BHP BILLITON LTD Form 20-F September 14, 2009 <u>Table of Contents</u>

# **UNITED STATES**

# SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

# FORM 20-F

(Mark One)

# " REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR 12(g) OF THE SECURITIES EXCHANGE ACT OF 1934 OR

x ANNUAL REPORT PURSUANT TO SECTION 13 OR 15 (d) OF THE SECURITIES EXCHANGE ACT OF 1934 FOR THE FISCAL YEAR ENDED 30 JUNE 2009

OR

" TRANSITION REPORT PURSUANT TO SECTION 13 OR 15 (d) OF THE SECURITIES AND EXCHANGE ACT OF 1934

" SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 Date of event requiring this shell company report \_\_\_\_\_\_

For the transition period from \_\_\_\_\_\_ to \_\_\_\_\_

Commission file number: 001-09526

Commission file number: 001-31714

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# **BHP BILLITON LIMITED**

#### (ABN 49 004 028 077) (Exact name of Registrant as specified in its charter) VICTORIA, AUSTRALIA (Jurisdiction of incorporation or organisation) 180 LONSDALE STREET, MELBOURNE, VICTORIA 3000 AUSTRALIA

(Address of principal executive offices)

# **BHP BILLITON PLC**

(REG. NO. 3196209) (Exact name of Registrant as specified in its charter) ENGLAND AND WALES (Jurisdiction of incorporation or organisation) NEATHOUSE PLACE, VICTORIA, LONDON,

> UNITED KINGDOM (Address of principal executive offices)

#### Securities registered or to be registered pursuant to section 12(b) of the Act.

Name of each exchange on Name of each exchange on Title of each class which registered Title of each class which registered American Depositary New York Stock Exchange American Depositary New York Stock Exchange Shares\* Shares\* Ordinary Shares\*\* New York Stock Exchange Ordinary Shares, nominal value New York Stock Exchange US\$0.50 each\*\* Evidenced by American Depositary Receipts. Each American Depositary Receipt represents two ordinary shares of BHP Billiton Limited or BHP Billiton Plc, as the case may be. Not for trading, but only in connection with the listing of the applicable American Depositary Shares.

Securities registered or to be registered pursuant to Section 12(g) of the Act.

#### None

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act.

None

Indicate the number of outstanding shares of each of the issuer s classes of capital or common stock as of the close of the period covered by the annual report.

	BHP Billiton Limited	BHP Billiton Plc
Fully Paid Ordinary Shares	3,358,359,496	2,231,121,202
Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 40	05 of the Securities Act.	Yes x No "

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934. Yes "No x

Note Checking the box above will not relieve any registrant required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 from their obligations under those Sections.

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject

\*

\*\*

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to such filing requirements for the past 90 days. Yes x No "

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes "No"

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of accelerated filer and large accelerated filer in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer x Accelerated filer "Non-accelerated filer " Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP "International Financial Reporting Standards as issued by the International Accounting Standards Board x Other " If Other has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow. Item 17 "Item 18 "

If this is an annual report, indicate by checkmark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes "No x

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Form 20-F Cross Reference Table

Item Number	Description	<b>Report section reference</b>
1.	Identity of directors, senior management and advisors	Not applicable
2.	Offer statistics and expected timetable	Not applicable
3.	Key Information	
А	Selected financial information	1.4.1
В	Capitalisation and indebtedness	Not applicable
С	Reasons for the offer and use of proceeds	Not applicable
D	Risk factors	1.5
4.	Information on the company	
А	History and development of the company	2.2.1, 2.2.2 to 2.2.10, 2.3, 2.11 and 3
В	Business overview	1, 2.2 to 2.9 and 3.1
С	Organisational structure	2.11 and Note 27 to the Financial Statements
D	Property, plant and equipment	2.1, 2.2.2 to 2.2.10, 2.3, 2.8, 2.14 and 3.7.2
4A.	Unresolved staff comments	None
5.	Operating and financial review and prospects	
А	Operating results	1.5, 2.7, 3.4, 3.6
В	Liquidity and capital resources	3.7
С	Research and development, patents and licenses etc	2.5 and 2.6
D	Trend information	3.4.1 to 3.4.7
Е	Off-balance sheet arrangements	3.8 and Notes 23 and 24 to the Financial
	č	Statements
F	Tabular disclosure of contractual obligations	3.8 and Notes 23 and 24 to the Financial
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6.	Directors, senior management and employees	
А	Directors and senior management	4.1 and 4.2
В	Compensation	6
С	Board practices	4.1, 4.2, 5.1 to 5.12, 6.3, 6.4 and 6.6
D	Employees	2.10 and 7.8
Е	Share ownership	6, 7.8, 7.20 and 7.21
7.	Major shareholders and related party transactions	
А	Major shareholders	11.2
В	Related party transactions	3.9 and Note 33 to the Financial Statements
С	Interests of experts and counsel	Not applicable
8.	Financial Information	11
А	Consolidated statements and other financial information	8, 11.3 and F-1 to F-106
В	Significant changes	3.10
9.	The offer and listing	
А	Offer and listing details	11.4
В	Plan of distribution	Not applicable
С	Markets	11.1
D	Selling shareholders	Not applicable
Е	Dilution	Not applicable
F	Expenses of the issue	Not applicable

Item Number	Description	<b>Report section reference</b>
10.	Additional Information	
А	Share capital	Not applicable
В	Memorandum and articles of association	2.7.3 and 2.13
С	Material contracts	2.12
D	Exchange controls	2.7.3
Е	Taxation	11.5
F	Dividends and paying agents	Not applicable
G	Statement by experts	Not applicable
Н	Documents on display	2.13.14
Ι	Subsidiary information	3.9 and Note 27 to the Financial Statements
11.	Quantitative and qualitative disclosures about market risk	3.7.4 and Note 30 to the Financial Statements
12.	Description of securities other than equity securities	Not applicable
13.	Defaults, dividend arrearages and delinquencies	There have been no defaults, dividend
		arrearages or delinquencies
14.	Material modifications to the rights of security holders and use of	There have been no material modifications to
	proceeds	the rights of security holders and use of
		proceeds since our last Annual Report
15.	Controls and procedures	5.5.1 and 5.12
16.		
А	Audit committee financial expert	4.1 and 5.5.1
В	Code of ethics	5.8
С	Principal accountant fees and services	5.12.2 and Note 36 to the Financial
		Statements
D	Exemptions from the listing standards for audit committees	Not applicable
E	Purchases of equity securities by the issuer and affiliated purchasers	7.2
F	Change in Registrant s Certifying Accountant	Not applicable
G	Corporate Governance	5.10
17.	Financial statements	Not applicable as Item 18 complied with
18.	Financial statements	F-1 to F-106, Exhibit 15.1
19.	Exhibits	12

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# 1 Key information

# 1.1 Our business

We are the world s largest diversified natural resources company. Our corporate objective is to create long-term value for shareholders through the discovery, development and conversion of natural resources, and the provision of innovative customer and market-focused solutions.

We pursue this objective through our unchanged strategy of investing in tier one assets that are large, low-cost and long-life to provide a balanced portfolio of export-oriented commodities:

steelmaking products iron ore, metallurgical coal, manganese

non-ferrous products copper, aluminium, nickel, diamonds

energy products petroleum, liquefied natural gas (LNG), energy coal, uranium. We continue to invest in the future and have a deep inventory of growth assets.

Our operations and investments are designed to ensure the Group remains stable in the long term and responsive to market volatility in the short term.

The Group is headquartered in Melbourne, Australia, and consists of the BHP Billiton Limited Group and the BHP Billiton Plc Group as a combined enterprise, following the completion of the Dual Listed Company (DLC) merger in June 2001. BHP Billiton Limited and BHP Billiton Plc have each retained their separate corporate identities and maintained their separate stock exchange listings, but they are operated and managed as if they are a single unified economic entity, with their boards and senior executive management comprising the same people.

BHP Billiton Limited has a primary listing on the Australian Securities Exchange (ASX) in Australia. It has secondary listings on the Frankfurt Stock Exchange in Germany and the Swiss Stock Exchange in Switzerland and has notified its intention to delist from both these exchanges. We expect to complete these delistings in 2010. BHP Billiton Plc has a primary listing on the London Stock Exchange (LSE) in the UK and a secondary listing on the Johannesburg Stock Exchange in South Africa. In addition, BHP Billiton Limited American Depositary Receipts (ADRs) and BHP Billiton Plc ADRs trade on the New York Stock Exchange (NYSE) in the US.

As at 30 June 2009, we had a market capitalisation of approximately US\$144 billion. For the year ended 30 June 2009, we reported net operating cash flow of US\$18.9 billion, net profit attributable to shareholders of US\$5.9 billion and revenue of US\$50.2 billion. We have approximately 99,000 employees and contractors working in more than 100 operations in over 25 countries.

We operate nine businesses, called Customer Sector Groups (CSGs), which are aligned with the commodities we extract and market:

Petroleum

Aluminium

Base Metals

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Diamonds and Specialty Products

Stainless Steel Materials

Iron Ore

Manganese

Metallurgical Coal

Energy Coal

# 1.2 Chairman s Review

By any measure, this has been an extraordinary year.

The global financial crisis has created the worst business environment the world has faced in more than 60 years. World economic activity contracted dramatically and commodity prices fell sharply. Accompanying this, volatility has been high and should remain for the immediate future. While the global economy is showing signs of stabilising, the large developed economies are not expected to show real growth until at least the end of 2010.

BHP Billiton s strategy has served us well during these volatile times. Since the merger of BHP and Billiton in 2001, we have focused on a few key fundamentals. These include owning and operating large, low-cost, long-life tier one assets; a commitment to a solid A credit rating; a deep inventory of growth projects; and working hard to be leaders in safety, environmental management and community engagement.

While low commodity prices and less demand for our products led to a fall in profits, our resolute focus on our long-term strategy delivered record operating cash flow of almost US\$19 billion, profit from operations, excluding exceptional items, of US\$18.2 billion, and margins on this profit of more than 40 per cent. Dividends were increased by 17.1 per cent to 82 US cents per share. We have enviable balance sheet strength. At 30 June 2009, gearing was 12.1 per cent and we have an A credit rating with significant funding capacity.

Despite producing strong operating and financial performance during a challenging year, our safety performance was simply unacceptable. This year, we had seven fatalities. The death of a family member at work has a devastating and long-lasting impact not only on the immediate family, but also on a wide community of relatives, friends and work colleagues. The Board has reinforced its emphasis on management creating a workplace free of injury.

In environmental management, the immediate issue facing the world is climate change. BHP Billiton shares the view that mainstream science is correct in drawing attention to the high risks associated with unmitigated climate change. However, we also believe that the problem is solvable and strongly support a global regime that is endorsed by both developed and major developing countries and provides the clarity and stability necessary to allow investment in carbon abatement activities to occur. We are determined to play our part and see business leadership as part of our role in achieving low carbon growth. To this end, we support key initiatives like the establishment of binding commitments for all developed and major developing countries.

We remain committed to prudently investing for the future. This is reflected in the agreement we signed with Rio Tinto in June this year to create an iron ore production joint venture in Western Australia. This joint venture represents a significant, strategic investment for the Group that provides us with the opportunity to capture significant synergies that can only come through this unique partnership. The agreement is non-binding and pre-conditions for its formation include regulatory, relevant governmental and shareholder approvals from both Rio Tinto and BHP Billiton shareholders.

Our ability to fund opportunities like these and the Group s consistent, solid financial performance during this period is testament to the ability of Marius Kloppers and his team. Over the past five years, we have delivered Total Shareholder Returns<sup>(1)</sup> of 220 per cent, outperforming the FTSE 100, ASX 100 and our peers. There are very few companies in any sector with such solid financial and operating strength.

Clearly, as a Board, we have a responsibility to shareholders to ensure we attract, develop and retain the talented people we need to run our business. The way we reward and recognise those people is an important part of how we do this. Our reward and recognition arrangements are set out in the Remuneration Report. From your

<sup>&</sup>lt;sup>(1)</sup> Weighted three month average US\$ Total Shareholder Returns (TSR) of BHP Billiton Limited and BHP Billiton Plc. TSR reflects the changes in share price plus dividends over the period.

Board s point of view, the critical issue is that shareholders have the ability to fully understand remuneration arrangements, to monitor them and to express their opinion on their value. Aligning executive remuneration with shareholder value creation is fundamental.

Our program of Board renewal continued this year. David Jenkins, after nine years on the Board, will retire after the Annual General Meetings. David has made an outstanding contribution to the work of the Board; and on your behalf, I would like to thank David and wish him well for the future.

We also appointed Wayne Murdy as a non-executive Director. Wayne s experience will be invaluable to your Board given his background as Chairman and Chief Executive Officer of Newmont Mining Corporation and 30 years experience in the mining and petroleum industries.

We remain committed to achieving the highest level of governance and continue to believe that there is a fundamental link between high-quality governance and the creation of shareholder value. We also recognise that governance is not just a matter for the Board, but that a good governance culture must be fostered throughout the Group.

Undoubtedly, the past year has been difficult. The economic landscape has changed and organisations have had to adjust to meet these unprecedented economic challenges. In many sectors of the economy we have witnessed quite dramatic falls in demand, and there have been large cutbacks in production across the commodities sector. We were not immune from this. We reduced production levels from many of our operations in response to the lower global commodities demand and in some instances also made difficult decisions to indefinitely suspend or close operations.

Looking ahead, economies around the world are responding to government-driven economic stimulus packages, the impact of which is difficult to measure; and consequently, there remains a level of uncertainty about the rate of economic growth over the short term. Having said that, there is evidence in the US, UK, Europe and Australia of increasing stability in financial systems and economies.

China, which has been the major source of demand for commodities in 2009, is showing early signs of improvement, providing strong support for short-term economic growth.

Over the longer term, we believe that emerging economies such as China and India will contribute the majority of world economic growth as they continue to industrialise, which will see demand for commodities continue to grow.

BHP Billiton maintains its unique position in the resources industry. We are able to generate above average returns in this part of the cycle, continue to invest in growth and are well-placed to take advantage of any upturn.

Finally, this will be my last report to you as Chairman.

Jac Nasser will succeed me when I retire. It is your Directors view that the choice of the Chairman is the responsibility of the Board. This is why, over the past 18 months, the Board itself has conducted the succession process for the new Chairman and when the Board met, John Buchanan, the Senior Independent Director for BHP Billiton Plc, chaired the meetings. Jac has outstanding skills and experience and will be an excellent Chairman. To ensure an orderly transition, the Board has asked me to stand for re-election at the upcoming Annual General Meetings, although I will not serve a full term and expect to retire from the Board in early 2010.

