 2014 quarter, manganese ore volumes declined by three per cent in the 2014 financial year as GEMCO was affected by higher than usual rainfall during the wet season.

**Manganese alloys** – Manganese alloy production increased by six per cent from the 2013 financial year which was affected by the temporary suspension of operations at TEMCO.

**Nickel** – Nickel production declined by seven per cent in the 2014 financial year to 143 kt as production at Cerro Matoso was affected by kiln and furnace outages, and lower nickel grades. Nickel West production declined by four per cent following the closure of the Perseverance underground mine in November 2013.

Saleable nickel production at Nickel West is expected to decline by four per cent in the 2015 financial year to 95 kt. Ferro-nickel production at Cerro Matoso is expected to decline by three per cent to 43 kt as a result of lower grades and recoveries.

On 14 May 2014, BHP Billiton announced a review of the Nickel West business, comprising the Mt Keith, Cliffs and Leinster mines, its concentrators, the Kalgoorlie smelter and the Kwinana refinery. The review is considering all options for the long-term future of Nickel West, including the potential sale of all or part of the business.

## Minerals exploration

Minerals exploration expenditure in the 2014 financial year was US\$410 million, of which US\$347 million was expensed. Greenfield minerals exploration is predominantly focused on advancing copper targets within Chile and Peru.

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1. Refers to copper equivalent production based on average realised prices for the 2013 financial year.
  2. Excludes operations which were sold during the year (Liverpool Bay and Pinto Valley).
  3. Based on provisional, unaudited estimates. Prices exclude third party product and represent the weighted average of various sales terms (for example, FOB, CIF and CFR), unless otherwise noted.
  4. Includes third party product.
  5. Export sales only, excludes Cerrejón. Includes thermal coal sales from metallurgical coal mines.
  6. Excludes internal sales.
  7. Competent Persons – P. Whitehouse (MAusIMM), M. Lowry (MAusIMM), M. Smith (MAusIMM), D. Stephens (MAIG).

The statement of Mineral Resources is presented on a 100 per cent basis, represents an estimate as at 30 June 2014, and is based on information compiled by the above named Competent Persons. Mr. Whitehouse, Mr. Lowry, Mr. Smith and Mr. Stephens are full time employees of BHP Billiton Iron Ore Ltd, are members of either The Australasian Institute of Mining and Metallurgy or The Australian Institute of Geoscientists, and have sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity they are undertaking to qualify as Competent Persons as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Whitehouse, Mr. Lowry, Mr. Smith and Mr. Stephens consent to the inclusion in the report of the matters based on their information in the form and context in which it appears.

8. Excludes announced pre-commitment funding.

The following abbreviations have been used throughout this report: barrels (bbl) billion cubic feet (bcf); cost and freight (CFR); cost, insurance and freight (CIF), dry metric tonne unit (dmu); free on board (FOB); grams per tonne (g/t); kilograms per tonne (kg/t); kilometre (km); metre (m); million barrels of oil equivalent (MMboe); million cubic feet per day (MMcf/d); million tonnes (Mt); million tonnes per annum (Mtpa); ounces (oz); pounds (lb) thousand barrels of oil equivalent (Mboe); thousand ounces (koz); thousand standard cubic feet (Mscf); thousand tonnes (kt); thousand tonnes per annum (ktpa); thousand tonnes per day (ktpd); tonnes (t); and wet metric tonnes (wmt).

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Further information on BHP Billiton can be found at: [www.bhpbilliton.com](http://www.bhpbilliton.com).

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## BHP BILLITON PRODUCTION SUMMARY

		QUARTER ENDED			YEAR TO DATE		% CHANGE		
		JUN	MAR	JUN	JUN	JUN	JUN YTD14	JUN Q14	JUN Q14
		2013	2014	2014	2014	2013	vs JUN YTD13	vs JUN Q13	vs MAR Q14
<b>Petroleum</b>									
Crude oil, condensate and NGL	(Mboe)	23,441	<i>27,244</i>	<b>28,877</b>	<b>106,147</b>	90,051	18%	23%	6%
Natural gas	(bcf)	214.5	202.0	<b>215.0</b>	<b>839.3</b>	874.3	(4%)	0%	6%
Total petroleum production	(MMboe)	59.2	60.9	<b>64.7</b>	<b>246.0</b>	235.8	4%	9%	6%
<b>Copper</b>									
Copper	(kt)	461.7	413.9	<b>470.0</b>	<b>1,727.1</b>	1,689.4	2%	2%	14%
Lead	(t)	67,034	47,577	<b>46,165</b>	<b>188,026</b>	214,432	(12%)	(31%)	(3%)
Zinc	(t)	45,881	19,409	<b>29,116</b>	<b>109,935</b>	128,205	(14%)	(37%)	50%
Gold	(oz)	56,070	43,883	<b>59,705</b>	<b>194,288</b>	184,769	5%	6%	36%
Silver	(koz)	11,602	8,757	<b>8,509</b>	<b>34,804</b>	38,913	(11%)	(27%)	(3%)
Uranium	(t)	1,105	966	<b>1,044</b>	<b>3,988</b>	4,066	(2%)	(6%)	8%
Molybdenum	(t)	376	281	<b>83</b>	<b>1,201</b>	1,561	(23%)	(78%)	(70%)
<b>Iron ore</b>									
Iron ore	(kt)	47,689	<i>49,280</i>	<b>56,643</b>	<b>203,564</b>	169,856	20%	19%	15%
<b>Coal</b>									
Metallurgical coal	(kt)	10,858	11,467	<b>11,886</b>	<b>45,078</b>	37,650	20%	9%	4%
Energy coal	(kt)	18,561	17,723	<b>18,363</b>	<b>73,492</b>	72,445	1%	(1%)	4%
<b>Aluminium, Manganese and Nickel</b>									
Alumina	(kt)	1,265	1,250	<b>1,325</b>	<b>5,178</b>	4,880	6%	5%	6%
Aluminium	(kt)	310	286	<b>276</b>	<b>1,174</b>	1,179	(0%)	(11%)	(3%)
Manganese ores	(kt)	2,246	1,801	<b>2,255</b>	<b>8,302</b>	8,517	(3%)	0%	25%
Manganese alloys	(kt)	182	162	<b>181</b>	<b>646</b>	608	6%	(1%)	12%
Nickel	(kt)	40.3	34.1	<b>30.9</b>	<b>143.2</b>	154.1	(7%)	(23%)	(9%)

Throughout this report figures in italics indicate that this figure has been adjusted since it was previously reported.



## BHP BILLITON PRODUCTION

BHP Billiton interest	QUARTER ENDED					YEAR TO DATE		
	JUN	SEP	DEC	MAR	JUN	JUN	JUN	
	2013	2013	2013	2014	2014	2014	2013	
<b>Petroleum</b>								
<b>Production</b>								
Crude oil, condensate and NGL (Mboe) <sup>(1)</sup>	23,441	26,053	23,973	27,244	<b>28,877</b>	<b>106,147</b>	90,051	
Natural gas (bcf)	214.5	219.7	202.6	202.0	<b>215.0</b>	<b>839.3</b>	874.3	
Total petroleum production (MMboe)	59.2	62.7	57.7	60.9	<b>64.7</b>	<b>246.0</b>	235.8	
<b>Copper<sup>(2)</sup></b>								
<b>Copper</b>								
<b>Payable metal in concentrate (kt)</b>								
Escondida <sup>(3)</sup>	57.5%	223.0	205.1	208.0	190.6	<b>241.0</b>	<b>844.7</b>	831.5
Antamina	33.8%	34.7	41.9	42.4	33.0	<b>26.2</b>	<b>143.5</b>	139.7
Pinto Valley	100%	10.8	10.9	1.6	-	-	<b>12.5</b>	16.6
Total		268.5	257.9	252.0	223.6	<b>267.2</b>	<b>1,000.7</b>	987.8
<b>Cathode (kt)</b>								
Escondida <sup>(3)</sup>	57.5%	79.3	73.2	77.5	75.8	<b>81.5</b>	<b>308.0</b>	297.9
Pampa Norte <sup>(4)</sup>	100%	64.7	43.5	59.4	63.4	<b>66.8</b>	<b>233.1</b>	232.6
Pinto Valley	100%	1.3	0.8	0.1	-	-	<b>0.9</b>	4.9
Olympic Dam	100%	47.9	27.9	50.9	51.1	<b>54.5</b>	<b>184.4</b>	166.2
Total		193.2	145.4	187.9	190.3	<b>202.8</b>	<b>726.4</b>	701.6
Total Copper		461.7	403.3	439.9	413.9	<b>470.0</b>	<b>1,727.1</b>	1,689.4
<b>Lead</b>								
<b>Payable metal in concentrate (t)</b>								
Cannington	100%	66,666	46,287	47,259	47,214	<b>45,768</b>	<b>186,528</b>	213,425
Antamina	33.8%	368	158	580	363	<b>397</b>	<b>1,498</b>	1,007
Total		67,034	46,445	47,839	47,577	<b>46,165</b>	<b>188,026</b>	214,432
<b>Zinc</b>								
<b>Payable metal in concentrate (t)</b>								
Cannington	100%	20,206	16,033	16,123	10,074	<b>15,666</b>	<b>57,896</b>	56,281
Antamina	33.8%	25,675	12,522	16,732	9,335	<b>13,450</b>	<b>52,039</b>	71,924
Total		45,881	28,555	32,855	19,409	<b>29,116</b>	<b>109,935</b>	128,205
<b>Gold</b>								
<b>Payable metal in concentrate (oz)</b>								
Escondida <sup>(3)</sup>	57.5%	17,593	17,347	19,384	15,253	<b>20,920</b>	<b>72,904</b>	71,529
Olympic Dam (refined gold)	100%	38,477	27,649	26,271	28,630	<b>38,785</b>	<b>121,335</b>	113,240
Pinto Valley	100%	-	49	-	-	-	<b>49</b>	-
Total		56,070	45,045	45,655	43,883	<b>59,705</b>	<b>194,288</b>	184,769
<b>Silver</b>								
<b>Payable metal in concentrate (koz)</b>								
Escondida <sup>(3)</sup>	57.5%	890	891	982	1,078	<b>1,320</b>	<b>4,271</b>	2,960
Antamina	33.8%	1,297	1,205	1,350	961	<b>843</b>	<b>4,359</b>	3,952
Cannington	100%	9,101	6,361	6,306	6,465	<b>6,029</b>	<b>25,161</b>	31,062
Olympic Dam (refined silver)	100%	266	190	212	253	<b>317</b>	<b>972</b>	880
Pinto Valley	100%	48	41	-	-	-	<b>41</b>	59
Total		11,602	8,688	8,850	8,757	<b>8,509</b>	<b>34,804</b>	38,913
<b>Uranium</b>								
<b>Payable metal in concentrate (t)</b>								
Olympic Dam	100%	1,105	970	1,008	966	<b>1,044</b>	<b>3,988</b>	4,066
Total		1,105	970	1,008	966	<b>1,044</b>	<b>3,988</b>	4,066
<b>Molybdenum</b>								
<b>Payable metal in concentrate (t)</b>								
Antamina	33.8%	376	458	379	281	<b>83</b>	<b>1,201</b>	1,561
Total		376	458	379	281	<b>83</b>	<b>1,201</b>	1,561

Refer footnotes on page 19.