I want to acknowledge and sincerely thank you, our shareholders, for your support over the 13 years I have been on the BHP Billiton Board and my 10 years as Chairman. It has always been my underpinning principle to respect shareholders as the owners of the Company, as it is to you that I am accountable for the governance and performance of BHP Billiton. It has been an outstanding highlight in my life and an extraordinary privilege to serve you as Chairman.

# 1.3 Chief Executive Officer s Report

The 2009 financial year was an interesting one as it was divided into distinct periods the first with rapid growth in demand for products at record prices, and the second in which a global de-stocking cycle, following the global financial crisis, resulted in diminished demand and lower prices.

With aggressive growth plans following the preceding year s record world economic growth in our industry, many of our peers and other companies were forced to make an about-turn in strategy in response to the global economic downturn. In many cases, long-term value was sacrificed as a result of short-term pressures.

While the shift in demand and prices also presented challenges for BHP Billiton, our long-standing strategy of focusing on a diversified portfolio of tier one, low-cost, long-life assets, allowed us to continue to focus on the long-term creation of value, in line with our corporate objective.

#### Safety

Our workforce contains many talented people who help make this Group what it is today: a premier global organisation. Given this, I am personally deeply saddened to report that this year seven deaths occurred at our operations. Any injury is unacceptable and these fatalities highlight the need to do more as an organisation to protect the health and safety of our people. To this end, we have undertaken a variety of measures, which have included reviews of our management procedures and safety systems.

Encouragingly, seven of our Customer Sector Groups reported improvements in Total Recordable Injury Frequency performance ranging from seven to 44 per cent. Twenty-four BHP Billiton sites completed 12 months of operations without a Lost Time Injury. In aggregate, this amounts to more than 23 million hours of work without a Lost Time Injury. Our challenge is to replicate this performance throughout our business and we must remain diligent in continuing our work towards zero workplace injuries.

#### Managing through the cycle

I have already stated that during the year, we stayed true to our strategy of focusing on long-term value creation. Operationally, however, we continued to seek ways that allow us to be responsive in the short term. For example, very early on in the global financial crisis and consistent with the way we have always managed our business, we reiterated our commitment to taking swift action in any operation that was cash negative and set to remain so, or for which we did not have sufficient customers for the particular product.

We acted quickly to curtail production across our metallurgical coal, manganese, nickel and iron ore pellet operations. Disappointingly, this slowdown in demand, coupled with the dramatic fall in nickel prices, led to the indefinite suspension of our Ravensthorpe operation in Western Australia. I can assure you that these decisions were carefully considered and that we are ever mindful of the effects on everyone involved.

While difficult decisions to reduce staff numbers were taken in some areas, we have continued to implement programs that work to attract and retain skilled people. For example, in May we announced the introduction of uniform, minimum paid parental leave benefits across our operations. The introduction of this initiative actively encourages broad inclusion in the workplace, which we believe will ultimately give us a strong competitive edge.

The strong cash flow from our existing portfolio along with low levels of financial gearing, enabled us to continue with our stated strategy of investing in our business throughout the cycle, with another four projects constituting US\$5.9 billion of investment being approved during the year. Together with previously approved projects it brings our pipeline of projects in execution to approximately US\$14 billion. We intend to invest approximately US\$10 billion in capital and exploration expenditure in FY2010.

Additionally, our strong cash flow and low gearing enabled us to contemplate other non-organic growth opportunities. In this regard, we are very pleased with the recent non-binding agreement with Rio Tinto to combine our iron ore businesses in Western Australia in a 50-50 owned production joint venture. This joint venture will see us invest a further US\$5.8 billion in this business beyond the already sanctioned projects.

## Looking ahead

The major economies are starting to rebuild their inventories in sequence, led by an early recovery in China; and we may see a more predictable demand scenario for our products in the coming financial year. However, we do not expect a return to the same buoyant demand conditions that prevailed before the global financial crisis, or a return to record global growth rates within our forecasting horizon.

Given that China represents approximately 20 per cent of BHP Billiton s revenue, and up to 50 per cent of the world s raw material consumption, it merits additional comment. China s reduction of lending controls in November 2008 has facilitated an increase in real estate and mortgage lending, which in turn has supported an increase in construction and increased demand for products we supply. Also, the infrastructure stimulus measures announced to improve China s rail, road and air transport links will, in due course, create a need for raw materials. Therefore, we expect the resource intensive nature of Chinese growth to substantially drive global raw materials consumption. The investment plans that I detailed earlier will continue to supply product to meet this demand.

On a final note, I wish to thank all of BHP Billiton s employees and contractors for their continued commitment, which has enabled the Group to deliver value in very challenging times.

In summary, our Group remains in an enviable position in its industry. Our low gearing, strong cash flow and portfolio of investment options positions us well to create value from the long-term demand for our commodities.

# **1.4** Selected key measures

#### 1.4.1 Financial information

Our selected financial information reflects the operations of the BHP Billiton Group, and should be read in conjunction with the 2009 financial statements, together with the accompanying notes.

We prepare our financial statements in accordance with International Financial Reporting Standards (IFRS), as issued by the International Accounting Standards Board, and as outlined in note 1 Accounting policies to the financial statements in this Annual Report. We publish our consolidated financial statements in US dollars.

	2009	2008	2007 <sup>(a)</sup>	2006 (a)	2005 (a)
Consolidated Income Statement (US\$M except per share data)					
Revenue	50,211	59,473	47,473	39,099	31,150
Profit from operations	12,160	24,145	19,724	15,716	9,810
Profit attributable to members of BHP Billiton Group	5,877	15,390	13,416	10,450	6,396
Dividends per ordinary share paid during the period (US cents)	82.0	56.0	38.5	32.0	23.0
Dividends per ordinary share declared in respect of the period (US					
cents)	82.0	70.0	47.0	36.0	28.0
Earnings per ordinary share (basic) (US cents) <sup>(b)</sup>	105.6	275.3	229.5	173.2	104.4
Earnings per ordinary share (diluted) (US cents) <sup>(b)</sup>	105.4	274.8	228.9	172.4	104.0
Number of ordinary shares (millions)					
At period end	5,589	5,589	5,724	5,964	6,056
Weighted average	5,565	5,590	5,846	6,035	6,124
Diluted	5,598	5,605	5,866	6,066	6,156
Consolidated Balance Sheet (US\$M)					
Total assets	78,770	76,008	61,404	51,343	45,077
Share capital	2,861	2,861	2,922	3,242	3,363
Total equity attributable to members of BHP Billiton Group	39,954	38,335	29,667	24,218	17,575
Other financial information					
Underlying EBIT (US\$M) <sup>(c)</sup>	18,214	24,282	20,067	15,277	9,921
Net operating cash flow (US\$M)	18,863	17,817	15,957	11,325	9,117
Gearing <sup>(d)</sup>	12.1%	17.8%	25.0%	27.2%	35.8%

- (a) On 1 July 2007, the Group adopted the policy of recognising its proportionate interest in the assets, liabilities, revenues and expenses of jointly controlled entities within each applicable line item of the financial statements. All such interests were previously recognised using the equity method. Comparative figures for the years 2007 to 2005 that were affected by the policy change have been restated. Total assets for 2006 and 2005, Profit from operations for 2005 and Net operating cash flow for 2005 have been restated but are unaudited.
- (b) The calculation of the number of ordinary shares used in the computation of basic earnings per share is the aggregate of the weighted average number of ordinary shares outstanding during the period of BHP Billiton Limited and BHP Billiton Plc after deduction of the number of shares held by the Billiton share repurchase scheme and the Billiton Employee Share Ownership Plan Trust and the BHP Bonus Equity Plan Trust and adjusting for the BHP Billiton Limited bonus share issue. Included in the calculation of fully diluted earnings per share are shares contingently issuable under Employee Share Ownership Plans.
- (c) Underlying EBIT is profit from operations, excluding the effect of exceptional items. See section 3.6.1 for more information about this measure, including a reconciliation to profit from operations.

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(d) See section 10 for glossary definitions.

## 1.4.2 Operational information

Our Board and Group Management Committee monitor a range of financial and operational performance indicators, reported on a monthly basis, to measure performance over time. We also monitor a comprehensive set of health, safety, environment and community contribution indicators.

	2009	2008	2007
People and Licence to operate Health, safety, environment and community			
Total Recordable Injury Frequency (TRIF) <sup>(a)</sup>	5.6	5.9	7.4
Community investment (US\$M) <sup>(a)</sup>	<b>197.8</b> <sup>(b)</sup>	141.0	103.4
Production			
Total petroleum products (million barrels of oil equivalent)	137.19	129.50	116.19
Alumina ( 000 tonnes)	4,396	4,554	4,460
Aluminium ( 000 tonnes)	1,233	1,298	1,340
Copper cathode and concentrate ( 000 tonnes)	1,207.1	1,375.5	1,250.1
Nickel ( 000 tonnes)	173.1	167.9	187.2
Iron ore ( 000 tonnes)	114,415	112,260	99,424
Metallurgical coal (000 tonnes)	36,416	35,193	38,429
Energy coal ( 000 tonnes)	68,206	80,868	87,025

- (a) See section 10 for glossary definitions.
- (b) In FY2009 we established a new UK-based charitable company, BHP Billiton Sustainable Communities, registered with the UK Charities Commission for the purpose of funding community investment globally. In FY2009 our voluntary community contribution included the provision of US\$60 million to BHP Billiton Sustainable Communities.

# 1.5 Risk factors

We believe that, because of the international scope of our operations and the industries in which we are engaged, there are numerous factors which may have an effect on our results and operations. The following describes the material risks that could affect the BHP Billiton Group.

#### Fluctuations in commodity prices and impacts of the global financial crisis may negatively impact our results

The prices we obtain for our oil, gas, minerals and other commodities are determined by, or linked to, prices in world markets, which have historically been subject to substantial variations. The Group s usual policy is to sell its products at the prevailing market prices. The diversity provided by the Group s broad portfolio of commodities may not fully insulate the effects of price changes. Fluctuations in commodity prices can occur due to sustained price shifts reflecting underlying global economic and geopolitical factors, industry demand and supply balances, product substitution and national tariffs. The global financial crisis has severely impacted commodity markets in terms of lower prices, reduced demand and increased price volatility. The ongoing uncertainty and impact on global economic growth, particularly in the developed economies, may impact future demand and prices for commodities. The influence of hedge and other financial investment funds participating in commodity markets has increased in recent years contributing to higher levels of price volatility. The impact of potential longer-term sustained price shifts and shorter-term price volatility creates the risk that our financial and operating results and asset values will be materially and adversely affected by unforeseen declines in the prevailing prices of our products.

We seek to maintain a solid A credit rating as part of our strategy. Notwithstanding our financial and capital management programs the ongoing effects of the global financial crisis may impact our future cash flows and credit rating.

#### Our profits may be negatively affected by currency exchange rate fluctuations

Our assets, earnings and cash flows are influenced by a wide variety of currencies due to the geographic diversity of the countries in which we operate. Fluctuations in the exchange rates of those currencies may have a significant impact on our financial results. The US dollar is the currency in which the majority of our sales are denominated. Operating costs are influenced by the currencies of those countries where our mines and processing plants are located and also by those currencies in which the costs of imported equipment and services are determined. The Australian dollar, South African rand, Chilean peso, Brazilian real and US dollar are the most important currencies influencing our operating costs. Given the dominant role of the US currency in our affairs, the US dollar is the currency in which we present financial performance. It is also the natural currency for borrowing and holding surplus cash. We do not generally believe that active currency hedging provides long-term benefits to our shareholders. We may consider currency protection measures appropriate in specific commercial circumstances, subject to strict limits established by our Board. Therefore, in any particular year, currency fluctuations may have a significant impact on our financial results.

# Failure to discover new reserves, maintain or enhance existing reserves or develop new operations could negatively affect our future results and financial condition

The increased demand for our products and increased production rates from our operations in recent years has resulted in existing reserves being depleted at an accelerated rate. Because our revenues and profits are related to our oil and gas and minerals operations, our results and financial conditions are directly related to the success of our exploration and acquisition efforts, and our ability to replace existing reserves. The depletion of reserves has necessitated increased exploration adjacent to established operations and development of new operations in less-developed countries. Additionally these activities may increase land tenure, infrastructure and related political risks. A failure in our ability to discover new reserves, enhance existing reserves or develop new operations in sufficient quantities to maintain or grow the current level of our reserves could negatively affect our results, financial condition and prospects.

There are numerous uncertainties inherent in estimating ore and oil and gas reserves, and geological, technical and economic assumptions that are valid at the time of estimation may change significantly when new information becomes available. The impacts of the global financial crisis may impact economic assumptions related to reserve recovery and require reserve restatements. Reserve restatements could negatively affect our reputation, results, financial condition and prospects.

#### Reduction in Chinese demand may negatively impact our results

The Chinese market has become a significant source of global demand for commodities. In calendar year 2008, China represented 49 per cent of global seaborne iron ore demand, 28 per cent of copper demand, 28 per cent of nickel demand and 18 per cent of energy demand. China s demand for these commodities has been driving global materials demand over the past decade.

The strong economic growth and infrastructure development in China of recent years has been tempered by the global financial crisis. Sales into China generated US\$9.9 billion (FY2008: US\$11.7 billion), or 19.7 per cent (FY2008: 19.6 per cent), of our revenue in the year ended 30 June 2009. A continued slowing in China s economic growth could result in lower prices and demand for our products and therefore reduce our revenues.

In response to its increased demand for commodities, China is increasingly seeking strategic self-sufficiency in key commodities, including investments in existing businesses or new developments in other countries. These investments may adversely impact future commodity demand and supply balances and prices.

#### Actions by governments or political events in the countries in which we operate could have a negative impact on our business

We have operations in many countries around the globe, some of which have varying degrees of political and commercial stability. We operate in emerging markets, which may involve additional risks that could have

an adverse impact upon the profitability of an operation. These risks could include terrorism, civil unrest, nationalisation, renegotiation or nullification of existing contracts, leases, permits or other agreements, and changes in laws and policy, as well as other unforeseeable risks. Risks relating to bribery and corruption may be prevalent in some of the countries in which we operate. If one or more of these risks occurs at one of our major projects, it could have a negative effect on the operations in those countries as well as the Group s overall operating results and financial condition.

Our business could be adversely affected by new government regulation, such as controls on imports, exports and prices, new forms or rates of taxation and royalties. Increasing requirements relating to regulatory, environmental and social approvals can potentially result in significant delays in construction and may adversely impact upon the economics of new mining and oil and gas projects, the expansion of existing operations and results of our operations.

Infrastructure such as rail, ports, power and water, is critical to our business operations. We have operations or potential development projects in countries where government provided infrastructure or regulatory regimes for access to infrastructure, including our own privately operated infrastructure, may be inadequate or uncertain. These may adversely impact the efficient operations and expansion of our businesses.

In South Africa, the Mineral and Petroleum Resources Development Act (2002) (MPRDA) came into effect on 1 May 2004. The law provides for the conversion of existing mining rights (so called Old Order Rights ) to rights under the new regime ( New Order Rights ) subject to certain undertakings to be made by the company applying for such conversion. The Mining Charter requires that mining companies achieve 15 per cent ownership by historically disadvantaged South Africans of South African mining assets by 1 May 2009 and 26 per cent ownership by 1 May 2014. If we are unable to convert our South African mining rights in accordance with the MPRDA and the Mining Charter, we could lose some of those rights. Where new order mining rights are obtained under the MPRDA, these rights may not be equivalent to the old order mining rights in terms of duration, renewal, rights and obligations.

We operate in several countries where ownership of land is uncertain and where disputes may arise in relation to ownership. In Australia, the Native Title Act (1993) provides for the establishment and recognition of native title under certain circumstances. In South Africa, the Extension of Security of Tenure Act (1997) and the Restitution of Land Rights Act (1994) provide for various landholding rights. Such legislation could negatively affect new or existing projects.

#### We may not be able to successfully integrate our acquired businesses

We have grown our business in part through acquisitions. We expect that some of our future growth will stem from acquisitions. There are numerous risks encountered in business combinations. These include adverse regulatory conditions and obligations, commercial objectives not achieved due to minority interests, unforeseen liabilities arising from the acquired businesses, retention of key staff, anticipated synergies and cost savings being delayed or not being achieved, uncertainty in sales proceeds from planned divestments, and planned expansion projects are delayed or higher cost than anticipated. These factors could negatively affect our financial condition and results of operations.

#### We may not recover our investments in mining and oil and gas projects

Our operations may be impacted by changed market or industry structures, commodity prices, technical operating difficulties, inability to recover our mineral, oil or gas reserves and increased operating cost levels. These may impact the ability for assets to recover their historical investment and may require financial write-downs adversely impacting our financial results.

#### Our non-controlled assets may not comply with our standards

Some of our assets are controlled and managed by joint venture partners or by other companies. Some joint venture partners may have divergent business objectives which may impact business and financial results. Management of our non-controlled assets may not comply with our management and operating standards, controls and procedures (including health, safety, environment). Failure to adopt equivalent standards, controls and procedures and reduced production and adversely impact our results and reputation.

#### Operating cost pressures and shortages could negatively impact our operating margins and expansion plans

The strong commodity cycle of past years led to increasing cost pressures across the resources industry and shortages in skilled personnel, contractors, materials and supplies that are required as critical inputs to our existing operations and planned developments. Recent rapid declines in commodity prices without commensurate cost declines have resulted in operating margins being reduced. Notwithstanding our efforts to reduce costs and a number of key cost inputs being commodity price-linked, the inability to reduce costs and a timing lag may impact our operating margins for an extended period.

Changing industrial relations legislation such as the Australian Fair Work Act 2009 may impact workforce flexibility, productivity and costs. Labour unions may seek to pursue claims under the new framework. Industrial action may impact our operations resulting in lost production and revenues.

A number of our operations are energy or water intensive and, as a result, the Group s costs and earnings could be adversely affected by rising costs or by supply interruptions. These could include the unavailability of energy, fuel or water due to a variety of reasons, including fluctuations in climate, significant increase in costs, inadequate infrastructure capacity, interruptions in supply due to equipment failure or other causes and the inability to extend supply contracts on economical terms.

These factors have led, and could continue to lead, to increased operating costs at existing operations.

#### Increased costs and schedule delays may impact our development projects

Although we devote significant time and resources to our project planning, approval and review process, we may underestimate the cost or time required to complete a project. In addition, we may fail to manage projects as effectively as we anticipate, and unforeseen challenges may emerge. Any of these may result in increased capital costs and schedule delays at our development projects impacting anticipated financial returns.

#### Health, safety, environmental and community exposures and related regulations may impact our operations and reputation negatively

The nature of the industries in which we operate means that our activities are highly regulated by health, safety and environmental laws. As regulatory standards and expectations are constantly developing, we may be exposed to increased litigation, compliance costs and unforeseen environmental remediation expenses.

Potential health, safety, environmental and community events that may materially impact our operations include rockfall incidents in underground mining operations, aircraft incidents, light vehicle incidents, explosions or gas leaks, incidents involving mobile equipment, uncontrolled tailings breaches, escape of polluting substances, community protests or civil unrest.

Longer-term health impacts may arise due to unanticipated workplace exposures by employees or site contractors. These effects may create future financial compensation obligations.

We provide for operational closure and site remediation. We have closure plans for all of our operating and closed facilities. Changes in regulatory or community expectations may result in the relevant plans not being adequate. This may impact financial provisioning and costs at the affected operations.

We contribute to the communities in which we operate by providing skilled employment opportunities, salaries and wages, taxes and royalties and community development programs. Notwithstanding these actions, local communities may become dissatisfied with the impact of our operations, potentially affecting costs and production, and in extreme cases viability.

Legislation requiring manufacturers, importers and downstream users of chemical substances, including metals and minerals, to establish that the substances can be used without negatively affecting health or the environment may impact our operations and markets. These potential compliance costs, litigation expenses, regulatory delays, remediation expenses and operational costs could negatively affect our financial results.

We may continue to be exposed to increased operational costs due to the costs and lost time associated with the HIV/AIDS and malaria infection rate mainly within our African workforce. Because we operate globally, we may be affected by potential influenza outbreaks, such as A(H1N1) and avian flu, in any of the regions in which we operate.

Despite our best efforts and best intentions, there remains a risk that health, safety, environmental and/or community incidents or accidents may occur that may negatively impact our reputation or licence to operate.

#### Unexpected natural and operational catastrophes may impact our operations

We operate extractive, processing and logistical operations in many geographic locations both onshore and offshore. Our operational processes and geographic locations may be subject to operational accidents such as port and shipping incidents, fire and explosion, pitwall failures, loss of power supply, railroad incidents and mechanical failures. Our operations may also be subject to unexpected natural catastrophes such as earthquakes, flood, hurricanes and tsunamis. Based on our claims, insurance premiums and loss experience, our risk management approach changed during the year to maintaining self-insurance for property damage and business interruption related risk exposures. Existing business continuity plans may not provide protection for all of the costs that may arise from such events. The impact of these events could lead to disruptions in production and loss of facilities more than offsetting premiums saved and adversely affecting our financial results.

#### Climate change and greenhouse effects may adversely impact our operations and markets

We are a major producer of carbon-related products such as energy and metallurgical coal, oil, gas, and liquefied natural gas. Carbon based energy is also a significant input in a number of the Group s mining and processing operations.

A number of governments or governmental bodies have introduced or are contemplating regulatory change in response to the impacts of climate change. The December 1997 Kyoto Protocol established a set of greenhouse gas emission targets for developed countries that have ratified the Protocol. The European Union Emissions Trading System (EU ETS), which came into effect on 1 January 2005, has had an impact on greenhouse gas and energy-intensive businesses based in the EU. Our Petroleum assets in the UK are currently subject to the EU ETS, as are our EU based customers. Elsewhere, there is current and emerging climate change regulation that will affect energy prices, demand and margins for carbon intensive products. The Australian Government s plan of action on climate change includes the introduction of a national emissions trading scheme by 2011 and a mandatory renewable energy target of 20 per cent by the year 2020. From a medium- to long-term perspective, we are likely to see some changes in the cost position of our greenhouse-gas-intensive assets and energy-intensive assets as a result of regulatory impacts in the countries in which we operate. These regulatory mechanisms may impact our operations directly or indirectly via our suppliers and customers. Inconsistency of

regulations particularly between developed and developing countries may also change the competitive position of some of our assets. Assessments of the potential impact of future climate change regulation are uncertain given the wide scope of potential regulatory change in the many countries in which we operate.

The physical impacts of climate change on our operations are highly uncertain and will be particular to the geographic circumstances. These may include changes in rainfall patterns, water shortages, rising sea levels, increased storm intensities and higher average temperature levels. These effects may adversely impact the cost, production and financial performance of our operations.

#### Our human resource talent pool may not be adequate to support our growth

Our existing operations and our pipeline of development projects, when activated, require highly skilled staff with relevant industry and technical experience. The inability of the Group and industry to attract and retain such people may adversely impact our ability to adequately meet demand in projects and fill roles in existing operations. Skills shortages in engineering, technical service, construction and maintenance contractors may impact activities. These shortages may adversely impact the cost and schedule of development projects and the cost and efficiency of existing operations.

#### Breaches in our information technology (IT) security processes may adversely impact the conduct of our business activities

We maintain global IT and communication networks and applications to support our business activities. IT security processes protecting these systems are in place and subject to assessment as part of the review of internal control over financial reporting. These processes may not prevent future malicious action or fraud by individuals or groups, resulting in the corruption of operating systems, theft of commercially sensitive data, misappropriation of funds and disruptions to our business operations.

#### A breach in our governance processes may lead to regulatory penalties and loss of reputation

We operate in a global environment straddling multiple jurisdictions and complex regulatory frameworks. Our governance and compliance processes, which include the review of control over financial reporting, may not prevent future potential breaches of law, accounting or governance practice. Our *Code of Business Conduct* and anti-trust standards may not prevent instances of fraudulent behaviour and dishonesty nor guarantee compliance with legal or regulatory requirements. This may lead to regulatory fines, litigation, loss of operating licences or loss of reputation.

# **1.6** Forward looking statements

This Annual Report contains forward looking statements, including statements regarding:

estimated reserves

trends in commodity prices

demand for commodities

plans, strategies and objectives of management

closure or divestment of certain operations or facilities (including associated costs)

anticipated production or construction commencement dates

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expected costs or production output

anticipated productive lives of projects, mines and facilities

provisions and contingent liabilities.

Forward looking statements can be identified by the use of terminology such as intend, aim, project, anticipate, estimate, plan, believe may, should, will, continue or similar words. These statements discuss future expectations concerning the results of operations or financial condition, or provide other forward looking statements.

These forward looking statements are not guarantees or predictions of future performance, and involve known and unknown risks, uncertainties and other factors, many of which are beyond our control, and which may cause actual results to differ materially from those expressed in the statements contained in this Annual Report. Readers are cautioned not to put undue reliance on forward looking statements.

For example, our future revenues from our operations, projects or mines described in this Annual Report will be based, in part, upon the market price of the minerals, metals or petroleum produced, which may vary significantly from current levels. These variations, if materially adverse, may affect the timing or the feasibility of the development of a particular project or the expansion of certain facilities or mines.

Other factors that may affect the actual construction or production commencement dates, costs or production output and anticipated lives of operations, mines or facilities include our ability to profitably produce and transport the minerals, petroleum and/or metals extracted to applicable markets; the impact of foreign currency exchange rates on the market prices of the minerals, petroleum or metals we produce; activities of government authorities in some of the countries where we are exploring or developing these projects, facilities or mines, including increases in taxes, changes in environmental and other regulations and political uncertainty; and other factors identified in the description of the risk factors above.

We cannot assure you that our estimated economically recoverable reserve figures, closure or divestment of such operations or facilities, including associated costs, actual production or commencement dates, cost or production output or anticipated lives of the projects, mines and facilities discussed in this Annual Report, will not differ materially from the statements contained in this Annual Report.

Except as required by applicable regulations or by law, the Group does not undertake any obligation to publicly update or review any forward looking statements, whether as a result of new information or future events.

# 2 Information on the Company

# 2.1 BHP Billiton locations

We extract and process minerals, oil and gas from our production operations located primarily in Australia, the Americas and southern Africa. We sell our product globally with our marketing activities centralised in Singapore, The Hague and Antwerp.

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# Petroleum

Ref	Country	Site/Asset	Description	Ownership
1	Algeria	Ohanet	Onshore wet gas development	45%
2	Algeria	ROD	Onshore oil development, comprising development and production of six oil fields	45%
3	Australia	Bass Strait	Production of oil, condensate, LPG, natural gas and ethane located in the Gippsland Basin, offshore southern Australia	50%
4	Australia	Minerva	Operator of offshore gas field development in the Otway Basin of Victoria	90%
5	Australia	North West Shelf	One of Australia s largest resource projects, producing liquids, LNG and domestic gas located offshore northwestern Australia	8.33-16.67%
6	Australia	Stybarrow/	Operator of Stybarrow oil development and Griffin oil and gas development located offshore Western Australia	45-50%
		Griffin		
7	Pakistan	Zamzama	Operator of onshore gas development in Sindh province	38.5%
8	Trinidad & Tobago	Greater Angostura	Operator of oil and gas field located offshore east Trinidad	45%
9	UK	Bruce/Keith	Oil and gas production in the UK North Sea	16-31.83%
10	UK	Liverpool Bay	Operator of oil and gas developments in the Irish Sea	46.1%
11	US	Gulf of Mexico	Interests in several producing assets, including deepwater oil and gas production at:	
			Atlantis	44%
			Shenzi/Genghis Khan	44%
			Mad Dog	23.9%
			Neptune	35%
			Additional other interests in producing assets and a significant exploration acreage position	4.95-100%

#### Aluminium

Ref	Country	Site/Asset	Description	Ownership
12	Australia	Boddington/Worsley	Integrated bauxite mine and alumina refinery in Western Australia	86%
13	Brazil	Alumar	Integrated alumina refinery, aluminium smelter and port facilities in Maranhão province	36-40%
14	Brazil	MRN	Bauxite mine in Pará province	14.8%
15	Guinea	Guinea Alumina	Integrated bauxite mine and alumina refiner (currently undertaking feasibility study)	33.3%
		Project		
16	Mozambique	Mozal	Aluminium smelter near Maputo	47.1%
17	South Africa	Hillside/	Two aluminium smelters at Richards Bay	100%
		Bayside		
18	Suriname	Paranam	Bauxite mines and alumina refinery *	45%

\* Asset sale completed 31 July 2009

# **Base Metals**

Ref	Country	Site/Asset	Description	Ownership
19	Australia	Cannington	Silver, lead and zinc mine in northwest Queensland	100%
20	Australia	Olympic Dam	Underground copper, uranium, gold and silver mine in South Australia	100%
21	Chile	Cerro Colorado	Open-cut mine producing copper cathode in Atacama Desert, northern Chile	100%
22	Chile	Escondida	Copper mines in Atacama Desert, northern Chile	57.5%
23	Chile	Spence	Open-cut mine producing copper cathode in Atacama Desert, northern Chile	100%
24	Peru	Antamina	Copper and zinc mine located in the Andes, north-central Peru	33.75%
25	US	Pinto Valley	Copper mine located in the state of Arizona	100%

**Diamonds and Specialty Products** 

Ref	Country	Site/Asset	Description	Ownership
26	Canada	EKATI	Diamond mine in Northwest Territories	80%
27	Canada	Potash	Greenfield potash projects near Saskatoon, Saskatchewan	100%
28	South Africa	Richards Bay	Integrated titanium smelter and mineral sands mine	50%
		Minerals		