## BHP BILLITON PRODUCTION

BHP Billiton interest	QUARTER ENDED					YEAR TO DATE		
	JUN 2013	SEP 2013	DEC 2013	MAR 2014	JUN 2014	JUN 2014	JUN 2013	
<b>Iron Ore</b>								
<b>Production (kt) <sup>(5)</sup></b>								
Newman	85%	14,391	12,196	12,483	15,470	16,766	56,915	44,620
Yarrie	85%	-	202	428	206	-	836	1,106
Area C Joint Venture	85%	12,552	11,814	11,383	11,282	12,481	46,960	44,717
Yandi Joint Venture	85%	17,027	18,146	17,135	15,622	17,615	68,518	60,054
Jimblebar <sup>(6)</sup>	85%	-	700	1,702	2,721	3,740	8,863	-
Wheelarra <sup>(7)</sup>	85%	1,017	3,166	2,716	1,698	2,973	10,553	8,377
Samarco	50%	2,702	2,729	2,841	2,281	3,068	10,919	10,982
<b>Total</b>		<b>47,689</b>	<b>48,953</b>	<b>48,688</b>	<b>49,280</b>	<b>56,643</b>	<b>203,564</b>	<b>169,856</b>
<b>Coal</b>								
<b>Metallurgical coal</b>								
<b>Production (kt) <sup>(8)</sup></b>								
BMA	50%	6,696	6,705	7,494	7,461	7,596	29,256	22,645
BHP Mitsui Coal <sup>(9)</sup>	80%	1,846	2,057	2,114	1,995	2,143	8,309	7,063
Illawarra	100%	2,316	1,423	1,932	2,011	2,147	7,513	7,942
<b>Total</b>		<b>10,858</b>	<b>10,185</b>	<b>11,540</b>	<b>11,467</b>	<b>11,886</b>	<b>45,078</b>	<b>37,650</b>
<b>Energy coal</b>								
<b>Production (kt)</b>								
South Africa <sup>(10)</sup>	90%	7,902	7,937	7,036	7,398	8,013	30,384	31,627
USA	100%	2,752	3,145	2,896	2,359	2,412	10,812	12,791
Australia	100%	4,893	5,372	4,544	5,018	5,030	19,964	18,010
Colombia	33.3%	3,014	3,185	3,291	2,948	2,908	12,332	10,017
<b>Total</b>		<b>18,561</b>	<b>19,639</b>	<b>17,767</b>	<b>17,723</b>	<b>18,363</b>	<b>73,492</b>	<b>72,445</b>
<b>Aluminium, Manganese and Nickel</b>								
<b>Alumina</b>								
<b>Saleable production (kt)</b>								
Worsley	86%	961	946	1,024	936	1,010	3,916	3,675
Alumar	36%	304	305	328	314	315	1,262	1,205
<b>Total</b>		<b>1,265</b>	<b>1,251</b>	<b>1,352</b>	<b>1,250</b>	<b>1,325</b>	<b>5,178</b>	<b>4,880</b>
<b>Aluminium</b>								
<b>Production (kt)</b>								
Hillside	100%	181	184	183	172	176	715	665
Bayside <sup>(11)</sup>	100%	24	24	24	23	18	89	96
Alumar	40%	39	35	28	26	15	104	154
Mozal	47.1%	66	67	67	65	67	266	264
<b>Total</b>		<b>310</b>	<b>310</b>	<b>302</b>	<b>286</b>	<b>276</b>	<b>1,174</b>	<b>1,179</b>
<b>Manganese ores</b>								
<b>Saleable production (kt)</b>								
South Africa <sup>(12)</sup>	44.4%	939	864	944	782	936	3,526	3,490
Australia <sup>(12)</sup>	60%	1,307	1,182	1,256	1,019	1,319	4,776	5,027
<b>Total</b>		<b>2,246</b>	<b>2,046</b>	<b>2,200</b>	<b>1,801</b>	<b>2,255</b>	<b>8,302</b>	<b>8,517</b>
<b>Manganese alloys</b>								
<b>Saleable production (kt)</b>								
South Africa <sup>(12) (13)</sup>	60%	104	86	94	91	106	377	374
Australia <sup>(12)</sup>	60%	78	51	72	71	75	269	234
<b>Total</b>		<b>182</b>	<b>137</b>	<b>166</b>	<b>162</b>	<b>181</b>	<b>646</b>	<b>608</b>
<b>Nickel</b>								
<b>Saleable production (kt)</b>								
Cerro Matoso	99.9%	12.8	12.0	12.3	9.8	10.2	44.3	50.8
Nickel West	100%	27.5	28.4	25.5	24.3	20.7	98.9	103.3
<b>Total</b>		<b>40.3</b>	<b>40.4</b>	<b>37.8</b>	<b>34.1</b>	<b>30.9</b>	<b>143.2</b>	<b>154.1</b>

Refer footnotes on page 19.

## BHP BILLITON PRODUCTION

- (1) LPG and ethane are reported as natural gas liquids (NGL). Product-specific conversions are made and NGL is reported in barrels of oil equivalent (boe). Total boe conversions are based on 6,000 scf of natural gas equals 1 boe.
- (2) Metal production is reported on the basis of payable metal.
- (3) Shown on 100% basis following the application of IFRS 10 which came into effect from 1 July 2013. BHP Billiton interest in saleable production is 57.5%.
- (4) Includes Cerro Colorado and Spence.
- (5) Iron ore production is reported on a wet tonnes basis.
- (6) Shown on 100% basis. BHP Billiton interest in saleable production is 85%.
- (7) All production from Wheelarra is now processed via the Jimblebar processing hub.
- (8) Metallurgical coal production is reported on the basis of saleable product. Production figures include some thermal coal.
- (9) Shown on 100% basis. BHP Billiton interest in saleable production is 80%.
- (10) Shown on 100% basis. BHP Billiton interest in saleable production is 90%.
- (11) Aluminium smelting at Bayside ceased with the closure of the final potline in June 2014.
- (12) Shown on 100% basis. BHP Billiton interest in saleable production is 60%, except Hotazel Manganese Mines which is 44.4%.
- (13) Production includes Medium Carbon Ferro Manganese.

## PRODUCTION AND SALES REPORT

	QUARTER ENDED					YEAR TO DATE	
	JUN	SEP	DEC	MAR	JUN	JUN	JUN
	2013	2013	2013	2014	2014	2014	2013
<b>Petroleum</b>							
<b>Crude oil, condensate and NGL (Mboe)</b>							
<u>Crude oil and condensate</u>							
Bass Strait	2,229	2,247	1,958	2,095	<b>2,355</b>	<b>8,655</b>	8,813
North West Shelf	1,646	1,865	1,497	1,504	<b>1,408</b>	<b>6,274</b>	6,868
Stybarrow	401	348	317	282	<b>255</b>	<b>1,202</b>	1,722
Pyrenees	1,817	1,707	1,295	2,386	<b>2,075</b>	<b>7,463</b>	8,460
Other Australia <sup>(1)</sup>	12	14	12	11	<b>14</b>	<b>51</b>	59
Atlantis <sup>(2)</sup>	2,594	2,953	3,988	3,734	<b>4,114</b>	<b>14,789</b>	7,995
Mad Dog <sup>(2)</sup>	649	732	496	704	<b>187</b>	<b>2,119</b>	2,715
Shenzi <sup>(2)</sup>	3,378	3,467	3,201	3,467	<b>3,530</b>	<b>13,665</b>	14,749
Onshore US <sup>(3)</sup>	3,614	5,044	4,238	5,589	<b>7,069</b>	<b>21,940</b>	11,701
Trinidad/Tobago	259	320	314	279	<b>248</b>	<b>1,161</b>	1,328
Other Americas <sup>(2) (4)</sup>	403	378	373	329	<b>371</b>	<b>1,451</b>	1,564
UK <sup>(5)</sup>	282	142	305	254	<b>27</b>	<b>728</b>	1,223
Algeria	1,210	1,142	1,156	1,069	<b>996</b>	<b>4,363</b>	5,042
Pakistan	65	62	52	49	<b>37</b>	<b>200</b>	273
<b>Total</b>	<b>18,559</b>	<b>20,421</b>	<b>19,202</b>	<b>21,752</b>	<b>22,686</b>	<b>84,061</b>	<b>72,512</b>
<u>NGL</u>							
Bass Strait	1,753	2,001	1,603	1,621	<b>2,026</b>	<b>7,251</b>	6,553
North West Shelf	312	399	234	276	<b>288</b>	<b>1,197</b>	1,374
Atlantis <sup>(2)</sup>	200	255	348	288	<b>111</b>	<b>1,002</b>	559
Mad Dog <sup>(2)</sup>	-	38	24	36	<b>39</b>	<b>137</b>	143
Shenzi <sup>(2)</sup>	224	266	252	280	<b>252</b>	<b>1,050</b>	1,187
Onshore US <sup>(3)</sup>	2,375	2,656	2,295	2,986	<b>3,471</b>	<b>11,408</b>	7,631
Other Americas <sup>(2) (4)</sup>	9	11	10	2	-	<b>23</b>	55
UK <sup>(5)</sup>	9	6	5	3	<b>4</b>	<b>18</b>	37
<b>Total</b>	<b>4,882</b>	<b>5,632</b>	<b>4,771</b>	<b>5,492</b>	<b>6,191</b>	<b>22,086</b>	<b>17,539</b>
<b>Total crude oil, condensate and NGL</b>	<b>23,441</b>	<b>26,053</b>	<b>23,973</b>	<b>27,244</b>	<b>28,877</b>	<b>106,147</b>	<b>90,051</b>
<b>Natural gas (bcf)</b>							
Bass Strait	33.6	34.2	22.7	21.2	<b>30.5</b>	<b>108.6</b>	123.7
North West Shelf	30.3	34.2	30.3	31.4	<b>31.8</b>	<b>127.7</b>	131.0
Other Australia <sup>(1)</sup>	4.5	9.3	15.1	13.2	<b>13.6</b>	<b>51.2</b>	21.4
Atlantis <sup>(2)</sup>	0.8	1.3	1.8	1.8	<b>1.9</b>	<b>6.8</b>	2.9
Mad Dog <sup>(2)</sup>	0.1	0.1	0.1	0.1	<b>0.1</b>	<b>0.4</b>	0.4
Shenzi <sup>(2)</sup>	0.8	0.8	0.8	0.8	<b>0.8</b>	<b>3.2</b>	4.6
Onshore US <sup>(3)</sup>	118.1	114.9	105.3	109.7	<b>118.9</b>	<b>448.8</b>	479.4
Trinidad/Tobago	9.1	9.9	9.7	9.3	<b>9.1</b>	<b>38.0</b>	36.3
Other Americas <sup>(2) (4)</sup>	0.3	0.3	0.3	0.2	<b>0.2</b>	<b>1.0</b>	1.7
UK <sup>(5)</sup>	4.1	3.5	6.2	5.4	<b>0.8</b>	<b>15.9</b>	19.1
Pakistan	12.8	11.2	10.3	8.9	<b>7.3</b>	<b>37.7</b>	53.8
<b>Total</b>	<b>214.5</b>	<b>219.7</b>	<b>202.6</b>	<b>202.0</b>	<b>215.0</b>	<b>839.3</b>	<b>874.3</b>
<b>Total petroleum production (MMboe) <sup>(6)</sup></b>	<b>59.2</b>	<b>62.7</b>	<b>57.7</b>	<b>60.9</b>	<b>64.7</b>	<b>246.0</b>	<b>235.8</b>

(1) Other Australia includes Minerva and Macedon. Macedon achieved first production in August 2013.

(2) Gulf of Mexico volumes are net of royalties.

(3) Onshore US volumes are net of mineral holder royalties.

(4) Other Americas includes Neptune, Genesis and Overriding Royalty Interest.

(5) UK includes Bruce/Keith and Liverpool Bay. BHP Billiton completed the sale of its 46.1% operated interest in Liverpool Bay on 31 March 2014.

(6) Total boe conversions are based on 6,000 scf of natural gas equals 1 boe.

## PRODUCTION AND SALES REPORT

	QUARTER ENDED					YEAR TO DATE	
	JUN	SEP	DEC	MAR	JUN	JUN	JUN
	2013	2013	2013	2014	2014	2014	2013

### Copper

Metals production is payable metal unless otherwise stated.

#### Escondida, Chile <sup>(1)</sup>

Material mined	(kt)	98,665	93,744	93,814	96,420	<b>94,673</b>	<b>378,651</b>	392,669
Sulphide ore milled	(kt)	19,295	18,276	19,584	21,051	<b>21,438</b>	<b>80,349</b>	73,905
Average copper grade	(%)	1.42%	1.37%	1.30%	1.12%	<b>1.33%</b>	<b>1.28%</b>	1.40%
Production ex mill	(kt)	231.9	210.6	214.4	195.5	<b>235.6</b>	<b>856.1</b>	863.0

#### Production

Payable copper <sup>(2)</sup>	(kt)	223.0	205.1	208.0	190.6	<b>241.0</b>	<b>844.7</b>	831.5
Payable gold concentrate	(fine oz)	17,593	17,347	19,384	15,253	<b>20,920</b>	<b>72,904</b>	71,529
Copper cathode (EW)	(kt)	79.3	73.2	77.5	75.8	<b>81.5</b>	<b>308.0</b>	297.9
Payable silver concentrate	(koz)	890	891	982	1,078	<b>1,320</b>	<b>4,271</b>	2,960

#### Sales

Payable copper	(kt)	228.2	192.3	228.1	173.2	<b>239.1</b>	<b>832.7</b>	836.2
Payable gold concentrate	(fine oz)	15,831	12,490	18,602	20,889	<b>20,920</b>	<b>72,901</b>	69,041
Copper cathode (EW)	(kt)	95.0	63.0	86.7	76.4	<b>83.3</b>	<b>309.4</b>	303.0
Payable silver concentrate	(koz)	908	836	1,076	1,046	<b>1,320</b>	<b>4,278</b>	2,963

(1) Shown on 100% basis following the application of IFRS 10 which came into effect from 1 July 2013. BHP Billiton interest in saleable production is 57.5%.

(2) June 2014 quarter includes 4.3 kt of copper contained in ore sold to third parties.

### Pampa Norte, Chile

#### Cerro Colorado

Material mined	(kt)	16,303	15,771	17,487	15,939	<b>17,087</b>	<b>66,284</b>	63,056
Ore milled	(kt)	4,351	4,161	4,501	4,508	<b>4,016</b>	<b>17,186</b>	17,412
Average copper grade	(%)	0.82%	0.78%	0.76%	0.75%	<b>0.76%</b>	<b>0.76%</b>	0.67%

#### Production

Copper cathode (EW)	(kt)	21.2	17.6	19.4	22.0	<b>21.3</b>	<b>80.3</b>	71.5
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#### Sales

Copper cathode (EW)	(kt)	21.7	17.3	17.6	12.4	<b>28.7</b>	<b>76.0</b>	70.3
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#### Spence

Material mined	(kt)	28,646	24,331	27,911	25,037	<b>25,962</b>	<b>103,241</b>	111,047
Ore milled	(kt)	4,146	4,860	4,788	4,735	<b>3,775</b>	<b>18,158</b>	16,100
Average copper grade	(%)	1.16%	1.11%	1.25%	1.23%	<b>1.30%</b>	<b>1.22%</b>	1.25%

#### Production

Copper cathode (EW)	(kt)	43.5	25.9	40.0	41.4	<b>45.5</b>	<b>152.8</b>	161.1
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#### Sales

Copper cathode (EW)	(kt)	57.9	25.9	35.9	40.0	<b>49.6</b>	<b>151.4</b>	161.4
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## PRODUCTION AND SALES REPORT

	QUARTER ENDED					YEAR TO DATE	
	JUN	SEP	DEC	MAR	JUN	JUN	JUN
	2013	2013	2013	2014	2014	2014	2013

### Copper

Metals production is payable metal unless otherwise stated.