#### **Stainless Steel Materials**

Ref	Country	Site/Asset	Description	Ownership
29	Australia	Nickel West	Nickel assets including Mt Keith, Leinster and Cliffs operations, Kambalda nickel	100%
			concentrator, Kalgoorlie nickel smelter, Kwinana nickel refinery, and	
			Ravensthorpe nickel mine and processing facility	
30	Australia	Yabulu Refinery	Laterite nickel and cobalt processing plants northwest of Townsville *	100%
31	Colombia	Cerro Matoso	Integrated ferronickel mining and smelting complex in northern Colombia	99.94%

\* Asset sale completed 31 July 2009

# Iron Ore

Ref	Country	Site/Asset	Description	Ownership
32	Australia	Western Australia	Integrated mine, rail and port operations in the Pilbara	85-100%
22	ו' ת	Iron Ore		500
33	Brazil	Samarco	Brazil	50%

# Manganese

Ref	Country	Site/Asset	Description	Ownership
34	Australia	GEMCO	Producer of manganese ore in the Northern Territory	60%
35	Australia	TEMCO	Producer of manganese alloys in Tasmania	60%
36	South Africa	Samancor	Integrated producer of manganese ore (Hotazel Manganese Mines), alloy	60%
		Manganese	(Metalloys) and manganese metal (Manganese Metal Company)	
Meta	llurgical Coal			

Metallurgical Coa
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Ref	Country	Site/Asset	Description	Ownership
37	Australia	Illawarra Coal	Three underground coal mines in southern New South Wales with access to rail and port facilities	100%
38	Australia	Queensland Coal	Integrated mine, rail and port operations, including a loading terminal at Hay Point, in the Bowen Basin, central Queensland	50-80%
Ener	gy Coal			

Ref	Country	Site/Asset	Description	Ownership
39	Australia	Hunter Valley	Mt Arthur Coal open-cut mine in Hunter Valley, New South Wales	100%
		Energy Coal		
40	Colombia	Cerrejón	Export coal mine with integrated rail and port facilities in La Guajira province	33.3%
41	South Africa	Energy Coal	Three energy coal mines in Witbank region of Mpumalanga province	84-100%
		South Africa		
42	US	New Mexico	Two mines in New Mexico supplying energy coal to adjacent power stations	100%
		Coal		

# Offices

<b>Ref</b> 43 44 45	<b>Country</b> Australia Australia Australia	Location Adelaide l Brisbane ¿ l Melbourne ¿ l	<b>Ref</b> 57 58 59	Country Indonesia Japan Netherlands	<b>Location</b> Jakarta l Tokyo l The Hague l
		(Global Headquarters)			
46	Australia	Newcastle 1	60	New Caledonia	Noumea l
47	Australia	Perth ¿ l p	61	Philippines	Manila l
48	Australia	Sydney ¿	62	Russia	Moscow p
49	Belgium	Antwerp l	63	Singapore	Singapore l p
50	Brazil	Rio de Janeiro l	64	South Africa	Johannesburg ¿ l p
51	Canada	Vancouver ¿	65	South Africa	Richards Bay l
52	Chile	Santiago ¿ l p	66	South Korea	Seoul l
53	China	Shanghai l	67	Switzerland	Baar l
54	Colombia	Cartagena l	68	UK	London ¿
55	Gabon	Libreville p	69	US	Houston ¿ l
56	India	New Delhi l	70	US	Pittsburgh l

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- ذ Corporate/Business Centres
- 1 Marketing Offices
- p Minerals Exploration Offices

# 2.2 Business overview

## 2.2.1 History and development

Since 29 June 2001, we have operated under a Dual Listed Company (DLC) structure. Under the DLC structure, the two parent companies, BHP Billiton Limited (formerly BHP Limited and before that The Broken Hill Proprietary Company Limited) and BHP Billiton Plc (formerly Billiton Plc) operate as a single economic entity, run by a unified Board and management team. More details of the DLC structure are located under section 2.11 of this Report.

BHP Billiton Limited was incorporated in 1885 and is registered in Australia with ABN 49 004 028 077. BHP Billiton Plc was incorporated in 1996 and is registered in England and Wales with registration number 3196209. Successive predecessor entities to BHP Billiton Plc have operated since 1860.

The registered office of BHP Billiton Limited is 180 Lonsdale Street, Melbourne, Victoria 3000, Australia, and its telephone number is 1300 55 47 57 (within Australia) or +61 3 9609 3333 (outside Australia). The registered office of BHP Billiton Plc is Neathouse Place, London SW1V 1BH, UK, and its telephone number is +44 20 7802 4000.

## 2.2.2 Petroleum Customer Sector Group

Our Petroleum CSG is a global oil and gas business employing more than 1,500 people worldwide and headquartered in Houston, Texas. We have producing assets in six countries and exploration opportunities in a further six countries.

Our financial strength allows us to reinvest in our long-term growth through exploration even through the most challenging of economic times. During FY2009, we have captured new exploration interests in countries such as India, supplemented our existing portfolio in Australia and the Gulf of Mexico, and executed seismic programs in countries such as Malaysia. BHP Billiton Petroleum continues to build its capability as an operator of some of the world s largest and technically challenging projects. We have delivered the Shenzi deepwater, tension-leg platform ahead of schedule and within budget.

We continue to deliver production growth through delivery of new projects and ongoing focus on driving base performance. During FY2009, first production was achieved from five projects Neptune, Shenzi and Atlantis North (all US) and North West Shelf Train 5 and Angel (both Australia). We have realised annual production volumes of 137.2 million barrels of oil equivalent in FY2009. This represents an increase of 6 per cent over the previous financial year.

We sell our crude oil production to refiners around the world at market prices. Gas is generally marketed under long-term domestic contracts and we export LNG under long-term contracts. Almost three-quarters of our contracted LNG sales volumes are subject to contracts that contain provisions allowing prices to be reset within the next four years. However, more than a quarter of our currently contracted volumes are subject to long-term fixed-price contracts, some of which were priced in a lower price environment.

Our production assets are as follows:

#### **Bass Strait**

Together with our 50-50 joint venture partner, Esso Australia, a subsidiary of ExxonMobil, we have been producing oil and gas from Bass Strait, off the south-eastern coast of the Australian mainland, for 40 years, having participated in the original discovery of hydrocarbons there in 1965. We dispatch the majority of our Bass Strait crude oil and condensate production to refineries along the east coast of Australia. Gas is piped ashore to our Longford processing facility, from where we sell our production to domestic distributors under contracts with periodic price reviews.

#### North West Shelf

We are a joint venture participant in the North West Shelf Project in Western Australia. The North West Shelf Project was developed in phases: the domestic gas phase, which supplies gas to the Western Australian domestic market mainly under long-term contracts, and a series of LNG expansion phases, which supply LNG to buyers in Japan, Korea and China under a series of long-term contracts. We also produce LPG and condensate.

We are also a joint venture participant in four nearby oil fields. Both the North West Shelf gas and oil ventures are operated by Woodside Petroleum Ltd.

#### **Gulf of Mexico**

Our production in the Gulf of Mexico has continued to expand, with the Neptune and Shenzi projects coming on line in FY2009. We operate three fields in the Gulf of Mexico (Neptune, Shenzi/Genghis Khan and consolidated operations in the West Cameron area), and hold non-operating minority interests in a further three fields (Atlantis, Mad Dog and Genesis). We also own 25 per cent and 22 per cent, respectively, of the companies that own and operate the Caesar oil pipeline and the Cleopatra gas pipeline which transport oil and gas from the Green Canyon area, where a number of our fields are located, to connecting pipelines that transport product to the mainland. We deliver our oil production to refineries along the Gulf Coast of the United States.

In early September 2008, the Mad Dog facility suffered damage from Hurricane Ike, including the loss of a portion of the drilling derrick, which sat atop the spar facility. Production from the facility resumed in late October 2008, and engineering studies to review replacement options for the lost drilling equipment are currently being conducted by the operator.

#### Zamzama

We hold a 38.5 per cent working interest in and operate the Zamzama gas project in Sindh province of Pakistan. The existing capacity of Zamzama is 500 million cubic feet of gas per day and 3,350 barrels of condensate per day. Both gas and condensate are sold domestically.

#### Liverpool Bay and Bruce/Keith

The Liverpool Bay integrated development consists of six offshore gas and oil fields in the Irish Sea, the Point of Ayr onshore processing plant in North Wales, and associated infrastructure. We deliver all of the Liverpool Bay gas by pipeline to E.ON s Connah s Quay power station. We own 46 per cent of and operate Liverpool Bay. We also hold a 16 per cent non-operating interest in the Bruce oil and gas field in the North Sea and operate the Keith field, a subsea tie-back, which is processed via the Bruce platform facilities.

#### Algeria

Our Algerian assets consist of our effective 45 per cent interest in the Ohanet wet gas development and our 45 per cent interest in ROD, the production sharing contract which consists of six satellite oil fields that pump oil back to a dedicated processing train.

#### Stybarrow

We are the operator of the Stybarrow project (50 per cent our share), a nine well subsea development in approximately 825 metres of water approximately 65 kilometres offshore north Western Australia. The project uses a floating production storage and offtake facility with capacity of approximately 80 thousand barrels of oil per day.

#### **Other Australia**

We are the operator of the Griffin project (45 per cent our share) where oil and gas are produced via the Griffin Venture, a floating production storage and offtake facility. We pipe natural gas to shore, where it is delivered directly into a pipeline and sold domestically. The Griffin Venture will cease production in October 2009 as the facility reaches the end of its useful life. We also operate the Minerva gas field located offshore Victoria in which we hold a 90 per cent interest.

#### **Trinidad and Tobago**

The Greater Angostura project is an integrated oil and gas development located offshore east Trinidad. We are the operator of the field and have a 45 per cent interest in the production sharing contract for the project.

#### Information on Petroleum operations

#### Significant oil and gas assets

Production and reserve information for our most significant oil and gas assets are listed in the table below:

		FY2009		
Asset	Location	Net Production (MMboe)	Net Proved Reserves (MMboe)	
Bass Strait	Offshore SE Australia	38	462	
North West Shelf	Offshore NW Australia	31	386	
Atlantis	Gulf of Mexico	11	98	
Zamzama	Pakistan	10	87	
Mad Dog	Gulf of Mexico	5	77	
Shenzi/Genghis Khan	Gulf of Mexico	3	24	
Pyrenees	Offshore NW Australia		49	

The following table contains additional details of our production operations. This table should be read in conjunction with the production (see section 2.3.1) and reserve tables (see section 2.14.1).

Name, location and type of asset AUSTRALIA/ASIA	Ownership and operation	Title/lease	Facilities
Bass Strait Offshore Victoria, Australia	We hold a 50% interest in the Bass Strait fields.	The venture holds 20 production licences and two retention leases issued by the Commonwealth of Australia with expiry dates ranging between 2009 and 2019.	There are 20 producing fields with 21 offshore developments (14 steel jacket platforms, three subsea developments, two steel gravity based mono towers and two concrete gravity based
	50% interest and is the operator.		platforms).
Oil and gas production	Oil Basins Ltd holds a 2.5% royalty interest in 18 of the production licences.	One of the 20 production licences is held with additional partner Santos Ltd.	Onshore infrastructure includes the Longford Facility, which includes three gas plants and liquid processing facilities, interconnecting pipelines, the Long Island Point LPG and

crude oil storage facilities and

an ethane pipeline.

Name, location and type of asset	Ownership and operation	Title/lease	<b>Facilities</b> The Bass Strait production capacity is as follows:
			Crude 200 Mbbl/d
			Gas 1,075 MMcf/d
			LPG 5,150 tpd
			Ethane 850 tpd
North West Shelf (NWS) gas and gas liquids (LPG and condensate) North Rankin, Goodwyn, Perseus, Echo-Yodel and Angel, and Searipple fields offshore, Dampier in northwestern Australia	We are a participant in the North West Shelf (NWS) Project, an unincorporated joint venture. We hold 8.33% of the original domestic gas joint venture. Our share of domestic gas production will progressively increase from 8.33% to 16.67%. We also hold 16.67% of the Incremental Pipeline Gas (IPG) domestic gas	The venture holds nine production licences issued by the Commonwealth of Australia, of which six expire in 2022 and three expire five years after the end of production.	Production from the North Rankin and Perseus fields is currently processed through the North Rankin A platform, which has the capacity to produce 2,300 MMcf/d of gas and 60 Mbbl/d of condensate.
Gas, LPG and condensate production and LNG liquefactions	Pipeline Gas (IPG) domestic gas joint venture, 16.67% of the original LNG joint venture, 12.5% of the China LNG joint venture, 16.67% of the LPG joint venture and approximately 15% of current condensate production.		Production from the Goodwyn, Searipple and Echo-Yodel fields is processed through the Goodwyn A platform, which has the capacity to produce 1,450 MMcf/d of gas and 110 Mbbl/d of condensate. Four subsea wells in the Perseus field are tied into the Goodwyn A platform
	Other participants in the respective NWS joint ventures are subsidiaries of Woodside Energy, Chevron, BP, Shell, Mitsubishi/Mitsui and the China National Offshore Oil Corporation.		An onshore gas treatment plant at Withnell Bay has a current capacity to process approximately 600 MMcf/d of gas for the domestic market.
	Woodside Petroleum Ltd is the operator of the project.		An existing five train LNG plant has the capacity to produce an average rate of 45,000 tpd of LNG.
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Name, location and type of asset North West Shelf crude oil Approximately 30 km northeast of the North Rankin gas and condensate field, offshore Western Australia, Australia	<b>Ownership and operation</b> We hold a 16.67% working interest in oil production from these fields. The other 83.33% is held by Woodside Energy 33.34%, with BP Developments Australia, Chevron Australia, and Japan Australia LNG (MIMI) each holding 16.67%.	<b>Title/lease</b> The venture holds three production licences issued by the Commonwealth of Australia, with expiry dates ranging between 2012 and 2018.	Facilities The oil is produced to a floating production storage and offtake unit, the Cossack Pioneer, which has a capacity of 140 Mbbl/d and a storage capacity of 1.15 MMbbl of crude oil.
Crude oil production is from the Wanaea, Cossack, Lambert and Hermes oil fields	Woodside Petroleum Ltd is the operator of the project.		
Griffin Situated in the Carnarvon Basin, 62 km offshore Western Australia, Australia	We hold a 45% interest in the Griffin venture. The other 55% is held by Mobil Exploration and Producing Australia (35%) and Inpex Alpha (20%).	The venture holds a production licence issued by the Commonwealth of Australia that expires in 2014.	Oil and gas are produced via the Griffin Venture, a floating production storage and offtake facility. We pipe natural gas to shore, where it is delivered directly into a pipeline.
Comprises the Griffin, Chinook and Scindian offshore oil and gas fields	We are the operator of the field.	The Griffin Venture will cease production in October 2009 as the facility reaches the end of its useful life.	The Griffin Venture has an original production design capacity of 80 Mbbl/d of crude oil and 50 MMcf/d of gas.
<b>Minerva</b> Approximately 10 km offshore in the Otway Basin of Victoria, Australia	We hold a 90% share of the Minerva venture. The other 10% is held by Santos (BOL) Pty Ltd.	The venture holds a production licence issued by the Commonwealth of Australia that expires five years after production ceases.	The Minerva development consists of two well completions in 60 m of water. A single flow line transports gas to an onshore gas processing facility with an original production design
Single offshore gas reservoir with	We are the operator of the field.		capacity of 150 TJ/d and 600 bbl/d of condensate.
two compartments. Gas plant is situated approximately 4 km inland from Port Campbell			
Stybarrow Situated in the Exmouth Sub-basin, 30 km offshore Western Australia, Australia	We own a 50% share of the Stybarrow venture. The other 50% interest is held by Woodside Energy.	The venture holds a production licence issued by the Commonwealth of Australia that expires five years after production ceases.	Oil is produced by the Stybarrow development which comprises of a floating production storage and offshore loading facility, nine subsea well completions (including five producers, three water
Ausualla	We are the operator of the field.		injectors and one gas injector) in 850 m of water.

Comprises the Stybarrow and Eskdale oil and gas fields. The Stybarrow project achieved first oil production on 17 November 2007
Name, location and type of asset	Ownership and operation	Title/lease	<b>Facilities</b> The Stybarrow facility has a
			crude oil production and storage capacity of 80 Mbbl/d and 900 Mbbl respectively. Gas production is reinjected into the reservoirs.
Zamzama	We hold a 38.5% working interest in the joint venture. The other 61.5% is owned by ENI Pakistan (M) Ltd (17.75%) PKP	20-year development and production lease starting April 2002 from the Government of Pakistan (with an option to	Zamzama currently consists of eight production wells and four process trains, with an existing capacity of 500 MMcf/d of gas
Dadu Block, Sindh Province, Pakistan	Exploration Ltd (9.375%), PKP Exploration Ltd 2 (9.375%), and Government Holdings (Private) Limited (25%).	extend five years beyond the 20-year term).	and 3,350 bbl/d of condensate.
Onshore gas wells	We are the operator		
	we are the operator.		
AMERICAS			
Neptune (Green Canyon 613)	We hold a 35% interest in the joint venture.	The venture holds a lease from the US as long as oil and gas are produced in paying quantities.	The production facility consists of a tension-leg platform permanently moored in 1,300
			m of water.
Gulf of Mexico, approximately 195 km offshore of Fourchon, Louisiana, US	The other owners are Marathon Oil (30%), Woodside Energy (20%) and Maxus US Exploration (15%).		The facility has nameplate processing capacity of 50 Mbbl/d of oil and 50 MMcf/d of gas.
Deservator oil and see field	We are the operator		
Deepwater on and gas neid	I		Production commenced in July 2008.
Shenzi/Genghis Khan (Green Canyon 653 )	We hold a 44% interest in the joint venture.	The venture holds a lease from the US as long as oil and gas are produced in paying quantities.	The Shenzi production facility consists of a stand-alone tension-leg platform (TLP) permanently moored in 1,310 m of water.
Gulf of Mexico, approximately 200 km offshore of Fourchon, Louisiana, US	The other owners are Hess Corporation (28%) and Repsol (28%).		
			The facility has nameplate processing capacity of 100 Mbbl/d of oil and 50 MMcf/d
Deepwater oil and gas field	We are the operator.		of gas.

Production commenced in March 2009.

Name, location and type of asset	Ownership and operation	Title/lease	<b>Facilities</b> The Genghis Khan field is part of the same geological structure as the Shenzi project and consists of a tieback to the existing Marco Polo TLP.
West Cameron 76	We hold a 33.76% interest in the joint venture.	The venture holds a lease from the US as long as oil and gas are produced in paying quantities.	The production facility consists of two conventional gas platforms with a capacity of 120 MMcf/d of gas and 800 bbl/d of condensate
Gulf of Mexico, approximately 20 km offshore, Central Louisiana, US	The other owners are ENI Petroleum (40%), Merit Management Partners (15%) and Ridgewood Energy Company (11,24%).		bond of condensate.
Offshore gas and condensate field			
	We are the operator.		
Starlifter	We hold a 30.95% interest in the joint venture.	The venture holds a lease from the US as long as oil and gas are	The production facility consists of a single conventional gas
West Cameron 77)		produced in paying quantities.	platform with a capacity of 40 MMcf/d of gas and 450 bbl/d of condensate.
Gulf of Mexico, approximately 25 km offshore, Central Louisiana, US	The other owners are McMoRan (33.75%), Seneca Resources (11.25%), Merit Management Partners (13.75%) and Ridgewood Energy Company (10.3%).		
Offshore gas and condensate field			
	We are the operator.		
Mustang (West Cameron 77)	We hold a 43.66% interest in the joint venture.	The venture holds a lease from the US as long as oil and gas are produced in paying quantities.	The production facility consists of a single conventional gas platform with a capacity of 40 MMcf/d of gas and 450 bbl/d of condensate.
Gulf of Mexico, approximately 25 km offshore, Central Louisiana, US	The other owners are ENI Petroleum (22.4%), Merit Management Partners (19.4%) and Ridgewood Energy Company (14.54%).		
Offshore gas and condensate field			
	We are the operator.		
Atlantis	We hold a 44% working interest in the joint venture.	The venture holds a lease from the US as long as oil and gas are	The production facility consists of a semi-submersible platform
(Green Canyon 743)	-	produced in paying quantities.	permanently moored in 2,155

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Gulf of Mexico, approximately 200 km offshore of Fourchon, Louisiana, US

The other owner is BP (56%).

BP is the operator.

Deepwater oil and gas field

m of water.

The facility has nameplate processing capacity of 200 Mbbl/d of oil and 180 MMcf/d of gas.

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<b>Ownership and operation</b> We hold a 23.9% interest in the joint venture.	<b>Title/lease</b> The venture holds a lease from the US as long as oil and gas are produced in paying quantities.	<b>Facilities</b> The production facility consists of an integrated truss spar equipped with facilities for simultaneous production and
The other owners are BP (60.5%) and Chevron (15.6%).		drilling operations, permanently moored in 1,310 m of water.
BP is the operator.		The facility has the capacity to process 100 Mbbl/d of oil and 60 MMcf/d of gas.
We hold a 4.95% interest in the joint venture.	The venture holds a lease from the US as long as oil and gas are	The production facility consists of a floating cylindrical hull
	produced in paying quantities.	(spar) moored to the seabed with integrated drilling facilities and a capacity of 55
The other owners are Chevron (56.67%) and ExxonMobil (38.38%).		of gas.
Chevron is the operator.		
We hold a 45% interest in the joint venture.	The venture has entered into a production sharing contract with the Republic of Trinidad and Tobago that entitles the contractor to operate Greater	The Greater Angostura development is an integrated oil and gas development. The infrastructure consists of a steel jacketed central processing
The other 55% is held by Total (30%) and Chaoyang (25%).	Angostura until 2021.	platform with three satellite wellhead protector platforms and flow lines. A pipeline connects the processing
We are the operator.		Guayaguayare, where an export pipeline has been installed to allow for offloading to tankers in Guayaguayare Bay.
	Ownership and operationWe hold a 23.9% interest in thejoint venture.The other owners are BP (60.5%) and Chevron (15.6%).BP is the operator.We hold a 4.95% interest in the joint venture.The other owners are Chevron (56.67%) and ExxonMobil (38.38%).Chevron is the operator.We hold a 45% interest in the joint venture.The other 55% is held by Total (30%) and Chaoyang (25%).We are the operator.	Ownership and operation yinit venture.Title/lease The venture holds a lease from the US as long as oil and gas are produced in paying quantities.The other owners are BP (60.5%) and Chevron (15.6%).He venture holds a lease from the US as long as oil and gas are produced in paying quantities.BP is the operator.The venture holds a lease from the US as long as oil and gas are produced in paying quantities.We hold a 4.95% interest in the joint venture.The venture holds a lease from the US as long as oil and gas are produced in paying quantities.Chevron is the operator.The venture holds a lease from the US as long as oil and gas are produced in paying quantities.Chevron is the operator.The venture has entered into a production sharing contract with the Republic of Trinidad and Tobago that entitles the contractor to operate Greater Angostura until 2021.We are the operator.We are the operator.

The facility has the capacity to process 100 Mbbl/d of oil.

Name, location and type of asset EUROPE/AFRICA/MIDDLE EAST	Ownership and operation	Title/lease	Facilities
Liverpool Bay	We hold a 46.1% interest in the joint venture. The other 53.9% is held by ENI.	The joint venture holds three production licences issued by the Crown of the United Kingdom. One of these licences was extended in July 2009 for a further term which expires in 2027. The other licences expire in 2016 and 2025.	The Liverpool Bay asset is an integrated development of six fields.
Douglas and Douglas West oil fields, Hamilton, Hamilton North and Hamilton East gas fields, and Lennox oil and gas field in the Irish Sea, approximately 10 km off the northwest coast of England	We are the operator.		Oil from the Lennox and Douglas fields is treated at the Douglas complex and piped 17 km to an oil storage barge for export by tankers.
Offshore oil and gas fields			Gas from the Hamilton
			Hamilton North, Hamilton, Hamilton North, Hamilton East and Lennox fields is initially processed at the Douglas complex then piped by subsea pipeline to the Point of Ayr gas terminal for further processing. The facility has the capacity to produce 308 MMcf/d of gas and 70 Mbbl/d of oil and condensate.
Bruce/Keith	We hold a 16% interest in the Bruce field. The other 84% is owned by BP (37%), Total (43.25%) and Marubeni (3.75%).	The joint venture holds three production licences issued by the Crown of the United Kingdom, which expire in 2011, 2015 and 2018.	Production is via an integrated oil and gas platform. The capacity of the Bruce facility has, since 2002, been increased to 920 MMcf/d through
northeast offshore of Aberdeen, Scotland			de-bottlenecking and revising operating envelopes.
	BP is the operator of Bruce.		
The Keith field is located adjacent to the Bruce field	We hold a 31.83% interest in the Keith field. The other 68.17% is owned by BP (34.84%), Total (25%) and Marubeni (8.33%).		The Keith field was developed as a tie-back to the Bruce platform facilities.
Offshore oil and gas fields			
	We are the operator of Keith.		

Name, location and type of asset Ohanet Approximately 1,300 km southeast of Algiers, Algeria	<b>Ownership and operation</b> We have an effective 45% interest in the Ohanet joint venture. The other 55% is held by Japan Ohanet Oil and Gas Co. Ltd. (30%), Woodside Energy (Algeria) Pty. Ltd. (15%) and Petrofac Energy Developments (Ohanet) LLC (10%).	<b>Title/lease</b> The venture is party to a risk service contract with the title holder Sonatrach that expires in 2011, with an option to extend under certain conditions.	<b>Facilities</b> Ohanet is a wet gas (LPG and condensate) development consisting of four gas and condensate fields and a gas processing plant with the capacity to treat 20 MMcm/d of wet gas and 61 Mbbl/d of associated liquids (LPG and
Four onshore gas and condensate fields	The project is operated by a Sonatrach/BHP Billiton staffed organisation.	Under this contract, the Ohanet joint venture is reimbursed and remunerated for its investments in liquids.	condensate).
ROD Integrated Development Berkine Basin, 900 km southeast of Algiers, Algeria	We hold a 45% interest in the 401a/402a production sharing contract, with ENI holding the remaining 55%.	The venture is party to a production sharing contract with the title holder Sonatrach that expires in 2016, with an option for two five-year extensions under certain conditions.	Comprises the development and production of six oil fields, the largest two of which, ROD and SFNE, extend into the neighbouring blocks 403a and 403d.
Six onshore oil fields	We have an effective 38% interest in ROD unitised integrated development. ENI owns the remaining 62%. This interest is subject to a contractual determination to ensure that interest from participating association leases is accurately reflected. Future redetermination may be possible under certain conditions.		The ROD Integrated Development is being produced through a dedicated processing train located adjacent to BRN processing facilities on block 403, with the capacity to process approximately 80 Mbbl/d of oil.
	A joint Sonatrach/ENI entity is		

**Development projects** 

Australia/Asia

## North West Shelf North Rankin gas compression project

the operator.

In March 2008, the Board approved the North West Shelf gas compression project to recover remaining lower pressure gas from the North Rankin and Perseus gas fields. A new gas compression platform, North Rankin B, capable of processing 2,500 million cubic feet of gas per day will be constructed adjacent to the existing North Rankin A platform, 135 kilometres offshore from Karratha on the northwest coast of Western Australia. The two platforms will be connected by a 100 metre bridge and operate as a single facility. Our 16.67 per cent share of development costs is approximately US\$850 million. First gas is expected in 2012.

## North West Shelf Cossack, Wanaea, Lambert, Hermes (CWLH) life extension

In December 2008, approval was announced to undertake a redevelopment project to replace and refurbish CWLH facilities because the existing operation had performed above expectation and had an expected field life much longer than originally planned. The project consists of the replacement of the existing floating production storage and offtake vessel and selected refurbishment of existing subsea infrastructure and the existing riser turret mooring. Our 16.67 per cent share of the cost is approximately US\$245 million. First production through the redeveloped facilities is expected in 2011.

## Pyrenees WA-12-R/WA-155-P

In July 2007, the Board approved the Pyrenees project to develop the WA-12-R permit portion of the Crosby, Stickle and Ravensworth oil fields in the Exmouth Sub-basin, off the northwest coast of Western Australia. Project costs for the WA-12-R permit portion of the Pyrenees development are approximately US\$1.7 billion (approximately US\$1.2 billion our share). The WA-155-P permit portion of the Pyrenees project was approved in November 2007, incorporating the remainder of the Ravensworth field as it straddles both WA-12-R and WA-155-P permits. The combined development consists of subsea production and injection wells tied back to a floating production storage and offtake facility with an oil processing capacity of 96 thousand barrels per day. First production is expected during the second half of FY2010.

We own a 71.43 per cent operated interest in the WA-12-R permit, with Apache Energy Ltd owning the remaining 28.57 per cent. We own a 40 per cent operated interest in the WA-155-P permit, with Apache Energy Ltd owning 31.5 per cent and Inpex owning 28.5 per cent.

### Bass Strait Kipper gas field development

Initial development of the Kipper gas field in the Gippsland Basin located offshore Victoria was approved by the Board in December 2007. The first phase of the project includes two new subsea wells, three new pipelines and platform modifications to supply 10 thousand barrels of condensate per day and 80 million cubic feet of gas per day. Gas and liquids will be processed via the existing Gippsland Basin joint venture facilities. Our share of development costs, based on the operator s estimate, is approximately US\$500 million. First production is expected in 2011.