#### Antamina, Peru

Material mined (100%)	(kt)	56,254	56,428	50,872	45,837	<b>49,797</b>	<b>202,934</b>	208,014
Sulphide ore milled (100%)	(kt)	12,424	11,765	12,521	11,729	<b>12,756</b>	<b>48,771</b>	46,780
Average head grades								
- Copper	(%)	1.03%	1.21%	1.15%	1.00%	<b>0.77%</b>	<b>1.03%</b>	1.06%
- Zinc	(%)	1.02%	0.56%	0.72%	0.54%	<b>0.58%</b>	<b>0.60%</b>	0.81%

#### Production

Payable copper	(kt)	34.7	41.9	42.4	33.0	<b>26.2</b>	<b>143.5</b>	139.7
Payable zinc	(t)	25,675	12,522	16,732	9,335	<b>13,450</b>	<b>52,039</b>	71,924
Payable silver	(koz)	1,297	1,205	1,350	961	<b>843</b>	<b>4,359</b>	3,952
Payable lead	(t)	368	158	580	363	<b>397</b>	<b>1,498</b>	1,007
Payable molybdenum	(t)	376	458	379	281	<b>83</b>	<b>1,201</b>	1,561

#### Sales

Payable copper	(kt)	31.9	41.3	44.5	30.2	<b>26.5</b>	<b>142.5</b>	138.4
Payable zinc	(t)	22,560	16,123	18,397	10,158	<b>14,527</b>	<b>59,205</b>	72,015
Payable silver	(koz)	1,165	1,503	1,367	910	<b>893</b>	<b>4,673</b>	3,887
Payable lead	(t)	262	297	368	405	<b>521</b>	<b>1,591</b>	983
Payable molybdenum	(t)	283	411	442	347	<b>142</b>	<b>1,342</b>	1,571

#### Cannington, Australia

Material mined	(kt)	802	893	974	773	<b>806</b>	<b>3,446</b>	3,146
Ore milled	(kt)	866	750	852	779	<b>821</b>	<b>3,202</b>	3,145
Average head grades								
- Silver	(g/t)	401	315	274	311	<b>286</b>	<b>296</b>	360
- Lead	(%)	9.1%	7.4%	6.7%	7.3%	<b>6.9%</b>	<b>7.1%</b>	7.9%
- Zinc	(%)	3.8%	3.3%	3.1%	2.4%	<b>3.1%</b>	<b>3.0%</b>	3.0%

#### Production

Payable silver	(koz)	9,101	6,361	6,306	6,465	<b>6,029</b>	<b>25,161</b>	31,062
Payable lead	(t)	66,666	46,287	47,259	47,214	<b>45,768</b>	<b>186,528</b>	213,425
Payable zinc	(t)	20,206	16,033	16,123	10,074	<b>15,666</b>	<b>57,896</b>	56,281

#### Sales

Payable silver	(koz)	7,793	7,844	6,548	6,127	<b>5,641</b>	<b>26,160</b>	30,258
Payable lead	(t)	64,633	56,500	47,185	43,649	<b>41,607</b>	<b>188,941</b>	218,655
Payable zinc	(t)	21,056	17,286	18,241	11,020	<b>15,708</b>	<b>62,255</b>	57,195

## PRODUCTION AND SALES REPORT

QUARTER ENDED					YEAR TO DATE	
JUN 2013	SEP 2013	DEC 2013	MAR 2014	JUN 2014	JUN 2014	JUN 2013

### Copper

Metals production is payable metal unless otherwise stated.

#### Olympic Dam, Australia

Material mined <sup>(1)</sup>	(kt)	2,750	2,897	2,717	2,495	<b>2,405</b>	<b>10,514</b>	9,547
Ore milled	(kt)	2,641	2,404	2,641	2,421	<b>2,654</b>	<b>10,120</b>	9,900
Average copper grade	(%)	1.86%	1.85%	1.86%	1.90%	<b>1.91%</b>	<b>1.88%</b>	1.80%
Average uranium grade	(kg/t)	0.56	0.53	0.52	0.54	<b>0.51</b>	<b>0.52</b>	0.53

#### Production

Copper cathode (ER)	(kt)	45.1	25.9	47.6	48.4	<b>51.3</b>	<b>173.2</b>	154.2
Copper cathode (EW)	(kt)	2.8	2.0	3.3	2.7	<b>3.2</b>	<b>11.2</b>	12.0
Uranium oxide concentrate	(t)	1,105	970	1,008	966	<b>1,044</b>	<b>3,988</b>	4,066
Refined gold	(fine oz)	38,477	27,649	26,271	28,630	<b>38,785</b>	<b>121,335</b>	113,240
Refined silver	(koz)	266	190	212	253	<b>317</b>	<b>972</b>	880

#### Sales

Copper cathode (ER)	(kt)	46.4	26.8	43.3	47.5	<b>54.2</b>	<b>171.8</b>	154.8
Copper cathode (EW)	(kt)	3.5	2.1	2.8	2.5	<b>3.0</b>	<b>10.4</b>	12.7
Uranium oxide concentrate	(t)	1,374	930	1,037	732	<b>1,426</b>	<b>4,125</b>	4,148
Refined gold	(fine oz)	38,394	21,675	32,226	31,129	<b>38,500</b>	<b>123,530</b>	109,248
Refined silver	(koz)	275	176	177	262	<b>367</b>	<b>982</b>	920

(1) Material mined refers to run of mine ore mined and hoisted.

#### Pinto Valley, US <sup>(1)</sup>

#### Production

Payable copper	(kt)	10.8	10.9	1.6	-	-	<b>12.5</b>	16.6
Copper cathode (EW)	(kt)	1.3	0.8	0.1	-	-	<b>0.9</b>	4.9
Payable silver	(koz)	48	41	-	-	-	<b>41</b>	59
Payable gold	(oz)	-	49	-	-	-	<b>49</b>	-

#### Sales

Payable copper	(kt)	9.9	10.0	-	-	-	<b>10.0</b>	12.5
Copper cathode (EW)	(kt)	1.4	1.1	0.2	-	-	<b>1.3</b>	4.9
Payable silver	(koz)	48	41	-	-	-	<b>41</b>	59
Payable gold	(oz)	-	49	-	-	-	<b>49</b>	-

(1) On 11 October 2013 BHP Billiton completed the sale of its Pinto Valley operations.

## PRODUCTION AND SALES REPORT

QUARTER ENDED					YEAR TO DATE	
JUN	SEP	DEC	MAR	JUN	JUN	JUN
2013	2013	2013	2014	2014	2014	2013

### Iron Ore

(kt)

#### Iron ore

##### Pilbara, Australia

###### Production <sup>(1)</sup>

Newman	14,391	12,196	12,483	15,470	16,766	56,915	44,620
Yarrie <sup>(2)</sup>	-	202	428	206	-	836	1,106
Area C Joint Venture	12,552	11,814	11,383	11,282	12,481	46,960	44,717
Yandi Joint Venture	17,027	18,146	17,135	15,622	17,615	68,518	60,054
Jimblebar <sup>(3)</sup>	-	700	1,702	2,721	3,740	8,863	-
Wheelarra <sup>(4)</sup>	1,017	3,166	2,716	1,698	2,973	10,553	8,377
<b>Total</b>	<b>44,987</b>	<b>46,224</b>	<b>45,847</b>	<b>46,999</b>	<b>53,575</b>	<b>192,645</b>	<b>158,874</b>
<b>Total production (100%)</b>	<b>52,926</b>	<b>54,258</b>	<b>53,638</b>	<b>54,812</b>	<b>62,369</b>	<b>225,077</b>	<b>186,911</b>

###### Sales

Lump	11,284	10,292	9,996	11,230	11,572	43,090	38,767
Fines	34,621	35,283	35,756	35,880	40,834	147,753	122,188
<b>Total</b>	<b>45,905</b>	<b>45,575</b>	<b>45,752</b>	<b>47,110</b>	<b>52,406</b>	<b>190,843</b>	<b>160,955</b>
<b>Total sales (100%)</b>	<b>54,006</b>	<b>53,561</b>	<b>53,808</b>	<b>55,018</b>	<b>61,015</b>	<b>223,402</b>	<b>189,357</b>

(1) Iron ore production and sales are reported on a wet tonnes basis.

(2) Yarrie ceased production on 25 February 2014.

(3) Shown on 100% basis. BHP Billiton interest in saleable production is 85%.

(4) All production from Wheelarra is now processed via the Jimblebar processing hub.

##### Samarco, Brazil

###### Production <sup>(1)</sup>

	2,702	2,729	2,841	2,281	3,068	10,919	10,982
<b>Sales</b>	<b>2,651</b>	<b>2,676</b>	<b>3,025</b>	<b>2,036</b>	<b>3,077</b>	<b>10,814</b>	<b>11,015</b>

(1) Iron ore production and sales are reported on a wet tonnes basis.



## PRODUCTION AND SALES REPORT

QUARTER ENDED					YEAR TO DATE	
JUN	SEP	DEC	MAR	JUN	JUN	JUN
2013	2013	2013	2014	2014	2014	2013

### Coal

(kt)

#### Metallurgical coal

##### Queensland Coal

###### Production <sup>(1)</sup>

###### BMA

Blackwater	1,539	1,691	1,655	1,759	<b>1,625</b>	<b>6,730</b>	5,432
Goonyella	1,816	1,737	1,999	2,041	<b>1,553</b>	<b>7,330</b>	6,221
Peak Downs	1,140	1,112	1,201	1,314	<b>1,282</b>	<b>4,909</b>	4,545
Saraji	971	1,197	1,195	1,108	<b>1,058</b>	<b>4,558</b>	3,449
Gregory Joint Venture	854	464	850	654	<b>997</b>	<b>2,965</b>	2,523
Daunia	376	504	594	585	<b>518</b>	<b>2,201</b>	475
Caval Ridge <sup>(2)</sup>	-	-	-	-	<b>563</b>	<b>563</b>	-
<b>Total BMA</b>	<b>6,696</b>	<b>6,705</b>	<b>7,494</b>	<b>7,461</b>	<b>7,596</b>	<b>29,256</b>	22,645

###### BHP Mitsui Coal <sup>(3)</sup>

South Walker Creek	1,215	1,298	1,313	1,312	<b>1,323</b>	<b>5,246</b>	4,351
Poitrel	631	759	801	683	<b>820</b>	<b>3,063</b>	2,712
<b>Total BHP Mitsui Coal</b>	<b>1,846</b>	<b>2,057</b>	<b>2,114</b>	<b>1,995</b>	<b>2,143</b>	<b>8,309</b>	7,063
<b>Total Queensland Coal</b>	<b>8,542</b>	<b>8,762</b>	<b>9,608</b>	<b>9,456</b>	<b>9,739</b>	<b>37,565</b>	29,708

###### Sales

Coking coal	6,316	6,123	6,517	7,030	<b>7,250</b>	<b>26,920</b>	20,868
Weak coking coal	2,417	2,397	2,505	2,594	<b>2,358</b>	<b>9,854</b>	7,811
Thermal coal	30	160	271	122	<b>134</b>	<b>687</b>	581
<b>Total</b>	<b>8,763</b>	<b>8,680</b>	<b>9,293</b>	<b>9,746</b>	<b>9,742</b>	<b>37,461</b>	29,260

(1) Metallurgical coal production is reported on the basis of saleable product. Production figures include some thermal coal.

(2) Caval Ridge achieved first production in the June 2014 quarter.

(3) Shown on 100% basis. BHP Billiton interest in saleable production is 80%.

#### Illawarra, Australia

<b>Production <sup>(1)</sup></b>	<b>2,316</b>	<b>1,423</b>	<b>1,932</b>	<b>2,011</b>	<b>2,147</b>	<b>7,513</b>	7,942
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###### Sales

Coking coal	1,877	1,084	1,495	1,581	<b>1,761</b>	<b>5,921</b>	7,032
Thermal coal	436	359	318	460	<b>486</b>	<b>1,623</b>	1,410
<b>Total</b>	<b>2,313</b>	<b>1,443</b>	<b>1,813</b>	<b>2,041</b>	<b>2,247</b>	<b>7,544</b>	8,442

(1) Metallurgical coal production is reported on the basis of saleable product. Production figures include some thermal coal.