We own a 32.5 per cent interest in the Kipper Unit Joint Venture, with Esso Australia and Santos owning the remaining 67.5 per cent. We own a 50 per cent interest in the Gippsland Basin joint venture.

### Bass Strait Turrum field development

Further expansion of the Gippsland Basin facilities is under way with the Board approving the full field development of the Turrum oil and gas field in July 2008. Our 50 per cent share of the investment, based on the operator s estimate, is approximately US\$625 million and consists of a new platform, Marlin B, linked by a bridge to the existing Marlin A platform. The Turrum field, which has a capacity of 11 thousand barrels of oil per day and 200 million cubic feet of gas per day, is located 42 kilometres from shore in approximately 60 metres of water. First production is expected in 2011.

#### **Trinidad & Tobago**

#### **Greater Angostura Phase 2**

In September 2008, we announced the signing of a gas sales contract with the National Gas Company of Trinidad and Tobago Limited (NGC) for the purchase of gas from the second phase of the Greater Angostura field. In August 2008, we sanctioned an investment of approximately US\$400 million (US\$180 million our share) to construct and install a new gas export platform alongside the Company s existing facilities within the Greater Angostura Field. Fabrication of the 280 million cubic feet per day facility started in February 2009 and is expected to be online during 2011.

The development also includes modifications to the existing Greater Angostura facilities and the installation of a new flowline. NGC will take delivery of the gas at the new gas export platform and will transport it in their proposed 36 inch diameter Northeastern Offshore Pipeline to Trinidad and in their 12 inch diameter Tobago pipeline.

The Greater Angostura field includes oil and gas discoveries at Aripo, Kairi and Canteen. We hold a 45 per cent interest in the joint venture. Other partners are Total (30 per cent interest) and Chaoyang Petroleum (BVI) Limited (25 per cent interest), a consortium between CNOOC and Sinopec.

## **Exploration and appraisal**

We are focused on finding significant discoveries through wildcat drilling. We have exploration interests throughout the world, particularly the Gulf of Mexico, Western Australia, Latin America and Malaysia. During the year, our gross expenditure on exploration was US\$548 million. Our major exploration interests are as follows:

### Australia/Asia

### Malaysia

In March 2007, we were awarded two offshore blocks in Malaysia. We are the operator of the blocks under two separate production sharing contracts. The minimum exploration program includes the acquisition and processing of seismic data for approximately 2,300 square kilometres across the two blocks, and the drilling of four exploration wells within the first seven years of the contracts. The initial seismic acquisition program commenced in June 2008 and was completed in September 2008. The results of the seismic acquisition program are currently under evaluation.

### Americas Gulf of Mexico

## Shenzi Green Canyon 609 & 610

We currently own a 44 per cent interest in the Shenzi prospect, located in the Green Canyon area. Partners in the well are Hess (28 per cent) and Repsol (28 per cent).

The Shenzi 8 appraisal well was drilled in September 2008. The well result was encouraging as hydrocarbons were encountered and the review of various development options is currently under way.

#### Mad Dog South

We currently own a 23.9 per cent interest in the Mad Dog South prospect, located in Green Canyon Block 826. Partners in the well are BP (60.5 per cent) and Unocal (15.6 per cent). Mad Dog appraisal well-1 was drilled in May 2009 and completed in June 2009 and sidetrack drilling was completed in July 2009. The well encountered hydrocarbons in the objective Miocene hydrocarbon bearing sands. The subsequent sidetrack reached a total measured depth of 8,273 metres and discovered a significant oil column.

#### Americas Colombia

In April 2006, we entered into two exploration and production contracts for the Fuerte Norte and Fuerte Sur blocks, located offshore Colombia. We hold a 75 per cent operated interest in each block with Ecopetrol holding the remaining 25 per cent. The joint venture has completed acquisition and processing of 3D seismic over the area as part of the second phase of the exploration and production contracts for both blocks.

In September 2008, we entered into a Technical Evaluation Assignment (TEA) for the evaluation of hydrocarbons in Block 5 in the Llanos basin, onshore Colombia. We are the operator of the project and hold a

71.4 per cent working interest in the joint venture, with SK Energy Co holding the remaining 28.6 per cent interest. The minimum work commitment under the TEA requires acquisition of 1,000 kilometres of 2D seismic plus the drilling of five stratigraphic wells.

## Americas Falkland Islands

In December 2007, we farmed into northern and southern area licences offshore in the Falkland Islands. We acquired a 51 per cent interest from our joint venture partner Falkland Oil and Gas Limited (FOGL) and assumed operatorship in January 2008. The minimum exploration work program includes the drilling of two wells in the first phase by the end of 2010.

Site surveys on both blocks were completed in 2009 and results of the evaluation area are currently being processed.

### Europe/Africa/Middle East

### India

In December 2008, we were awarded seven offshore blocks in India. We are the operator of all seven blocks, each with its own production sharing contract. The minimum exploration program includes the acquisition and processing of 2D seismic data for approximately 10,400 square kilometres across the seven blocks. We currently own a 26 per cent interest in all seven blocks, with our partner GVK holding the remaining 74 per cent.

### 2.2.3 Aluminium Customer Sector Group

Our Aluminium business is a portfolio of assets at three stages of the aluminium value chain: we mine bauxite, we refine bauxite into alumina, and we smelt alumina into aluminium metal. We are the world s sixth-largest producer of aluminium, with total production in FY2009 of approximately 1.2 million tonnes of aluminium. We also produced approximately 15 million tonnes of bauxite and 4.4 million tonnes of alumina.

During FY2009, approximately 52 per cent of our alumina production was used in our aluminium smelters and we sold the balance to other smelters. Our alumina sales are a mixture of long-term contract sales at LME-linked prices and spot sales at negotiated prices. Prices for our aluminium sales are generally linked to prevailing LME prices.

As with our other businesses, our strategy with bauxite and alumina is to own large, low-cost assets that provide good returns through the investment cycle and provide us with options for brownfield development. With aluminium smelters, where the availability and cost of power are critical, our investment decisions have been driven in part by the availability of stranded power generation capacity. For example, both Hillside and Mozal were originally built when there was excess electricity generating capacity in southern Africa.

We have interests in two sets of integrated bauxite mining/alumina refining assets:

#### **Boddington/Worsley**

The Boddington bauxite mine in Western Australia supplies bauxite ore via a 51 kilometre long conveyor to the Worsley alumina refinery. Worsley is one of the largest and lowest-cost refineries in the world, and is currently undergoing a major expansion (see Development projects below). Our share of Worsley s FY2009 production was 2.924 million tonnes of alumina. Worsley s export customers include our own Hillside, Bayside and Mozal smelters in southern Africa. Boddington has a reserve life of 24.9 years at current production rates. We own 86 per cent of the mine and the refinery.

#### Kaaimangrasie/ Klaverblad/Caramacca/Coermotibo/Paranam

During FY2009, we owned a 45 per cent interest in the Suriname bauxite and alumina joint venture that comprised bauxite mines in the Kaaimangrasie, Klaverblad, Caramacca and Coermotibo areas of Suriname and the nearby Paranam alumina refinery. Our share of Paranam s FY2009 production was 935,000 tonnes of alumina. In October 2008, we decided to exit the Suriname operations by December 2010. On 31 July 2009, we executed transaction agreements to pass all of our interests in the Suriname bauxite and alumina joint venture to Suralco effective on that date.

We also own 14.8 per cent of Mineração Rio do Norte (MRN) which owns and operates a large bauxite mine in Brazil.

We have interests in the Alumar integrated alumina refinery/aluminium smelter and three stand-alone aluminium smelters:

#### Alumar

We own 36 per cent of the Alumar refinery and 40 per cent of the smelter. Alcoa operates both facilities. The operations, and their integrated port facility, are located at São Luís in the Maranhão province of Brazil. Alumar sources bauxite from MRN. During FY2009, approximately 60 per cent of Alumar s alumina production was used to feed the smelter, while the remainder was exported. Our share of Alumar s FY2009 saleable production was 537,000 tonnes of alumina and 177,000 tonnes of aluminium. The Alumar refinery is currently undergoing a significant expansion (see Development projects below).

#### Hillside and Bayside

Our Hillside and Bayside smelters are located at Richards Bay, South Africa. Hillside s capacity of approximately 704,000 tonnes per annum makes it the largest aluminium smelter in the southern hemisphere, and it is one of the most efficient. Following the closure of potlines B and C, Bayside has smelting capacity of approximately 96,000 tonnes per annum, but it also uses its own aluminium and liquid aluminium from Hillside to produce a range of products such as rod, slab and extrusion. Bayside will cease to produce rod and extrusion from 30 September 2009. Both operations import alumina from our Worsley refinery and source power from Eskom, the South African state utility, under long-term contracts with prices linked to the LME price of aluminium except for Hillside Potline 3, the price for which is linked to the South African and US producer price indices.

In January 2008, Eskom determined that it had insufficient power to meet the national demand in South Africa, and mandated an emergency 10 per cent reduction in power consumption by many large industrial users, including BHP Billiton. Although our contracts with Eskom specify that power supply to our aluminium smelters can only be interrupted approximately one per cent of the time per calendar year, we have respected the emergency situation faced by the country and reduced our demand by the requested 10 per cent. To achieve this in the most economically efficient way, we have closed the B and C potlines at Bayside, reducing production there by approximately 92,000 tonnes per annum. Across all three southern Africa smelters (including Mozal), production losses were just over 108,000 tonnes per annum. The production cuts occurred primarily at Bayside, a 100 per cent BHP Billiton owned facility. A production sharing adjustment has been established between the Mozal partners (47.1 per cent BHP Billiton) to compensate us for taking the majority of the power reduction at a 100 per cent owned facility.

#### Mozal

We own 47.1 per cent of and operate the Mozal aluminium smelter in Mozambique, which has a total capacity of approximately 563,000 tonnes per annum. Mozal sources power generated by Eskom via Motraco, a transmission joint venture between Eskom and the national electricity utilities of Mozambique and Swaziland. Tariffs are fixed through to 2012 and will be linked to the LME aluminium price thereafter. Our share of Mozal s FY2009 production was 255,000 tonnes.

# Information on the Aluminium CSG s bauxite mining operations

The following table contains additional details of our mining operations. This table should be read in conjunction with the production (see section 2.3.2) and reserve tables (see section 2.14.2).

Name, location, mineralisation style, type of mine and access Boddington bauxite mine 123 km southeast of Perth at	Ownership, operation and title/lease We own 86% of the Worsley joint venture. The other 14% interest is owned by Sojitz Alumina Pty Ltd (4%), and Japan Alumina Associates (Australia) Pty Ltd (10%).	<b>History</b> The Boddington bauxite mine opened in 1983 and was significantly extended in 2000.	<b>Facilities and power source</b> The mine has a crushing plant with the capacity of approximately 13 mtpa of bauxite. Power is supplied from the Worsley alumina refinery site via a joint venture-owned
Boddington, Western Australia, Australia			powerline.
Surficial gibbsite-rich lateritic bauxite, residual weathering of Darling Range metamorphic and volcanic rocks	BHP Billiton Worsley Alumina Pty Ltd is the manager of the joint venture on behalf of the participants. BHP Billiton Worsley Alumina Pty Ltd has the same ownership structure as the Worsley joint venture.		A description of the Worsley alumina refinery can be found in the table below.
Open-cut mine			
The mine is accessible by sealed public roads. The ore is transported to Worsley alumina refinery via a 51 km overland conveyor.	We hold a 2,656 km <sup>2</sup> mining lease from the Western Australian government and two sub leases totalling 855 km <sup>2</sup> from Alcoa of Australia Limited. In 2004, we renewed the lease for a second 21-year term. A further 21-year renewal is available.		
Suriname Kaaimangrasie mine	During FY2009, we owned 45% of the refining and mining joint venture. The other 55% interest was held by Suralco (a subsidiary of Alcoa World	The development of the Kaaimangrasie mine started in November 2005.	Kaaimangrasie mine has a nominal production capacity of approximately 1.2 mtpa of bauxite; there are no processing facilities at the mine.
38 km southeast of Paramaribo and 30 km east of the Paranam refinery, Suriname	Alumina and Chemicals (AWAC), a venture of Alcoa and Alumina Limited).	Operations/delivery of bauxite to the refinery commenced in July 2006.	
Lateritic gibbsite-rich bauxite, residual weathering of Precambrian meta-sediments overlain by thick sediments	We managed all mining operations.		

Open-cut mine

We transferred our ownership to Suralco on 31 July 2009.

Name, location, mineralisation style, type of mine and access The mine is accessible by a joint venture-owned haul road. The ore is hauled by truck over a distance of 30 km to the Paranam refinery.	Ownership, operation and title/lease	History	Facilities and power source
Suriname Klaverblad mine	During FY2009, we owned 45% of the refining and mining joint venture. The other 55% interest was held by Suralco.	The development of the Klaverblad mine started in July 2005.	Klaverblad mine has a nominal production capacity of approximately 1.7 mtpa of bauxite; there are no processing
23 km southeast of Paramaribo and 19 km east of the Paranam refinery, Suriname	We managed all mining operations.	Delivery of bauxite to the refinery commenced in April 2007.	facilities at the mine.
Lateritic gibbsite-rich bauxite, residual weathering of Precambrian meta-sediments overlain by thick sediments	We transferred our ownership to Suralco on 31 July 2009.		
Open-cut mine			
The mine is accessible by a joint venture-owned haul road. The ore is hauled by truck over a distance of 19 km to the Paranam refinery.			
Suriname Caramacca mine	During FY2009, we owned 45% of the refining and mining joint venture. The other 55% interest was held by Suralco.	The development of the Caramacca mine started in July 2007.	Caramacca mine has a nominal production capacity of approximately 0.9 mtpa of bauxite; there are no processing
45 km southeast of Paramaribo and 37 km east of the Paranam refinery, Suriname	We managed all mining operations.	Operations/delivery of bauxite to the refinery commenced in August 2008.	facilities at the mine.
Lateritic gibbsite-rich bauxite, residual weathering of Precambrian meta-sediments overlain by thick sediments	We transferred our ownership to Suralco on 31 July 2009.		

Open-cut mine

The mine is accessible by a joint venture-owned haul road. The ore is hauled by truck over a distance of 37 km to the Paranam refinery.