## PRODUCTION AND SALES REPORT

	QUARTER ENDED					YEAR TO DATE	
	JUN	SEP	DEC	MAR	JUN	JUN	JUN
	2013	2013	2013	2014	2014	2014	2013
<b>Coal</b>							
(kt)							
<b>Energy coal</b>							
<b>South Africa <sup>(1)</sup></b>							
<b>Production</b>	7,902	7,937	7,036	7,398	<b>8,013</b>	<b>30,384</b>	31,627
<b>Sales</b>							
Export	3,363	2,504	4,087	3,179	<b>3,528</b>	<b>13,298</b>	13,935
Local utility	4,353	4,543	3,811	3,478	<b>4,498</b>	<b>16,330</b>	18,008
Inland	24	-	-	-	-	-	122
Total	<u>7,740</u>	<u>7,047</u>	<u>7,898</u>	<u>6,657</u>	<u><b>8,026</b></u>	<u><b>29,628</b></u>	<u>32,065</u>
(1) Shown on 100% basis. BHP Billiton interest in saleable production is 90%.							
<b>New Mexico, USA</b>							
<b>Production</b>							
Navajo Coal <sup>(1)</sup>	1,569	1,670	1,400	975	<b>1,082</b>	<b>5,127</b>	7,468
San Juan Coal	1,183	1,475	1,496	1,384	<b>1,330</b>	<b>5,685</b>	5,323
Total	<u>2,752</u>	<u>3,145</u>	<u>2,896</u>	<u>2,359</u>	<u><b>2,412</b></u>	<u><b>10,812</b></u>	<u>12,791</u>
<b>Sales - local utility</b>	2,815	3,129	2,950	2,360	<b>2,382</b>	<b>10,821</b>	12,775
(1) BHP Billiton completed the sale of Navajo Mine on 30 December 2013. As BHP Billiton will retain control of the mine until full consideration is received, production will continue to be reported by the Group.							
<b>NSW Energy Coal, Australia</b>							
<b>Production</b>	4,893	5,372	4,544	5,018	<b>5,030</b>	<b>19,964</b>	18,010
<b>Sales</b>							
Export	4,289	4,037	4,887	4,346	<b>4,548</b>	<b>17,818</b>	17,469
Inland	478	446	332	270	<b>333</b>	<b>1,381</b>	1,167
Total	<u>4,767</u>	<u>4,483</u>	<u>5,219</u>	<u>4,616</u>	<u><b>4,881</b></u>	<u><b>19,199</b></u>	<u>18,636</u>
<b>Carrejón, Colombia</b>							
<b>Production</b>	3,014	3,185	3,291	2,948	<b>2,908</b>	<b>12,332</b>	10,017
<b>Sales - export</b>	3,157	3,155	3,067	2,647	<b>2,858</b>	<b>11,727</b>	10,263

## PRODUCTION AND SALES REPORT

QUARTER ENDED					YEAR TO DATE	
JUN 2013	SEP 2013	DEC 2013	MAR 2014	JUN 2014	JUN 2014	JUN 2013

### Aluminium, Manganese and Nickel

(kt)

#### Alumina

##### Saleable production

Worsley, Australia	961	946	1,024	936	<b>1,010</b>	<b>3,916</b>	3,675
Alumar, Brazil	304	305	328	314	<b>315</b>	<b>1,262</b>	1,205
<b>Total</b>	<b>1,265</b>	<b>1,251</b>	<b>1,352</b>	<b>1,250</b>	<b>1,325</b>	<b>5,178</b>	4,880

##### Sales

Worsley, Australia	1,031	897	961	986	<b>1,020</b>	<b>3,864</b>	3,677
Alumar, Brazil	329	278	320	262	<b>388</b>	<b>1,248</b>	1,275
<b>Total</b>	<b>1,360</b>	<b>1,175</b>	<b>1,281</b>	<b>1,248</b>	<b>1,408</b>	<b>5,112</b>	4,952

#### Aluminium

##### Production

Hillside, South Africa	181	184	183	172	<b>176</b>	<b>715</b>	665
Bayside, South Africa <sup>(1)</sup>	24	24	24	23	<b>18</b>	<b>89</b>	96
Alumar, Brazil	39	35	28	26	<b>15</b>	<b>104</b>	154
Mozal, Mozambique	66	67	67	65	<b>67</b>	<b>266</b>	264
<b>Total</b>	<b>310</b>	<b>310</b>	<b>302</b>	<b>286</b>	<b>276</b>	<b>1,174</b>	1,179

##### Sales

Hillside, South Africa	191	180	173	187	<b>168</b>	<b>708</b>	667
Bayside, South Africa <sup>(1)</sup>	26	24	24	24	<b>24</b>	<b>96</b>	105
Alumar, Brazil	38	34	28	25	<b>17</b>	<b>104</b>	164
Mozal, Mozambique	65	68	74	72	<b>62</b>	<b>276</b>	264
<b>Total</b>	<b>320</b>	<b>306</b>	<b>299</b>	<b>308</b>	<b>271</b>	<b>1,184</b>	1,200

(1) Aluminium smelting at Bayside ceased with the closure of the final potline in June 2014.

#### Manganese ores

##### Saleable production

South Africa <sup>(1)</sup>	939	864	944	782	<b>936</b>	<b>3,526</b>	3,490
Australia <sup>(1)</sup>	1,307	1,182	1,256	1,019	<b>1,319</b>	<b>4,776</b>	5,027
<b>Total</b>	<b>2,246</b>	<b>2,046</b>	<b>2,200</b>	<b>1,801</b>	<b>2,255</b>	<b>8,302</b>	8,517

##### Sales

South Africa <sup>(1)</sup>	970	920	714	915	<b>931</b>	<b>3,480</b>	3,491
Australia <sup>(1)</sup>	1,102	1,078	1,445	1,252	<b>1,288</b>	<b>5,063</b>	4,578
<b>Total</b>	<b>2,072</b>	<b>1,998</b>	<b>2,159</b>	<b>2,167</b>	<b>2,219</b>	<b>8,543</b>	8,069

#### Manganese alloys

##### Saleable production

South Africa <sup>(1) (2)</sup>	104	86	94	91	<b>106</b>	<b>377</b>	374
Australia <sup>(1)</sup>	78	51	72	71	<b>75</b>	<b>269</b>	234
<b>Total</b>	<b>182</b>	<b>137</b>	<b>166</b>	<b>162</b>	<b>181</b>	<b>646</b>	608

##### Sales

South Africa <sup>(1) (2)</sup>	110	88	87	113	<b>112</b>	<b>400</b>	385
Australia <sup>(1)</sup>	61	54	63	85	<b>74</b>	<b>276</b>	227
<b>Total</b>	<b>171</b>	<b>142</b>	<b>150</b>	<b>198</b>	<b>186</b>	<b>676</b>	612

(1) Shown on 100% basis. BHP Billiton interest in saleable production is 60%, except Hotazel Manganese Mines which is 44.4%.

(2) Production includes Medium Carbon Ferro Manganese.

## PRODUCTION AND SALES REPORT

QUARTER ENDED					YEAR TO DATE	
JUN	SEP	DEC	MAR	JUN	JUN	JUN
2013	2013	2013	2014	2014	2014	2013

### Aluminium, Manganese and Nickel

(kt)

#### Nickel

##### Cerro Matoso, Colombia

<b>Production</b>	12.8	12.0	12.3	9.8	<b>10.2</b>	<b>44.3</b>	50.8
<b>Sales</b>	13.1	12.6	12.3	10.0	<b>10.2</b>	<b>45.1</b>	52.1

##### Nickel West, Australia

###### Saleable production

Nickel contained in concentrate	3.0	3.4	2.4	2.5	<b>1.6</b>	<b>9.9</b>	11.5
Nickel contained in finished matte	8.6	8.8	6.1	6.1	<b>4.4</b>	<b>25.4</b>	31.7
Nickel metal	15.9	16.2	17.0	15.7	<b>14.7</b>	<b>63.6</b>	60.1
Nickel production	<u>27.5</u>	<u>28.4</u>	<u>25.5</u>	<u>24.3</u>	<u><b>20.7</b></u>	<u><b>98.9</b></u>	<u>103.3</u>

###### Sales

Nickel contained in concentrate	3.0	2.7	2.8	2.3	<b>1.6</b>	<b>9.4</b>	10.6
Nickel contained in finished matte	9.7	7.8	7.4	5.3	<b>6.2</b>	<b>26.7</b>	32.4
Nickel metal	17.7	15.3	17.2	16.7	<b>14.4</b>	<b>63.6</b>	64.2
Nickel sales	<u>30.4</u>	<u>25.8</u>	<u>27.4</u>	<u>24.3</u>	<u><b>22.2</b></u>	<u><b>99.7</b></u>	<u>107.2</u>

## Appendix 1

Supporting document to the BHP Billiton Operational Review for the year ended 30 June 2014.

### Executive summary

#### Western Australia Iron Ore

**Table 1: Mineral Resources (inclusive of Ore Reserves) as at June 30 2014 in 100% terms – reported in compliance with the 2012 JORC Code**

As at 30 June 2014

As at 30 June 2013

Commodity Ore Deposit	Ore type	Measured Resources						Indicated Resources						Inferred Resources						Total Resources						BHP Billiton interest						
		Mt	% Fe	% P	% SiO <sub>2</sub>	% Al <sub>2</sub> O <sub>3</sub>	% LOI	Mt	% Fe	% P	% SiO <sub>2</sub>	% Al <sub>2</sub> O <sub>3</sub>	% LOI	Mt	% Fe	% P	% SiO <sub>2</sub>	% Al <sub>2</sub> O <sub>3</sub>	% LOI	Mt	% Fe	% P	% SiO <sub>2</sub>	% Al <sub>2</sub> O <sub>3</sub>	% LOI		Mt	% Fe	% P	% SiO <sub>2</sub>	% Al <sub>2</sub> O <sub>3</sub>	% LOI
<b>Iron Ore</b>																																
<b>WAIO</b>	BKM	1,300	62.2	0.12	3.9	2.4	4.1	4,200	59.9	0.14	4.9	2.5	6.2	9,200	59.0	0.14	5.4	2.8	6.6	15,000	59.5	0.14	5.1	2.7	6.3	13,000	59.6	0.14	5.2	2.7	6.1	88
	CID	960	56.1	0.05	6.4	2.0	10.9	430	56.7	0.06	6.1	2.1	10.3	790	54.9	0.06	6.6	3.0	11.0	2,200	55.8	0.05	6.4	2.3	10.8	2,400	55.7	0.05	6.4	2.4	10.9	
	MM	360	61.9	0.07	3.2	1.8	6.0	870	60.7	0.07	3.8	2.1	6.7	5,100	59.6	0.07	4.5	2.3	7.2	6,400	59.9	0.07	4.3	2.2	7.0	5,400	59.9	0.07	4.4	2.2	6.9	
	NIM	10	59.0	0.08	10.1	1.2	3.8	120	61.6	0.06	8.0	1.1	1.7	70	60.5	0.05	9.9	1.2	1.7	200	61.1	0.06	8.8	1.2	1.8	190	61.0	0.06	8.9	1.2	1.9	

- Western Australia Iron Ore (WAIO) is located within the Pilbara region of Western Australia. The geology of the region, comprising the Hamersley and North East Pilbara provinces, has been extensively studied and is well documented from over five decades of mapping, exploratory drilling and mining. Notably, the geological information is publicly available from the Geological Survey of Western Australia (GSWA – Department of Mines and Petroleum) in the form of maps, cross-sections, drillhole based information and other publications.
- Mineral Resources are divided into the ore types: BKM – Brockman, CID – Channel Iron Deposits, MM – Marra Mamba and NIM – Nimingarra.
- The Mineral Resources grades listed refer to in situ mass percentage on a dry weight basis. Wet tonnes are reported for WAIO deposits with moisture contents as: BKM 3%, MM 4%, CID 8% and NIM 3.5%.
- For Mineral Resources a single Fe cut-off value was applied per deposit ranging from 50-57% Fe across the WAIO resource inventory.
- BHP Billiton ownership varies between 85% and 100%. The WAIO BHP Billiton interest is calculated as a 'Pilbara Ore Reserves tonnes weighted average' across all Joint Ventures.
- The BKM Mineral Resources increase was due to infill drilling and revised resource models for Mindy; Ministers North; Wheelarra 1-2, 3 and 5-6; Packsaddle 1 and 3; Orebody 25 and Marillana. The MM Mineral Resources increase was due to infill drilling and revised resource models for A Deposit; C Deposit; Southeast Corner; Orebody 32 and Orebody 35, with maiden Mineral Resources Eastern Syncline and Orebody 37.
- Tonnes are rounded to two significant figures unless they are less than 100 million wmt, in which case they are rounded to the nearest 10 million wmt.
- The following abbreviations have been used throughout this report: centimetre (cm); kilogram (kg); kilometre (km); metre (m); millimetre (mm); micron (µm); billion tonnes (Bt); million tonnes (Mt); wet metric tonnes (wmt); thousand tonnes (kt); tonnes (t); parts per million (ppm).

### Competent Person acknowledgement

This Competent Persons Report, which provides supporting documentation for the Mineral Resources for WAIO as at 30 June 2014, was prepared under the direction of the Competent Persons listed below (Table 2).

These Competent Persons verify that:

- They have full knowledge of information contained in this report relating to the estimation of the Mineral Resources estimates of the said deposits;
- the Mineral Resources are estimated in accordance with the relevant assessment criteria contained in Table 1 of the JORC Code;
- they are members of the AusIMM, AIG or approved RPO, and have the relevant experience and competency required by the JORC Code; and
- Material issues are transparently disclosed on an 'if not, why not' basis.

**Table 2: WAIO Mineral Resource Competent Persons**

<b>Name</b>	<b>Professional Membership</b>	<b>Title</b>
Paul Whitehouse	Member of the Australasian Institute of Mining and Metallurgy	Superintendent Mineral Inventory
Michael Lowry	Member of the Australasian Institute of Mining and Metallurgy	Superintendent Resource Geology
Michael Smith	Member of the Australasian Institute of Mining and Metallurgy	Manager Exploration
Darren Stephens	Member of the Australian Institute of Geoscientists	Manager Exploration

## 1 Introduction

This report covers Mineral Resources for BHP Billiton's Western Australia Iron Ore asset and is issued in support of the BHP Billiton Operational Review for the year ended 30 June 2014.

BHP was the first company to start iron ore mining in Western Australia in the Kimberley area in 1956 at Yampi Sound's Cockatoo Island – the adjacent Koolan Island mine followed in 1965. These mines primarily supplied BHP's domestic steelworks at Newcastle and Port Kembla, although some product was exported. In 1966 BHP developed the Pilbara's first wholly export mine at Mt Goldsworthy by Goldsworthy Mining Limited (GML) and the Koolyanobbing (by Dampier Mining Company Ltd – DMC) mine in the Yilgarn. The latter mainly provided ore for BHP's steelworks in Kwinana near Perth with a minor portion exported to the Chinese market.

Major export operations commenced in 1969 with the creation of the Mt Newman Mining Joint Venture (MNM), and subsequent production from the Mt Whaleback deposit. In 1986 BHP acquired majority ownership of MNM, which along with the 100% BHP owned but undeveloped Yandi property (eventually developed in 1991) began a growth phase. Acquisition of Goldsworthy Mining Limited (GML) and Jimblebar (formerly McCamey's Monster) followed in 1990 and 1992 respectively. In July 2013, the completion of the ITOCHU Corporation (ITOCHU) and Mitsui & Co., Ltd. (Mitsui) transaction reduced our ownership in the Jimblebar Joint Venture to 85%.

BHP Billiton has been expanding the WAIO operations in response to increasing demand for iron ore. Production has increased from 68 Mt (100% basis) in the 2001 financial year to 225 Mt (100% basis) in the 2014 financial year. BHP Billiton's share of 2014 financial year production was 193 Mt.

## 2 Tenure

The majority of deposits reported are located over five main lease areas held by WAIO (and its joint venture partners, as appropriate) as shown in Figure 1. The leases, listed in Table 3, are governed by State Agreement Acts.

These State Agreement Acts are:

- *Iron Ore (Mount Newman) Agreement Act 1964 (WA)*
- *Iron Ore (Mount Goldsworthy) Agreement Act 1964 (WA)*
- *Iron Ore (Goldsworthy-Nimingarra) Agreement Act 1972 (WA)*
- *Iron Ore (McCamey's Monster) Agreement Authorisation Act 1972 (WA)*
- *Iron Ore (Marillana Creek) Agreement Act 1991 (WA)*

**Table 3: WAIO main lease areas**

<b>Lease number</b>	<b>Joint venture or tenement name</b>
ML 244 SA	Mt Newman JV
M 266 SA	Jimblebar
M 270 SA	Yandi JV
ML 281 SA	Mt Goldsworthy (Area C) JV
ML 235 SA, ML 249 SA, ML 263 SA, ML 251 SA	Mt Goldsworthy (Northern Areas) JV

There is a well-defined process for operating within the tenements that comprise each of the State Agreement Acts. This process includes various State Agreement approvals required before mining, processing and transport of iron ore products can commence.

In addition, one minor operation (Callawa part of Mt Goldsworthy JV Northern) is conducted upon a mining tenement issued under the *Mining Act 1978 (WA)*.

Proposals approved under State Agreements are a binding commitment between the State and the relevant Joint Venture and provide long-term security to the tenure and thereby the rights to mine. The approvals will remain current whilst operations are actively conducted and the State Agreements, which are ratified by the relevant Act, provide security to the renewal of tenure for the life of the operations.

Tenure is managed by the Land Tenure Team. The systems in place include a database of all tenure which includes details of the location, ownership, size, grant and expiry dates and records of the rent paid. In October 2013, the 1SAP Tenement Contract Management (TCM) Module was implemented and, since then, all WAIO tenements are captured in TCM with all payments governed through this process.

A minority of deposits for which Mineral Resources have been stated are located on exploration licences. The tenements systems described above manage all mining, exploration and infrastructure tenements.

Exploration titles are applied for under the processes set out in the *Mining Act 1978 (WA)* and once an exploration licence is granted it entitles the holder to explore for minerals over the tenement area. Retention of these licences is subject to annual rental and reporting obligations and meeting annual expenditure commitments or being granted exemptions.

During FY14, Exploration Licences and Mining Leases under the *Mining Act 1978 (WA)* held by BHP Coal Pty Ltd and BHP Billiton Minerals Pty Ltd as detailed in the points below were transferred to BHP Iron (Jimblebar) Pty Ltd.

- East Jimblebar / Caramulla – Mining Leases 52/865 – 52/869 and 52/874 – 52/885
- MAC North – Exploration Licence 47/628 and Mining Lease applications 47/703 – 47/709
- Mindy / Coondiner – Mining Leases 47/710 – 47/731
- Prairie Downs – Exploration Licences 52/21 – 52/23, Mining Leases 52/886 – 52/893, 52/907 – 52/909 and Mining Lease applications 52/870 – 52/873 and 52/897 – 52/900
- Roy Hill – Exploration Licence 45/1073 and 45/1074 and Mining Lease applications 45/1038 – 45/1065
- Western Ridge – Exploration Licence 52/170 and Mining Leases 52/901 – 52/906
- Western Ridge – Exploration Licence 52/2008

In 2010, amendments were made to the five State Agreements managed by BHP Billiton Iron Ore Pty Ltd to, amongst other matters, permit applications to be made to include the area of exploration and mining tenements granted under the *Mining Act 1978 (WA)* into mining and mineral leases granted under the State Agreements up to 777 km<sup>2</sup>. The State Agreement amendments also allow separate applications to be made to increase the total area of these State Agreement mining and mineral leases up to a limit not exceeding 1,000 km<sup>2</sup>.

BHP Billiton made an application to the Minister for State Development for the inclusion of areas into Mining Lease 266SA pursuant to clause 11B(1) of the McCamey's Monster State Agreement. The Minister approved the application and in order for the new sections of Mining Lease 266SA to be granted, conditional surrenders for the tenements in Application 1 were required.

The tenements within Application 1 are:

- East Jimblebar / Caramulla – Mining Leases 52/865 – 52/869 and 52/874 – 52/885
- Mindy / Coondiner – Mining Leases 47/710 – 47/731
- Prairie Downs – Mining Leases 52/886 – 52/893, 52/907 – 52/909
- West Jimblebar – Mining Lease 52/894 – 52-896
- Dongardoo – Exploration Licence 52/1830 and Mining Lease 52/1056
- Western Ridge – Exploration Licence 52/170 and Mining Leases 52/901 – 52/906
- Western Ridge – Exploration Licence 52/2008

The conditional surrenders have now been registered and these areas are now part of Mining Lease 266SA.



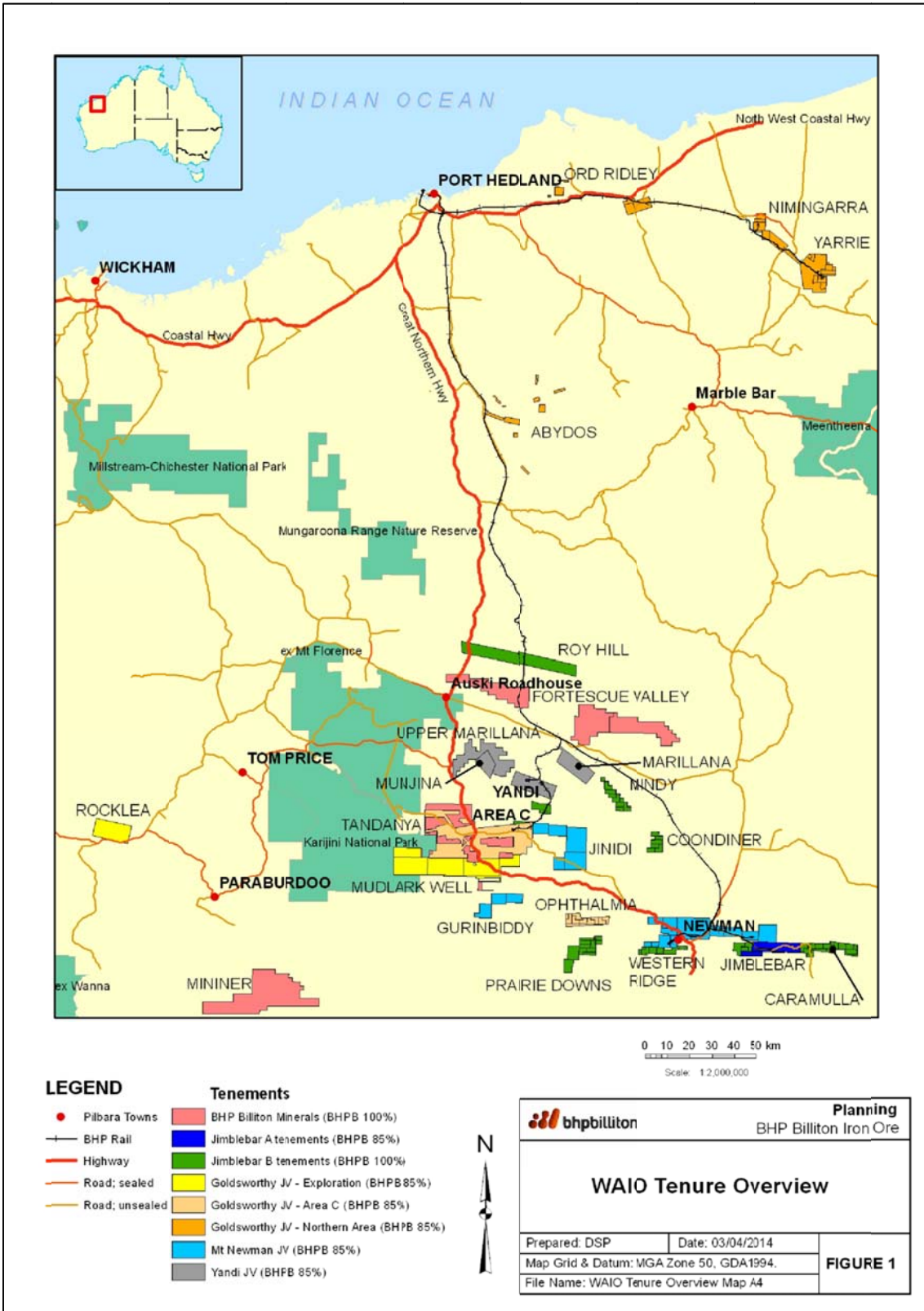


Figure 1: WAIO tenement location plan

### 3 Deposit geology

The Hamersley Province, Figure 2 (after Harmsworth et al 1990), covers an area of 80,000 km<sup>2</sup> and contains late Archaean – Lower Proterozoic age (2,800-2,300 Ma) sediments of the Mount Bruce Supergroup.

The Hamersley Group forms the central part of the Mt Bruce Supergroup and is conformable with both the underlying Fortescue Group and overlying Turee Creek Group. It is a 2.5 km thick sequence of dominantly deep water chemical sediments, with subordinate turbiditic sediments and various intrusive and extrusive rocks. Sediments include (in approximate order of decreasing abundance) banded iron-formation (BIF), shale, dolomite derived from peri-platfomal ooze, chert, pyroclastic shale and tuff, turbiditic carbonate and turbiditic volcanic, Figure 3 (after Harmsworth et al 1990).

The Hamersley Province overall can be considered as two structurally distinct regions:

- i. a northern / northwest region of mild deformation typified by shallow, open folds with a west to north-west trend;
- ii. a southern region displaying more intense deformation where the major iron deposits occur. This latter area can be further subdivided into a south-western area dominated by an echelon type open folds, and a south-eastern area dominated by tight E-W trending folds of shorter wavelength.

Within the banded iron-formations of the Hamersley Group there are two iron bearing stratigraphic sequences where the major bedded ores are formed:

- Brockman Iron Formation
- Marra Mamba Iron Formation

On the northern margin of the Archaean Pilbara Craton, in the North-East Pilbara (Figure 2) the Nimingarra Iron Formation hosts the Yarrie-Nimingarra iron ore deposits.

Another important iron bearing sequence is the Marillana Formation which is a detrital derived Channel Iron Deposit (CID) of late Eocene – Early Miocene age.

Detrital Iron deposits are colluvial-alluvial fans adjacent to some bedded iron deposits with their chemistry aligned to their source rocks. A schematic structural relationship of the various ore types in the SE Pilbara is represented as Figure 4.