Name, location, mineralisation style, type of mine and access Suriname Coermotibo	Ownership, operation and title/lease During FY2009, we owned 45% of the Coermotibo joint venture. The other 55% interest was held by Suralco.	<b>History</b> The Coermotibo mine started operations in 1991.	<b>Facilities and power source</b> Coermotibo mine has a nominal production capacity of 1.7 mtpa. There are primary crushing, beneficiation plant
150 km east of Paranam, Suriname			and barge loading facilities.
Lateritic gibbsite-rich bauxite, residual weathering of Precambrian meta-sediments occurring on hills	We managed all mining operations.		
	We transferred our ownership to Suralco on 31 July 2009.		
Surface strip mine			
The mine is accessible by joint venture-owned haul roads			
The ore is hauled to the Coermotibo crushing and loading facility and subsequently barged along the Commewijne River to the Paranam refinery.			
<b>MRN</b> Porto Trombetas, Pará, Brazil	MRN is operated as an incorporated joint venture between BHP Billiton (14.8%), Alcoa and affiliates (18.2%), Vale (40%), Rio-Tinto Alcan (12%), Votorantim (10%) and	Production started in 1979 and after the last expansion in 2003, MRN reached its current nominal production capacity of 18 mtpa of washed bauxite.	The mine is supported by a village of 6,000 people which is owned and maintained by MRN with all required facilities to maintain the residents in the village.
	Hydro (5%).		
Lateritic bauxite, residual weathering of nepheline syenite occurring primarily as gibbsite in a clay matrix overlain by thick clay sediments	MRN holds valid mining rights granted by the Brazilian Federal Government to all its reserves until exhaustion of the reserves.		Crushing facilities, long distance conveyors and the wash plant are situated near the mine area. Drying and ship loading facilities are situated close to the main mine village at Porto Trombetas.
Open-cut mine	Run of mine bauxite is mined from various plateaus, and after crushing is conveyed to the washing facilities, where the		A small airport is also maintained by MRN at Porto
The mine is situated approximately 40 km from Porto Trombetes Porto	quality of bauxite is improved. The washed bauxite is then		I rombetas.

40 km from Porto Trombetas. Porto

Trombetas can only be reached by air or by river. An asphalt road connects the mine area with the village at Porto Trombetas. transported by rail, approximately 28 km to the loading facilities at Porto Trombetas.

Power is generated on site by fuel oil generators.

All infrastructure in the area is owned by MRN.

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Information on the Aluminium CSG s aluminium smelters and alumina refineries

Operation and location	Ownership, operation and title	Plant type/product	Canacity
Hillside aluminium smelter	We own and operate the smelter.	The Hillside smelter uses the Aluminium Pechiney AP35 technology to produce standard aluminium ingots and aluminium T-Bars	The nominal production capacity of the smelter is 0.704 mtpa of primary aluminium.
Richards Bay, 200 km north of Durban, KwaZulu-Natal province, South Africa	We hold freehold title over the property, plant and equipment. We have long-term leases over the harbour facilities.		The plant s power requirements are sourced from the national power supplier Eskom under long-term contracts. The prices in the contract for Hillside 1 and 2 are linked to the LME price for aluminium, while the prices for Hillside 3 are linked to the SA and US producer price index.
Bayside aluminium smelter	We own and operate the smelter.	The Bayside smelter currently uses Alusuisse pre-bake technology to produce primary aluminium. Bayside uses its own aluminium and liquid aluminium	The nominal potline production capacity is 0.095 mtpa of primary aluminium on the remaining Potline A.
Richards Bay, 200 km north of Durban, KwaZulu-Natal province, South Africa	We hold freehold title over the property, plant and equipment. We have long term leases over the harbour facilities.	acquired from Hillside to produce a range of products, such as, rod, slab and extrusion. Rod and extrusion production will be discontinued from 30 September 2009.	The plant s power requirements are sourced from the national power supplier Eskom, under a long-term contract with prices linked to the LME price for aluminium.
<b>Mozal aluminium smelter</b> 17 km from Maputo, Mozambique	We hold a 47.1% interest in the Mozal joint venture and operate the smelter. The other 52.9% is owned by Mitsubishi (25%), Industrial Development Corporation of South Africa	The Mozal aluminium smelter uses the Aluminium Pechiney AP35 technology to produce standard aluminium ingots.	The nominal production capacity of the smelter is 0.563 mtpa.
	Limited (24%), and the Government of Mozambique (3.9%).		The plant s power requirements are purchased from Motraco, under an agreement that provides for a fixed tariff for the majority of electricity through to 2012 and
	The joint venture has a 50-year right to use the land, renewable for another 50 years under a government concession.		LME-linked pricing thereafter.

Operation and location Worsley alumina refinery Approximately 55 km northeast of Bunbury, Western Australia, Australia	Ownership, operation and title We own 86% of this asset through the Worsley joint venture. The other 14% is owned by Sojitz Alumina Pty Ltd (4%), and Japan Alumina Associates (Australia) Pty Ltd (10%). BHP Billiton Worsley Alumina Pty Ltd is the manager of the joint venture on behalf of the participants. BHP Billiton Worsley Alumina Pty Ltd has the same ownership structure as the Worsley joint venture.	Plant type/product The Worsley alumina refinery uses the Bayer process to produce metallurgical grade alumina, which is used as feedstock for aluminium smelting.	Capacity The nominal production capacity is 3.5 mtpa. Power and steam needed for the refinery are provided by a joint venture-owned on-site coal power station and a non-joint venture-owned on-site gas fired steam power generation plant.
Paranam refinery	We hold a 2,480 ha refinery lease from the Western Australian Government. In 2004, we renewed the lease for a second 21-year term. A further 21-year renewal is available. During FY2009, we owned 45% of the Paranam joint venture. The other 55% of the joint venture was owned by Suralco.	The Paranam alumina refinery utilises the Bayer process to produce metallurgical grade alumina, which is used as fractical for aluminim	Capacity is 2.2 mtpa. The Paranam refinery generates its own power.
Paranam, Suriname	Suralco managed the alumina refinery.	smelting.	
	We transferred our ownership to Suralco on 31 July 2009.		
Alumar	The Alumar Consortium is an unincorporated joint venture that holds the smelter, refinery, ingot plant and support facilities.	The alumina refinery and aluminium smelter use Alcoa technology to produce alumina and aluminium ingots.	The refinery complex was last expanded in June 2005, achieving annual capacity of 1.5 mtpa.
São Luís, Maranhão, Brazil			
	We own 40% of the aluminium smelter. The other 60% is owned by Alcoa Aluminio SA (Alcoa).		The smelter has a nominal capacity of approximately 0.45 mtpa of primary aluminium.

Operation and location	Ownership, operation and title We own 36% of the alumina refinery. The other 64% is owned by Alcoa and its affiliate Abalco SA (35.1% and 18.9% respectively) and Rio Tinto (10%).	Plant type/product	<b>Capacity</b> The electricity requirements are supplied by Brazilian public power generation concessionaire Electronorte, pursuant to a 20-year contract.
	Alcoa operates both facilities. The consortium comprises an integrated port, an alumina refinery and an aluminium smelter together with areas for the production of anodes and aluminium ingots.		
Development projects	All the above are freehold interests of the joint venture participants.		

# Alumar refinery expansion

A project to expand the production capacity of the Alumar refinery by 2 million tonnes per annum to 3.5 million tonnes per annum (100 per cent capacity) is nearing completion, with first production from the expansion announced in July 2009. Full mechanical completion is expected in October 2009, and after a period of ramping-up production, full nameplate capacity is expected to be achieved in second half of CY2009. Final expenditure is estimated at US\$900 million (our share).

## Worsley Efficiency and Growth Project

In May 2008, we announced approval for an expansion project to lift capacity of the Worsley refinery from 3.5 million tonnes per annum of alumina to 4.6 million tonnes per annum (100 per cent capacity) of alumina through expanded mining operations at Boddington, additional refinery capacity and upgraded port facilities. The project is budgeted to cost US\$1.9 billion (our share) and be completed in the first half of CY2011.

### **Guinea** Alumina

We have a one-third interest in a joint venture that is finalising a feasibility study into the construction of a 10 million tonnes per annum bauxite mine, an alumina refinery with processing capacity exceeding 3.3 million tonnes per annum and associated infrastructure approximately 110 kilometres from the port of Kamsar in Guinea.

#### 2.2.4 Base Metals Customer Sector Group

Our Base Metals CSG is one of the world s top producers of copper, silver, lead and uranium, and a leading producer of zinc. Our portfolio of large, low-cost mining operations includes the Escondida mine in Chile, which is the world s largest single producer of copper, and Olympic Dam in South Australia, which is already a major producer of copper and uranium and has the potential to be significantly expanded.

In recent years, we have commissioned the Spence copper mine and the Escondida Sulphide Leach projects. Our total copper production in FY2009 was 1.2 million tonnes, a 27 per cent increase over our production five years ago.

In addition to conventional mine development, we continue to pursue advanced treatment technologies, such as the leaching of low-grade chalcopyrite ores, which we believe has the potential to recover copper from ores which were previously uneconomic to treat.

We market five primary products:

copper concentrates

copper cathodes

uranium oxide

lead concentrates, and

zinc concentrates.

We sell most of our copper, lead and zinc concentrates to smelters under long-term volume contracts with prices based on the LME price for the contained metal three or four months after shipment, less treatment charges and refining charges (collectively referred to as TCRCs) that we negotiate with the smelters on an annual or bi-annual basis. Some of the ores we mine contain quantities of silver and gold, which remain in the base metal concentrates we sell. We receive payment credits for the silver and gold recovered by our customers in the smelting and refining process.

We sell most of our copper cathode production to rod and brass mills and casting plants around the world under annual contracts with premiums to LME prices. We sell uranium oxide to electricity generating utilities, principally in western Europe, north America and north Asia. Uranium is typically sold under long-term contracts. A significant portion of production is sold into fixed price contracts although increasingly sales are based on flexible pricing terms.

We have seven production assets:

#### Escondida

Our 57.5 per cent owned and operated Escondida mine is the largest and one of the lowest-cost copper producers in the world. In FY2009, our share of Escondida production was 417,638, tonnes of copper in concentrate and 172,100 tonnes of copper cathode. Current reserves will support mining for a further 21 years at current production rates. Availability of key inputs like power and water supply at competitive prices is an important focus at Escondida. To ensure security of supply and competitive power costs in the long term we are supporting the construction of an LNG facility to supply gas to the northern grid system, which is scheduled for completion in 2010, and have signed off-take agreements underwriting the construction of a 460 megawatt coal-fired power station, which is scheduled for completion in 2011. To address limitations on the availability of water, we carefully manage our use and re-use of available water, and explore for alternative sources. During FY2009, Escondida experienced an electrical motor failure at the SAG mill in the Laguna Seca concentrator plant. This has impacted the throughput at the plant given the increased maintenance requirements. A permanent repair was completed in the first quarter of FY2010.

## **Olympic Dam**

While it is already a significant producer of copper cathode and uranium oxide, and a refiner of smaller amounts of gold and silver bullion, we are continuing to explore a series of staged development options that would make our wholly-owned Olympic Dam operation one of the world s largest producers of copper, the

largest producer of uranium and a significant producer of gold (see Development projects below). In FY2009, Olympic Dam produced 194,057 tonnes of copper cathode, 4,007 tonnes of uranium oxide, 108,039 ounces of gold and 937,694 ounces of silver.

## Antamina

We own 33.75 per cent of Antamina, a large, low-cost, long-life copper/zinc mine in Peru. Opened in 2001, its reserves will support mining at current rates for a further 21 years. Our share of Antamina s FY2009 production was 109,000 tonnes of copper in concentrate, and 108,366 tonnes of zinc in concentrate. In addition to its primary copper and zinc concentrate products, Antamina also produces smaller amounts of molybdenum and lead/bismuth concentrate.

### Spence

We completed our wholly-owned greenfield Spence copper mine development in Chile and began ramping up cathode production in December 2006. During FY2009, we produced 172,685 tonnes of copper cathode as we continue to ramp-up to the nominal capacity of 200,000 tonnes per annum.

## **Cerro Colorado**

Our wholly-owned Cerro Colorado mine in Chile remains a significant producer of copper cathode, although production levels have declined in recent years as grades have declined. Production in FY2009 was 102,100 tonnes of copper cathode. Our current mine plan sees production continuing until FY2019, although we are currently evaluating the extent of hypogene mineralisation that may support further extension options.

#### Cannington

Our wholly-owned Cannington mine in northwest Queensland has grown to become the world's largest and, we believe, one of the lowest-cost producers of silver and lead. During FY2006 and FY2007, we undertook an extensive program of decline and stope access rehabilitation to improve safety conditions, which has positioned the mine to maintain production, offsetting natural grade decline over its remaining life, currently estimated at eight years. In FY2009, Cannington produced concentrates containing 226,794 tonnes of lead, 54,849 tonnes of zinc and approximately 33 million ounces of silver.

#### **Pinto Valley**

As a result of the global economic slowdown and the resulting decline in copper prices, we made the decision to stop sulphide mining and milling operations at our Pinto Valley Mine located in Arizona, US, placing the operations in care and maintenance. Despite this decision, we continue to produce copper cathode at the Pinto Valley site and the neighbouring Miami Unit from our residual solvent extraction electrowinning (SXEW) operations. Current reserves would support mining operations for approximately four years.

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# Information on the Base Metals CSG s mining operations

The following table contains additional details of our mining operations. This table should be read in conjunction with the production (see section 2.3.2) and reserve tables (see section 2.14.2).

Name, location, mineralisation style, type of mine and access COPPER	Ownership, operation and title/lease	History	Facilities and power source
Escondida	The mine is owned by Minera Escondida Limitada and operated by BHP Billiton.	Original construction of the operation was completed in 1990. The project has since undergone various expansion projects at an additional cost	Escondida has two processing streams: two concentrator plants in which high-quality copper concentrate is extracted from sulphide ore
Atacama Desert, at an altitude of approximately 3,100 m and 170 km southeast of Antofagasta, Chile	We own 57.5% of Minera Escondida. The other 42.5% is owned by affiliates of Rio Tinto (30%), the JECO	of US\$3.0 billion (100% terms).	through a flotation extraction process; and two solvent extraction plants in which leaching, solvent extraction and electrowinning are used to produce copper cathode.
The Escondida mining complex includes the Escondida and Escondida Norte mineral deposits that are adjacent, but distinct, supergene-enriched porphyry copper deposits	Corporation (10%), a consortium represented by Mitsubishi Corporation (7%), Mitsubishi Materials Corporation (1%), Nippon Mining and Metals (2%) and the International Finance Corporation (2.5%).	In June 2006, the Escondida Sulphide Leach copper project achieved first production. The cost of the project was US\$1.0 billion (100% terms).	Nominal production capacity is 3.2 mtpa of copper concentrate and 330,000 tpa of copper cathode.
Two open-cut pits			
The mine is accessible by public road.	Minera Escondida Limitada holds a mining concession from the Chilean state that remains valid indefinitely (subject to payment of annual fees).		Separate transmission circuits provide power for the Escondida mine facilities. These transmission lines, which are connected to Chile s northern power grid, are
Copper cathode is transported by privately-owned rail line to the Antofagasta port (government-operated) or Mejillones port (privately operated).			Company-owned. Electricity is purchased under contracts with local generating companies.
Copper concentrate is transported by Company-owned pipeline to its Coloso port facilities.			
Spence	We own and operate the mine (100%).	Spence received Board approval for execution in October 2004. The cost was US\$1.1 billion.	Spence has facilities to support the open-cut mining operations and ore processing/crushing
Atacama Desert, 150 km northeast of Antofagasta, Chile			operations.