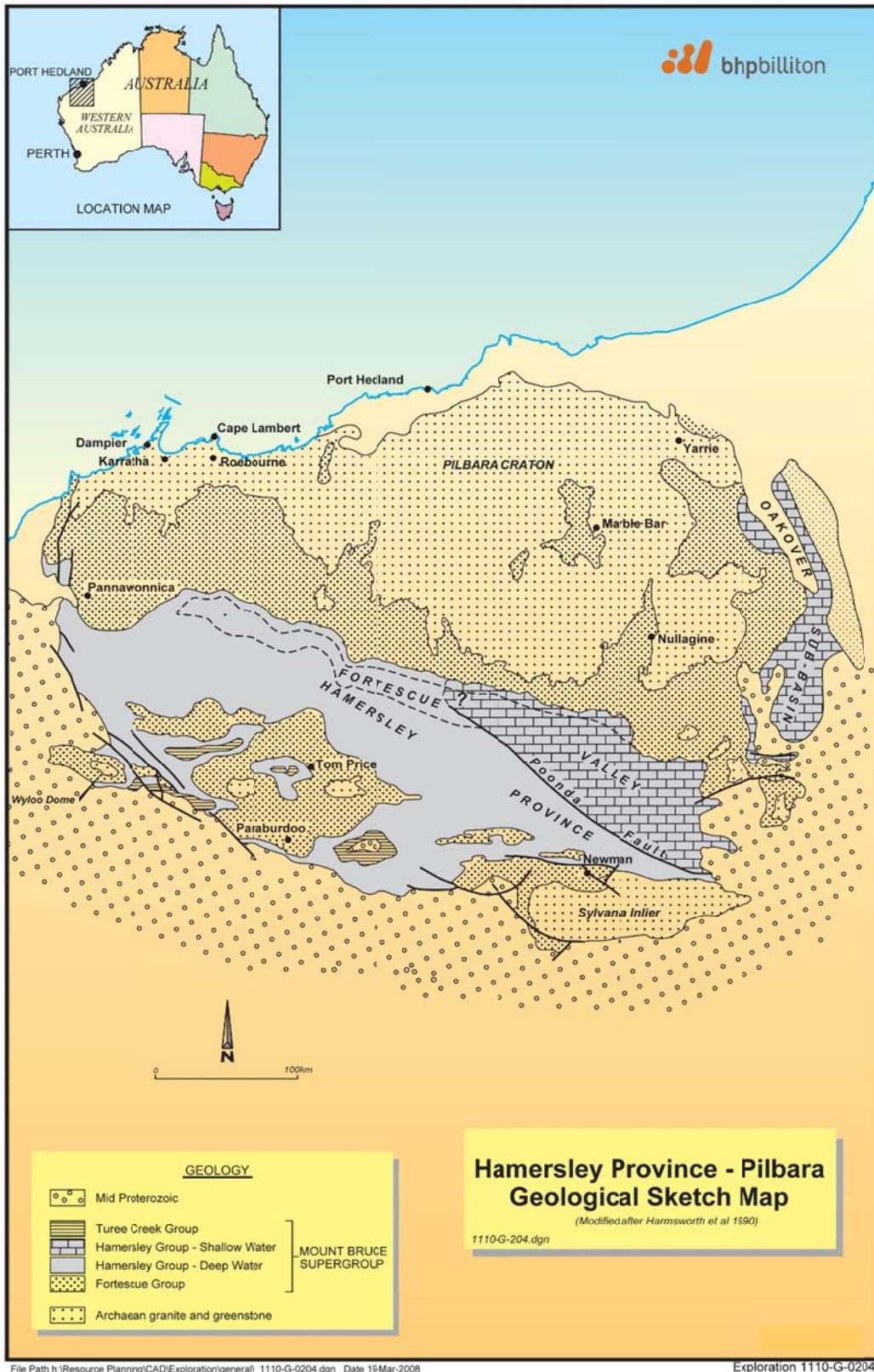


Figure 2: Hamersley Province – Pilbara geological sketch map

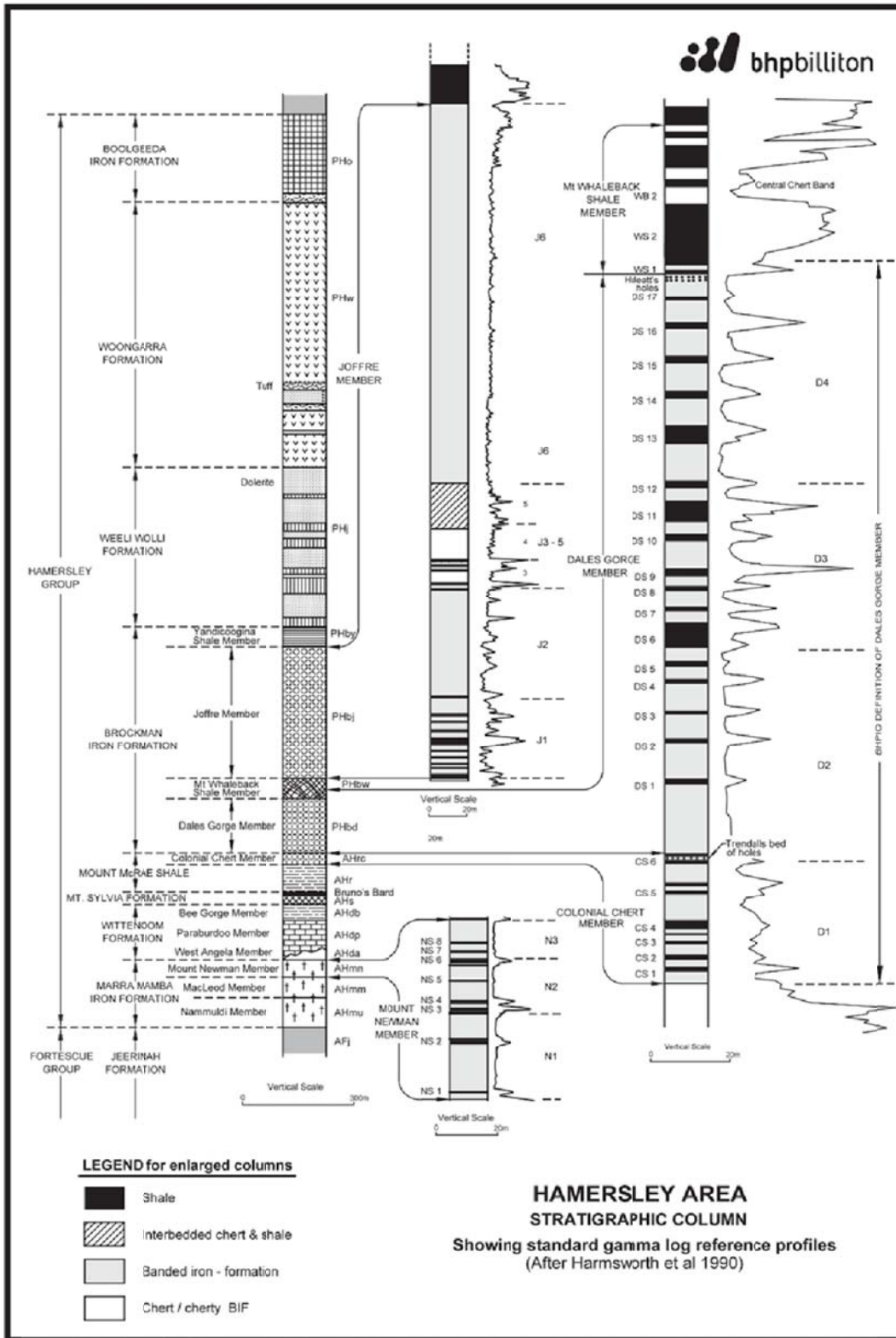


Figure 3: WAIO Hamersley Province stratigraphic column

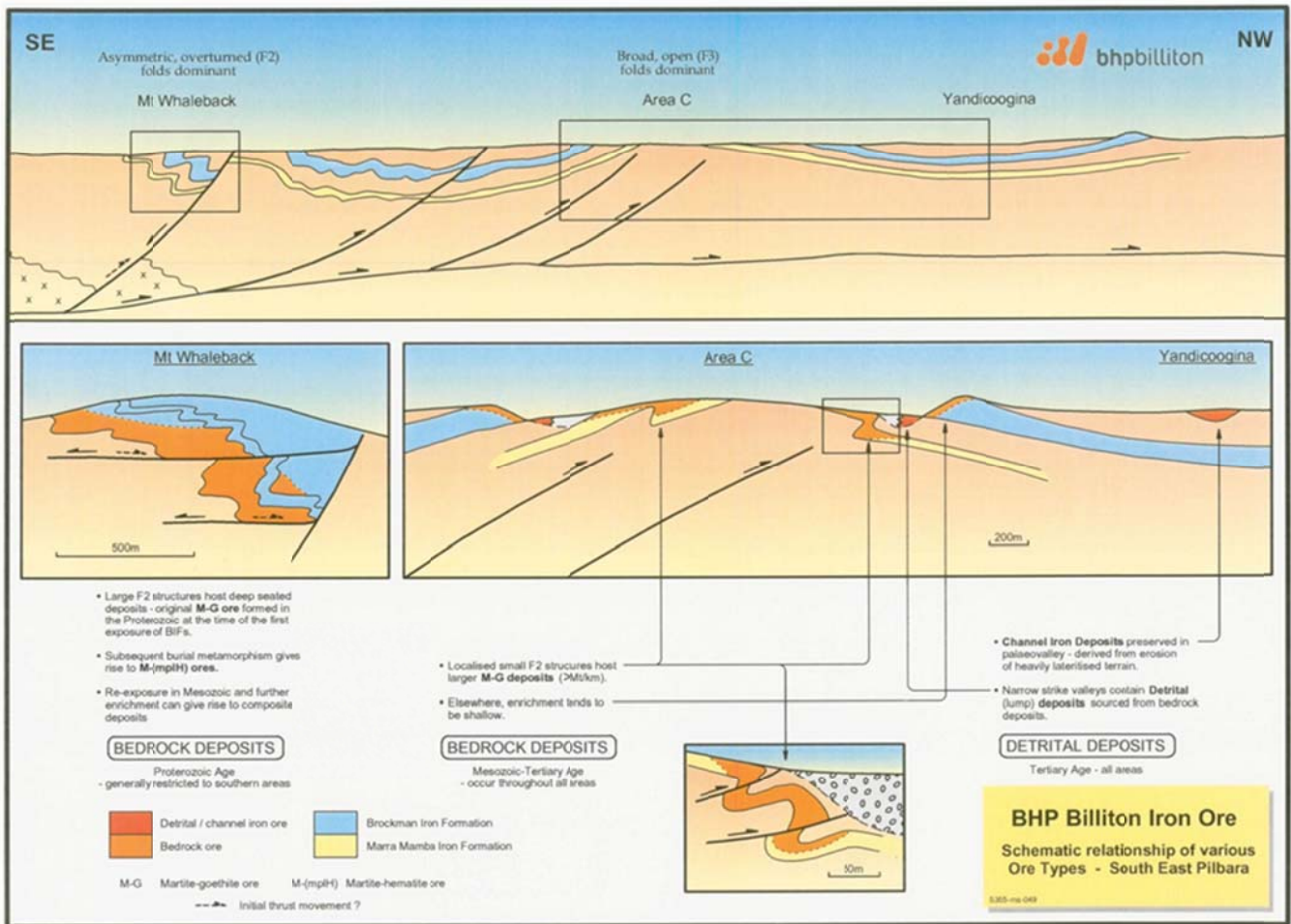


Figure 4: Schematic structural sections of mineralisation types of the South East Pilbara

#### 4 Data acquisition

A consistent method of data acquisition is used by WAIO for exploration and development drilling campaigns.

The data acquired includes:

- Drillhole collar coordinates, surveyed before and after drilling.
- Drillholes are geophysically logged for gamma, gamma-gamma density, calliper and magnetic susceptibility using industry standard tools and calibration methods.
- Magnetic susceptibility tool is used for measuring downhole deviation data as well as intermittent use of gyroscopes, chiefly for holes greater than 250 m length.
- Chip sampling protocols for Reverse Circulation (RC) holes follow benchmark industry practices, with QA/QC targets established and monitored.
- Standard geological logging and automated data capture procedures are followed for the different mineralisation types and different drilling methods.
- Geotechnical logging is typically undertaken in accordance with the BHP Billiton WAIO Geotechnical logging manual or under a separate consultants system which records similar features.
- Hydrogeological logging, bore construction and aquifer testing are completed in line with Australian Standards.

##### 4.1 Drilling

Spacing of the drillholes is project dependent, but as a guide, the nominal grids have their greatest spacing occurring along the main strike of the mineralisation and closer spacing occurring perpendicular to the main strike of mineralisation. Drilling grids, where present, vary from 1,200 m - 50 m along strike and 200 m - 50 m across strike.

A range of historical and current drilling methods are used in geological modelling and/or resource estimation:

- **Conventional Open-hole Percussion drilling (historical):** Utilised a 140 mm conventional downhole hammer drill bit to produce chip samples of the rock mass. Compressed air forces the drill spoil up the outside of the drill rods where it is collected in a rig mounted cyclone and then drops down through a drop box into a five tier riffle splitter to produce a final sample split and reject sample.
- **Open-hole Percussion drilling with a Cross Over Sub (historical):** Identical to Conventional Open-Hole Percussion drilling except that compressed air forces drill spoil from the drill bit through a cross over sub and into dual tubed drill rods (outer and inner) and then back to the surface where it is collected in a rig mounted cyclone.
- **Reverse Circulation (RC) drilling (current):** Utilises a 140 mm RC hammer face sampling bit to produce chip samples of the rock mass. Dual tube drill rods (outer and inner) are used to carry air to the hammer and drill spoil to the surface. The volume of air forces the drill spoil up the inner tubes where it is collected in a rig mounted cyclone and then drops down through a drop box into either a static cone splitter or a five tier riffle splitter to produce a final sample split and reject sample.
- **Diamond drillholes (current and historical):** Utilises a diamond impregnated drill bit to advance an attached hollow drill rod string into hard bedrock, producing a cylindrical core sample representing the formation being drilled. BHP Billiton Iron Ore uses various diameter diamond drillholes depending on the intended use of the drillhole samples (e.g. geological drillhole, geotechnical drillhole, hydrological drillhole, geo-metallurgical drillhole). Typically though the drillhole diameters are either 63.5 mm (HQ3) or 85 mm (PQ3).

In FY14, exploration activity was completed over multiple project areas and deposits. Drilling totalled 500,464 m comprising:

- 426,214 m RC (reverse circulation drilling utilising 140 mm Face Hammer)
- 52,300 m DD (diamond drilling typically 63.5 mm HQ triple core)
- 21,950 m Hydrology\* drilling.

\* Hydrology drilling incorporates a range of methods and diameters including conventional air rotary, dual rotary and flooded reverse.

Table 4 details the historical drilling carried out in the Pilbara since the 1950's by main drill types. It is interesting to note that 68% of all drilling has occurred since the year 2000.

**Table 4: Historical Drill Metres by Decade or Calendar Year Period**

Period Drilled	Air Core	Conventional Hammer (Percussion)	Diamond	Percussion	Reverse Circulation	RC Hammer Face Sampling Bit	Other Drill Type	Total Per Period
1950's	-	-	132	-	-	-	86,034	86,166
1960's	-	-	1,518	5,963	1,898	-	80,602	89,981
1970's	15	107	37,298	51,560	2,354	205	381,854	473,392
1980's	3,612	6,722	15,308	54,973	10,599	-	490,444	581,659
1990's	17,407	8,411	68,450	12,243	70,745	106,937	771,694	1,055,887
2000's	1,419	46,660	246,593	1,809	237,627	2,054,475	24,731	2,613,309
2010	-	15,774	41,618	-	-	409,541	5,482	472,415
2011	-	6,393	75,680	-	1,194	502,693	2,151	588,111
2012	-	28,091	85,655	-	-	556,359	5,314	675,420
2013	-	31,914	44,211	-	-	459,473	10,780	546,378
<b>Total</b>	<b>22,453</b>	<b>144,072</b>	<b>616,463</b>	<b>126,548</b>	<b>324,417</b>	<b>4,089,683</b>	<b>1,859,086</b>	<b>7,182,712</b>

Note: Other Drill Types comprised of Blade; Conventional Blade; Conventional Hammer - Crossover Sub; Conventional Rock Roller; Dual Rotary; Drag Bit; Reverse Flush / Flooded Reverse; Flushing; Hydro; RC Blade - Crossover Sub; Rotary Mud; Sonic; Vacuum and Unknown Drill Type.

#### 4.2 Survey

Survey practices have improved over time, ground truthing and re-survey of historic data is completed where issues are identified and it is practical to do so.

All surveys are referenced to Geocentric Datum of Australia 1994 (GDA94) and the Australian Height Datum (AHD).

Current practices are based on industry standards and best practice. The typical methodologies utilised and minimum accuracy requirements are;

For collar surveys:

- Multi Frequency Real Time Kinematic Global Positioning System (RTK GPS).
- Positional uncertainty: Horizontal 0.3 m; Vertical 0.1 m.
- For QA/QC 5% of each drill program is re-surveyed.
- Historical drillhole collars were surveyed using traditional terrestrial based techniques including trigonometric heighting and gridding by theodolite. Current RTK GPS practices were adopted circa 2000.

For mapping and relief modelling:

- Aerial Survey.
- Positional uncertainty: Horizontal 2.5 m; Vertical 1.0 m.

For downhole surveys:

- A Magnetic susceptibility tool is used for measuring downhole deviation data as well as intermittent use of gyroscopes, chiefly for holes greater than 250 m length.
- Any holes with greater than 2 degrees deviation over 5 m are investigated.
- For QA/QC purposes 5% of each drill program is re-surveyed.

### 4.3 Sampling and Analytical Procedures

The standard sample interval employed for the vast majority of drill holes is 3 m in the Bedded Iron Formations, and 2 m in Channel Iron Deposits. There is no specific trigger driving the choice of diamond drilling over RC drilling. In fact there are many varying reasons, these may include but are not limited to; QA/QC of RC techniques, geotechnical requirements, increased sample confidence below water table and detailed structural logging requirements in geologically complex deposits.

For diamond drillholes the entire interval of core is sent for Hylogging (HyLogger: Automated visible to infrared drill core scanning system that provides semi-quantitative colour and mineralogy estimates), Geometallurgy processing (typically studies on lump / fines relationships) and sample preparation.

For Open-hole Percussion and RC drillholes approximately 6 kg sample of drill cuttings is collected using either a static cone splitter or a five tier riffle splitter.

Historical assaying processes were employed by Mt Newman Mining Ltd and Goldsworthy Mining Ltd in the 1960's and 1970's where samples were processed in company-owned laboratories. Mt Newman Mining Ltd regularly assayed samples for Fe, P, SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub> by X-Ray Fluorescence (XRF) and sporadically for other elements such Mn, CaO, K<sub>2</sub>O, MgO, S and TiO<sub>2</sub>. Very early scout drill campaigns in the 1960's at Area C Goldsworthy Mining Ltd assayed Fe using a wet chemical titration method for analysis which only determined soluble Fe. Later drill programs were assayed for Fe, P, SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub> by X-Ray Fluorescence (XRF).

Post 1980, BHP Billiton Iron Ore has employed third party owned laboratories to process and assay drillhole samples. Samples are first oven dried and then are subsequently crushed to minus 2.8 mm (90% passing) and from each, a 2.5 kg split is robotically pulverised to minus 160µm (95% passing). After this process, 200 g of pulp is collected and later used for chemical analysis by X-Ray Fluorescence (XRF) for Fe, P, SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, MnO, CaO, K<sub>2</sub>O, MgO, S and TiO<sub>2</sub> and Robotic Thermo-Gravimetric Analysis (ROBTGA) for LOI.

Since FY13, RC drilling requires the injection of water at the bit so as to minimise dust exposure. Early indications are that a 40% reduction in dust exposure to personnel has been achieved. This practice produces wet samples of slurry consistency.

During the FY14 drilling campaign, approximately 90% of the samples collected were from reverse circulation face hammer (RC) (140 mm diameter) and 10% from diamond drilling HQ triple tube core (DDH) (63.5 mm diameter). A total of 181,284 samples were analysed, with 21,462 samples collected by diamond drilling and 159,822 samples by RC drilling.

During FY14, WAIO used external laboratories for the realisation of chemical analysis. UltraTrace (Bureau Veritas) was the main lab, processing 99% of WAIO samples, SGS laboratory was also used for processing project samples, chiefly from Bulk Sampling programs. Both are ISO 17025 certified Labs and work under the same procedures.

Sample preparation protocols (drying temperatures and times, crushing and pulverising sizing requirements, etc) at laboratories meet standards defined in contracts in line with ISO standards, with QA/QC targets established; duplicates, blanks and standards are routinely included in sample batches for monitoring of precision, contamination and accuracy.

Diagrammatic flow chart of the sample preparation process is shown Figure 5.



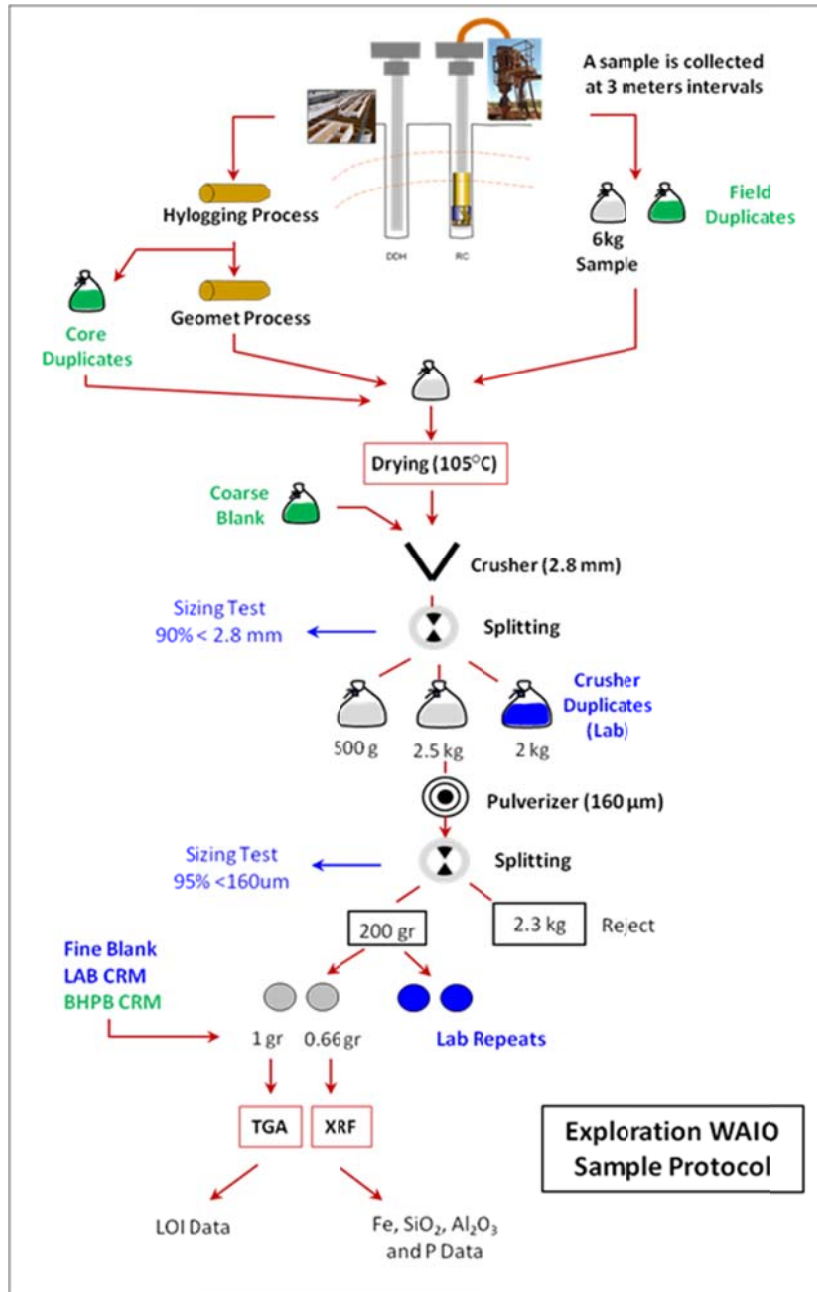


Figure 5: Sampling and analytical flow diagram

#### 4.4 Quality of assay data and laboratory tests

Since the year 2000, WAIO have employed a formalised QA/QC program that includes routine controls for approximately 10% of the samples sent for chemical analysis. The WAIO QA/QC controls include certified reference materials (CRM), duplicates samples for RC drillholes, and blanks. They have specific objectives in the process controlling mechanical preparation of sampling and analyses. Certified reference materials were prepared by Ore Research & Exploration Lab (ORE, an independent company specialising in CRM preparation) in 2010. Additionally by contract, WAIO have set third party laboratory QA/QC controls that include sizing checks, crusher duplicates, pulp repeats, blanks and standards.

Acceptance limits have been defined according to BHP Billiton guidelines and global sampling benchmarks.

QA/QC controls include routine and 'without prior notice' visits to the laboratories, with the aim of ensuring that the laboratories are working according to our procedure and to supervise sample integrity. If issues are detected, they are raised with the laboratory managers and an action plan is developed to improve the process.

QA/QC improvements implemented during FY14, including the quantification of sampling error and the facilitation of QA/QC improvements in the field, saw a reduction of the business risk associated with sampling uncertainty.

#### **4.5 Verification of sampling and assaying**

WAIO drillhole data is managed internally using processes and systems including:

- Computerised field logging system that includes controlled input through drop down lists and inbuilt validation checks to trap erroneous data at the earliest possible stage.
- Comprehensive SQL Server relational database that is structured such that quality data and relevant meta-data are integrated with the primary geological, geochemical and geophysical data, and
- Strict validation rules including confirmation of acceptable QA/QC results for each batch of samples assayed. Data is only loaded to the master database after all data for the hole has been validated and signed off by the field geologist.

The WAIO drillhole database was audited by Golder Associates in July 2008 with no fatal flaws identified and all the key recommendations actioned.

The WAIO database has a security model which requires user access to have supervisor approval. The system is backed up per standard backup procedures nightly. A disaster recovery test was successfully completed in May 2010 which recovered the database from a server image and backup.

Primary data sources for all drillhole data are stored on the database server in a secure archive directory. As part of standard work procedures, 5% of the assay data stored in the drillhole database are physically checked by geologists against hardcopy laboratory certificates. The details of these checks and approvals are stored in the database. Additionally QA/QC requirements require 5% of all drillhole collars to be resurveyed.

Data exported from the drillhole database for modelling contains summary statistics, and on the upload of the exported data into the modelling systems, work procedures require statistical checks to ensure the data loaded is the same as exported.

#### **4.6 Physical parameters**

In general, in situ bulk density is measured using gamma-gamma single density tool. A single detector density tool with a cobalt source is used. The density tool is calibrated every fortnight at designated calibration sites against known physical densities. The tool measures electron density and it is then converted to bulk density using the calibration points. The following QA/QC measures are taken to monitor data quality and ensure the credibility of the density data for geological modelling and resource evaluation:

- Calibration of log responses to known engineering units (accuracy).
- Logging a repeatability borehole (demonstrate accuracy and determine precision / repeatability).
- Resurveying of 5-10% of drill holes on a drill program (repeatability / reproducibility check).
- Comparison of independent density measures, i.e. downhole gamma-gamma density versus density measurements made on diamond drill core samples ('volume and weight' method).

RC drilling techniques cause a rougher sidewall condition in the drillhole internally termed rugosity. This rugosity causes an air gap between the downhole gamma density tool and the wall rock thus resulting in reduced density values. Therefore all RC derived density information is verified on a project by project basis.

#### **4.7 Audits and reviews**

The WAIO resource drillhole process was audited by Golder Associates in July 2008. The audit covered drillhole planning; set out, pick up and downhole survey practices; drilling supervision; sample collection and submission; downhole geophysical surveys and calibration; data management processes; chain of custody; procedure documentation; data security and data validation. The audit had no fatal flaws identified and all the key recommendations have been actioned.

## **5 Resource estimation**

The resource estimation process followed by WAIO is well established and is consistent with standard industry practice. A set of procedures governs geological interpretation, estimation and reporting of Mineral Resources including, peer reviews and independent auditing.

Documentation of the modelling work performed for each resource model used for resource reporting is stored electronically in a secure centralised location. These reports contain information on deposit extents, geometry, detailed geological and geostatistical modelling, data preparation and compositing and classification parameters including discussion of data spacings. Competent Persons visited the sites regularly for project planning and reviews.

### **5.1 Assumptions**

#### **Cut-off parameters**

Typically a 54% Fe cut-off is used for resource reporting of Marra Mamba and Brockman Iron Formations, a 52% Fe cut-off is used for Channel Iron Deposits and a 50% Fe cut-off for operational areas within the Nimingarra Formation. A single cut-off value is applied per deposit however cut-offs range from 50-57% Fe across the WAIO inventory.

These cut-offs employed for the Pilbara Mineral Resources estimates are based on operating successes and reserve work as outlined below. It is reasonable to consider that all material above the Mineral Resource cut-off grade would be eligible for sale via blending with higher grade ores or via beneficiation, either now or in the future as indicated by WAIO strategic mine planning.

#### **Mining factors**

Reported Mineral Resources assume extraction will continue with open pit bulk mining methods similar to the methods in operation currently with bench heights not decreasing below composite lengths. The current bench heights vary from mine to mine depending on deposit style, ranging from 6-12 m with some mines also mining benches with flitches of 3 and 4 m. Mineralisation volume modelling including internal waste and internal dilution consider continuity of volumes across multiple holes such that there is prospect for bulk mining extraction. Operating data and reconciliation outcomes support that the estimated Mineral Resources can be extracted using current open-pit bulk mining methods.

#### **Metallurgical factors**

Mineral Resource reporting is based on head grades with the assumption that lump and fines split products can be blended and marketed.

#### **Environmental factors**

Potentially Acid Forming (PAF) waste is coded in resource models based on three criteria:

1. Total sulphur content >0.2%, and
2. Not weathered, i.e. below the base of complete oxidisation, and
3. The waste is from a stratigraphy that has been identified as a potential PAF risk.

All three criteria must apply to confirm PAF. Identification of stratigraphies as presenting a potential PAF risk is based on previous test work. The PAF coding is carried through to the reserve model. At an operational level, blast hole samples are tested for total sulphur content to confirm whether the waste will be managed as PAF material.

Environment impacts from potential acid mine drainage are considered in waste management strategies during mine planning and at times lead to modification of the extracted resource; traditionally this impact is small and is not considered as a constraint on the reported Mineral Resources.

## 5.2 Estimation and modelling techniques

### Geological interpretation and data analysis

The standard geological resource modelling method used by WAIO involves cross sectional interpretation followed by wire-frame modelling to produce a three dimensional interpretation of the geology and mineralised zones of the deposit. Increasingly, WAIO is adopting processes and systems for implicit modelling of geology, relying less on sectional interpretation to focus more directly on the three-dimensional consistency of the resulting geology model.

The interpretation relies on downhole wireline logs of natural gamma supported by drill hole logging, geochemistry, downhole televiewer data and surface mapping. Interpretations undergo an internal peer review process to ensure accuracy and consistency. The work performed is documented in the Drilling and Geological Modelling Report for each model.

Data preparation for resource modelling involves flagging the original sample intervals to the geological interpretation, then compositing the data to a uniform composite length (breaking at the geology contacts) for statistical and geostatistical analysis, these are typically 3 m for the Bedded Iron Deposits (BID) and 2 m for CID type deposits. The outputs from the geostatistical analysis are used to verify and determine the appropriateness of the estimation domains.

Mineralisation domains are based on 'natural' cut-offs identifying stationary in-situ mineralisation volumes. They incorporate un-mineralised samples and/or low grade mineralised samples depending on the globally assessed mineralisation cut-offs and the degree of local continuity found during interpretation. Depending on grade continuity, dilution of mineralised domains ranges from a few to about 10% of samples within a domain. Any outlier deleterious values can be locally constrained during estimation; however top cutting is not currently part of WAIO estimation practices.

### Block modelling

Using Vulcan software, block models are constructed using the wire-framed interpretation with the grade interpolation achieved by ordinary kriging, constraining sample selection within mineralised domains, stratigraphy and weathering horizons as defined during Exploratory Data Analysis. Block models use estimation parent cells with dimensions approximately half drillhole spacing in Easting/Northing. The block sizes vary depending on the density of the drilling or maturity in the understanding of an orebody's continuity e.g. a wider spaced Inferred Resource may justify parent block cell sizes of 300 m x 150 m x 15 m whereas a closer spaced Measured Resource may adopt a 25 m x 25 m x 3 m cell size. Sub-cells are used to ensure robust representation of geological boundaries and domain volumes.

Resource models used by WAIO to generate Mineral Resource estimates stated in this report are comprised of models generated for the purpose of global resource reporting and medium to long-term mine planning studies. In some cases where the evaluation is at an early stage and drill information is broadly spaced, cross sectional area of influence type estimates have been generated for global resource reporting purposes, these represent 1,800 million wmt or 8% of WAIO's total Mineral Resources. All Mineral Resources estimated by cross sectional area of influence are classified as Inferred.

Typically, Ordinary Kriging (OK) is used for grade estimation into parent cells for Fe, P, SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub> and LOI, and Inverse Distance Weighting (IDW) or OK for the remaining trace chemical constituents – CaO, Mn, S, MgO, K<sub>2</sub>O and TiO<sub>2</sub>. Thirteen deposits have been interpolated using IDW only, these represent 1,400 million wmt or 6% of WAIO's total Mineral Resources. The majority of Mineral Resources estimated by IDW are classified as Inferred.

For OK, search neighbourhood optimisation is performed to balance the risk of local conditional bias and smoothing of the estimate.

Reconciliation confirms that overall, selectivity represented in the resource models mimics mining practice.

In-situ (wet) bulk density is assigned in the models based on domain averages of filtered density data from geophysical wirelines (gamma-gamma single density tool) or from core measurements. Some models do employ a local estimate based on wireline data; however often data quality is regarded as insufficient for local estimation into cells.

Validation of the estimates include:

- A visual comparison of the drillhole grades and the block estimates in cross section.
- A comparison of length weighted domain averages from the composited drillhole database versus the volume weighted domain averages from the block estimate.
- A comparison of east-west, north-south and depth 'swath' panels on a domain basis throughout the deposit comparing composite versus block estimate grade averages, scatter plots and Q-Q plots.
- A review of the estimation performance parameters including number of samples utilised, number of drillholes utilised, average distance to samples, theoretical slopes of regression and kriging efficiency.
- A Discrete Gaussian Global Change of Support analysis.

## **6 Mineral Resources statement**

### **6.1 Resource classification**

The classification of Mineral Resource is completed by BHP Billiton Competent Persons in accordance with the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC, 2012).

Factors influencing resource classification include data density, data quality, geological continuity and/or complexity, estimation quality, weathering zones, proximity to the water table.

The possibility of eventual economic extraction is considered as a decision point for whether it is a Mineral Resource or not.

### **6.2 Discussion of relative accuracy / confidence**

The relative accuracy and therefore confidence of the resource estimates are deemed appropriate for their intended purpose of global resource reporting and medium to long-term mine planning studies. The underlying influencing factors effecting the accuracy and confidence as stated in section 6.1 above are taken into consideration during classification of the model and are therefore addressed by the Competent Person in the attributed resource classification.

Reconciliation carried out on a quarterly and annual basis supports the confidence WAIO has in the estimations and related resource classifications.

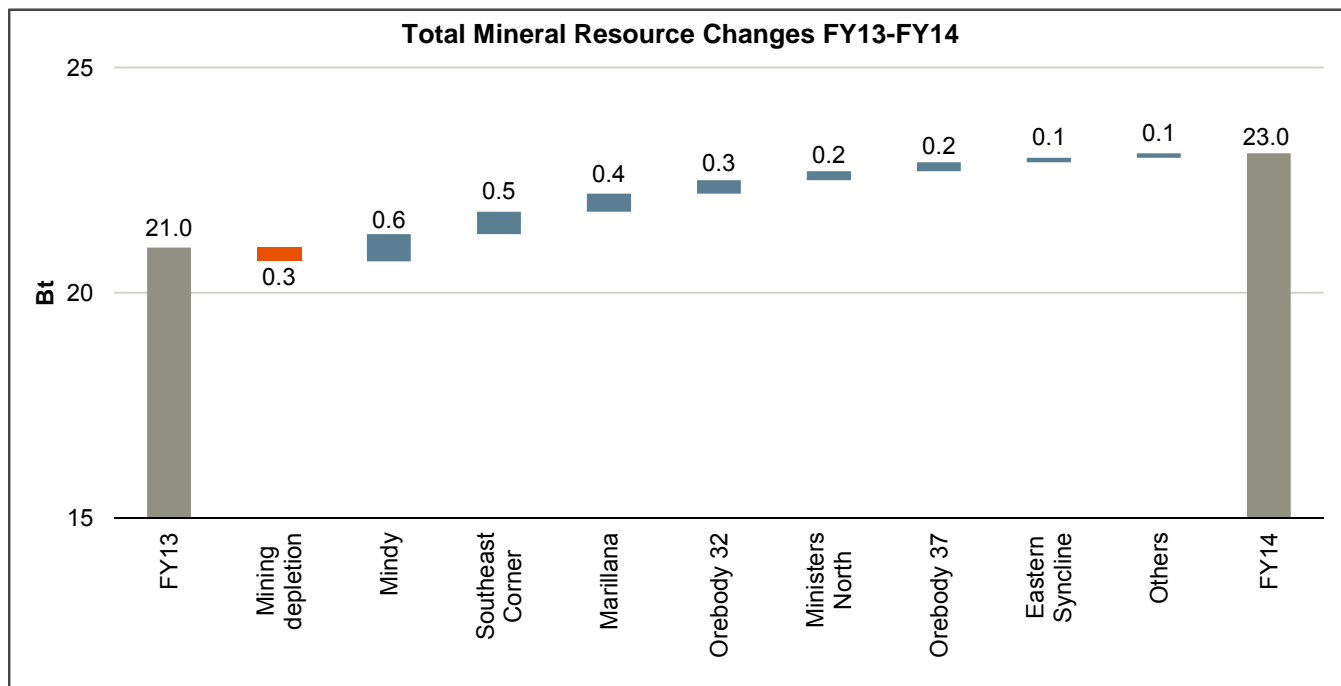
As a move to communicate the relative accuracy of our estimates we have changed our reporting precision for tonnes to two significant figures unless they are less than 100 Mt, in which case they are rounded to the nearest 10 Mt.

### **6.3 Mineral Resources declared**

Table 1 contains the statement of Mineral Resources for WAIO as at 30 June 2014. Mineral Resources are reported in compliance with the JORC Code (2012).

Figure 6 shows the Mineral Resources changes by the significant contributing deposits, incorporating rounding. As can be seen, Mindy, Southeast Corner and Marillana are driving the total changes with 1.5 billion wmt between them.

Measured Resource classification has seen a slight increase after consideration of mining depletion with increases occurring at or in the near vicinity of our producing mines. An overall increase of Indicated Resource classification is dominated by 1.2 billion wmt at Marillana which will provide improved resource confidence in our Life of Asset work for this deposit. A corresponding decrease of 0.9 billion wmt of Inferred Resource at Marillana is more than offset by an increase of Inferred Resource classification at the early stage Mindy and Southeast Corner deposits, contributing to no overall change in the quantity of WAIO Inferred Resource.



**Figure 6: Waterfall chart for major Mineral Resources changes**

## 7 Independent review

Selected operations and deposits are targeted for external audit as part of the Planning Department business plan based mainly on the significance of changes and the time from last audit. The last Mineral Resources audit was completed in FY14 by AMC consultants for the Jimblebar deposits Wheelarra 1-2, 3, 5-6; Hashimoto 1 and Mindoona.

Actions closed out in FY14 are:

1. Creation of a centralised Geological Modelling team was completed in July 2013 – procedures are in place for validation and sign-off prior to estimation usage.
2. All current resource modelling projects evaluate the amount and quality of density data available for the project and then utilises the most appropriate method of applying that data to the resource model. Preference is given to estimating in-situ density via linear estimation techniques however, where this is not practicable density is based on domain averages of filtered density data from geophysical wirelines (gamma-gamma single density tool) or from core measurements. Investigations into the use of gamma-gamma dual density tools and further filtering and or correction of single density tools are ongoing.

The remaining action items requiring close out are resource re-estimations for Orebody 29; Capricorn; Hashimoto H2-3-4 and E Deposit all of which are scheduled to be completed in the resource modelling five year plan.

## 8 Further work

Mineral Resources confidence is reflected in the applied resource classifications as guided by the JORC Code (2012) with factors influencing resource classification including but not limited to data density, data quality, geological continuity and/or complexity, estimation quality and weathering zones. Reconciliation data from operating mines supports our position.

Other estimation improvements being investigated include unfolding techniques and usefulness of recoverable resource estimation techniques such as uniform conditioning.

## 9 References

Harmsworth R.A., Kneeshaw M., Morris R.C., Robinson C.J., and Shrivastava P.K., 1990. BIF-Derived Iron Ores of the Hamersley Province in Monograph 14, Geology of the Mineral Deposits of Australia and Papua New Guinea, pp 617-642. (AusIMM, Melbourne).