A porphyry copper deposit that contains significant copper oxide (atacamite and chrysocolla) overlying the supergene sulphide enrichment zone We hold a mining concession from the Chilean state that remains valid indefinitely (subject to payment of annual fees). First ore was crushed in September 2006 with first copper produced in December 2006.

The crushed oxide and sulphide ores are leached on separate dynamic (on-off) leach pads. Acid leaching is applied to oxide ores

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Name, location, mineralisation style, type of mine and access Open-cut mine	Ownership, operation and title/lease	History	<b>Facilities and power source</b> and bio-leaching is applied to supergene sulphide ores.
The mine is accessible by public road and privately-owned rail access.			Solvent extraction consists of four trains in a series-parallel configuration, with extraction stages for both oxide and sulphide Pregnant Leach Solution. A single electrowinning plant produces the copper cathode.
Copper cathode produced is transported by rail line to Mejillones port (privately operated) and to Antofagasta port on an exceptional basis.			Nominal capacity is 200,000 tpa of copper cathode.
			Electrical power is supplied via a Company-owned voltage transmission line connected to Chile s northern power grid. Electricity is purchased under contracts from a local generating company.
<b>Cerro Colorado</b> Atacama Desert at an altitude of 2,600 m,	We own and operate the mine. We hold a mining concession from the Chilean state that remains valid indefinitely (subject to payment of annual fees)	Commercial production at Cerro Colorado commenced in June 1994.	Cerro Colorado s facilities for this process include two primary, secondary and tertiary crushers, leaching pads and solvent extraction and electrowinning plants
120 km east of Iquique, Chile A supergene porphyry copper deposit that consists of a sulphide enrichment zone overlayed by oxide ore (chrysocolla + brochantite)	payment of annual rees).	Expansions took place in 1995 and 1998 to increase the mine s crushing capacity, leach pad area and mine fleet. With these expansions, production was increased to 100,000 tpa. Production was then increased to the nameplate capacity of 120,000 tpa with optimisation and efficiency improvements.	Electricity is supplied under long-term contracts to the facilities through the northern Chile power grid.
Open-cut copper mine			
The mine is accessible by public road.		Due to lower copper grades of the ore the production is now approximately 100,000 tpa.	

Copper cathode production is trucked to the port at Iquique, which is privately operated.

Name, location, mineralisation style, type of mine and access Pinto Valley Located in the US approximately 125 km east of Phoenix, Arizona.	Ownership, operation and title/lease We own and operate 100% of Pinto Valley and we hold title to the land.	<b>History</b> Pinto Valley was acquired through the acquisition of Magma Copper Company in 1996. The sulphide mining operations were discontinued in 1998. In October 2007, the mining and milling operations	<b>Facilities and power source</b> Pinto Valley facilities include two SXEW operations at the Pinto Valley and Miami sites. Currently concentrate production facilities in care
A porphyry copper deposit of low-grade primary mineralisation		were restarted. As a result of the global economic slowdown, Pinto Valley mining and milling operations were stopped in January 2009. During cessation of the mining and milling operations, residual SXEW	and maintenance include a primary crusher, secondary and tertiary crushers, six ball mills and copper concentrate and molybdenum flotation circuits.
The mine is accessible by public road. Cathode production is trucked to domestic customers in the United States.		production from both the Pinto Valley site and neighbouring Miami Unit continues to produce small amounts of copper cathode.	Power is supplied to the site by the Salt River Project.
COPPER URANIUM			
Olympic Dam	We own and operate Olympic Dam.	Production of copper began in 1988. Between 1989 and 1995, the production rate was increased, ultimately raising the ore mining consolut to	The underground mine extracts copper uranium ore and hauls the ore by an automated train and trucking patwork feeding underground
560 km northwest of Adelaide, South Australia, Australia	The mining lease was granted by the Government of South Australia by an Act of Parliament for the period of	approximately 3 mtpa.	crushing, storage and ore hoisting facilities.
A large poly-metallic deposit of the iron oxide-copper-gold style of mineralisation	50 years from 1986, with a right of extension for a further period of 50 years in accordance with the Roxby Downs (Indenture Ratification) Act 1982.	During 1997 through 1999 a major expansion was conducted to raise throughput from 3 mtpa to 9 mtpa.	The processing plant consists of two grinding circuits in which high-quality copper concentrate is extracted from sulphide ore through a
Underground mine			flotation extraction process. The concentrate is fed into an
The mine is accessible by public road. Copper cathode and electrowon copper is transported by public road to public ports		In 2002, Olympic Dam completed an optimisation project. A new copper solvent extraction plant was commissioned in the first quarter of 2004.	Outokumpu flash furnace having a nominal concentrate smelting capacity of 450 ktpa to produce
Uranium oxide is transported by public road and rail to public ports.			

Name, location, mineralisation style, type of mine and access

Ownership, operation and title/lease

Antamina is owned by

SA, in which we hold a

33.75% interest. The

Cominco (22.5%) and

Mitsubishi (10%).

the mine.

Compañía Minera Antamina

remaining interests are held

by Xstrata (33.75%), Teck

Antamina is the operator of

Antamina holds mining rights

its mine and operations. These

rights can be held indefinitely,

contingent upon the annual

payment of licence fees and

the supply of information on investment and production.

from the Peruvian state over

History We acquired Olympic Dam as part of our acquisition of WMC in 2005.

The Antamina project

achieved commercial

production in October 2001.

Facilities and power source copper anodes, then into an ISA electro-refinery to produce copper cathodes and slimes treated to recover gold and silver. The flotation tailings are further processed to produce electrowon cathode and high-grade uranium oxide concentrates.

Power for the Olympic Dam operations is supplied via a 275 kV powerline from Port Augusta, transmitted by ElectraNet.

The principal project facilities include a primary crusher, a nominal 70,000 tpd concentrator, copper and zinc flotation circuits and a bismuth/ moly cleaning circuit, a 300 km concentrate pipeline with single-stage pumping, and port facilities at Huarmey. The pipeline design throughput is 2.3 dry mtpa.

Power to the mine site is being supplied under long-term contracts with individual power producers through a 58 km 220 kV transmission line, which is connected to Peru s national energy grid.

## **COPPER ZINC**

#### Antamina

270 km north of Lima at an altitude of 4,300 m, Peru

A zoned porphry skarn deposit with central Cu-only ores and an outer band of Cu-Zn ore zone

Open-cut mine

The mine is accessible by a Company-maintained 115 km access road.

A 300 km pipeline transports the copper and zinc concentrates to the port of Huarmey.

The molybdenum and lead/bismuth concentrates are transported by truck to different locations for shipment.

Name, location, mineralisation style, type of mine and access SILVER, LEAD AND ZINC	Ownership, operation and title/lease	History	Facilities and power source
Cannington	We own and operate Cannington.	The deposit was discovered in 1990. Concentrate production commenced in 1997.	The beneficiation plant consists of a primary grinding circuit (AG mill), secondary grinding circuit (tower mill),
300 km southeast of Mt Isa, Queensland, Australia	The Cannington deposit is contained within mining leases granted by the State of Queensland in 1994 and	In February 2003, the Cannington Growth Project commenced to improve mill	pre-flotation circuit, fine lead flotation circuit, coarse lead flotation circuit, zinc flotation circuit, concentrate and tailings thickening, lead and zinc concentrate leaching
A Broken Hill-type silver-lead-zinc sulphide deposit	which expire in 2029.	throughput and metal recovery. The project was completed during FY2005.	circuits, lead and zinc concentrate filtration circuit and a paste plant.
Underground mine			Nominal capacity is 3.1 mtpa. A power station, consisting of a combination of gas-fired
The mine is accessible by public road and a Company-owned airstrip.			and diesel-fired engines, located at Cannington, is operated under contract to supply power solely to Cannington.
Product is transported 187 km by road to			

Product is transported 187 km by road to Yurbi, a Company-owned loading facility, where it is loaded on public rail and transported to a public port at which we lease a berth. **Development projects** 

## **Olympic Dam**

Pre-feasibility study work on the proposed expansion of Olympic Dam is complete. The study has addressed production capacities, mining methods, processing (including smelting) options and supporting infrastructure requirements. Based on this work, a project configuration has been described in a draft Environmental Impact Statement (EIS) provided to the Federal, South Australian and Northern Territory governments which was publicly released on 1 May 2009. The proposed expansion would be a progressive development requiring construction activity over a period of 11 years to increase production to up to 750,000 tonnes per annum of copper, 19,000 tonnes per annum of uranium oxide and 800,000 ounces of gold. Government decisions on the draft EIS are expected by mid 2010. After that, the expansion project will depend on successfully completing all required feasibility studies and on BHP Billiton Board approval of the final investment case.

## Escondida

Exploration of the Escondida lease and early drilling results suggest that there is extensive additional mineralisation in close proximity to existing infrastructure and processing facilities, including a new prospect known as Pampa Escondida. Further study will be required before we establish whether it can be economically extracted. Escondida is planning to invest an estimated US\$198 million (US\$114 million our share) in drilling, assaying and metallurgical test work in exploration across the mining lease over the next five years.

## Antamina

Following extensive drilling completed during 2006 2007 and an updated resource model, Antamina increased its reserves estimate. We are currently considering production expansion alternatives.

## **Resolution Copper**

We hold a 45 per cent interest in the Resolution Copper project in Arizona, which is operated by our partner, Rio Tinto, which owns the other 55 per cent. Resolution Copper is currently undertaking a pre-feasibility study into a substantial underground copper mine and processing facility. During fiscal year 2009, Resolution Copper began sinking the number 10 shaft, which will provide further access to the orebody and also serve as a ventilation shaft during operation.

### 2.2.5 Diamonds and Specialty Products Customer Sector Group

Our Diamonds and Specialty Products CSG operates our diamonds and titanium minerals businesses and the exploration and development of a potash business.

#### Diamonds

The cornerstone of our diamonds business is the EKATI diamond mine in the Northwest Territories of Canada, of which we own 80 per cent. EKATI has produced on average over three million carats per year of rough diamonds over the last three years. However, the grade of ore we process fluctuates from year to year, resulting in variations in carats produced. In addition, the proportion of our production consisting of high-value carats (larger and/or higher-quality stones) and low-value carats (smaller and/or lower-quality stones) will fluctuate from year to year. Production at EKATI continues to transition from predominantly open-cut to a mix of open-cut and underground mining. EKATI has development options for future open-cut and underground mines to extend the life of the operation. The mine life based on current reserves and rate of production is nine years.

Annual sales from EKATI (100 per cent terms) represent approximately two per cent of current world rough diamond supply by weight and approximately six per cent by value. We sell most of our rough diamonds to international diamond buyers through our Antwerp sales office. We also sell a smaller amount of our diamond production to two Canadian manufacturers based in the Northwest Territories.

## Titanium minerals

Our principal interest in titanium minerals consists of our 50 per cent effective interest in Richards Bay Minerals (RBM). RBM is one of the largest and lowest-cost producers of titania slag, high-purity pig iron, rutile and zircon from mineral sands. Approximately 90 per cent of the titanium dioxide slag produced by RBM is suitable for the chloride process of titanium dioxide pigment manufacture and is sold internationally under a variety of short, medium and long-term contracts. The other 50 per cent of RBM is owned by Rio Tinto.

In December 2008, RBM announced an agreement had been reached for a 26 per cent Broad-Based Black Economic Empowerment (BBBEE) transaction. The BBBEE Consortium includes investors, local communities and RBM employees. The transaction will become effective on receipt of the remaining regulatory approvals.

## Potash

We believe that sound industry fundamentals, driven by rising demand for fertilisers, together with the resource attributes and capital-intensive nature of greenfield potash developments, make potash a suitable commodity for our portfolio.

In June 2006, we entered into a joint venture agreement with Anglo Potash Ltd, which gave us a 75 per cent interest in a large land position in Saskatchewan. BHP Billiton is the operator of the joint venture. In July of 2008 we acquired the remaining 25 per cent of our interest in the joint venture when we acquired our partner Anglo Potash Ltd. We now control 100 per cent of the land position.

Our permit positions for potash extend over 7,338 square kilometres of highly prospective exploration ground within Saskatchewan and Manitoba. We are currently studying development alternatives (see Development projects below).

#### Information on Diamonds and Specialty Products mining operations

The following table contains additional details of our mining operations. This table should be read in conjunction with the production (see section 2.3.2) and reserve tables (see section 2.14.2).

Name, location, mineralisation style, type of mine and access DIAMONDS	Ownership, operation and title/lease	History	Facilities and power source
EKATI Diamond Mine 310 km northeast of Yellowknife, Northwest	We own an 80% interest in the Core Zone joint venture, which includes the existing operations. The remaining 20% interest is held by two individuals.	Construction began in 1997 and production from the first open-cut was initiated in 1997. The mine and processing plant began operation in mid 1998.	The processing plant consists of crushers, washers/scrubber and grinder and heavy media separator. The diamond recovery process makes use of magnetics and X-ray
Terntones, Canada			sorters.
Eocene age kimberlite pipes-dominantly volcaniclastic infill	We also own a 58.8% interest in the Buffer Zone joint venture, made up predominantly of exploration targets.	In October 2001, we acquired Dia Met Minerals Ltd, bringing our interest in the Core Zone and Buffer Zone joint ventures up to 80% and 58.8% respectively.	All the electric power is generated by our Company-owned and operated diesel power station. In addition, there is storage
Fox is an open-cut mine and Panda and Koala are underground mines.			for approximately 90 million litres of diesel fuel on-site.
The mines are accessible year round by contracted aircraft.	We are the operators of the mines.	Current active mines include one open-cut (Fox) and two underground mines (Panda and Koala).	
Road access is available for approximately 10 weeks per year via an ice road.	Tenure is secured through ownership of mining leases granted by the Government of Canada. Mining leases have been granted for reserves until 2017.		
TITANIUM MINERALS			
Richards Bay Minerals	RBM comprises two legal entities, Tisand (Pty) Ltd and Richards Bay Iron and Titanium (Pty) Ltd. Our share is 51% and 49.45%	Richards Bay Minerals was formed in 1976 to mine and beneficiate the sands in the coastal dunes.	Mining is conducted largely by sand dredge mining, with minor supplementary dry mining. Gravity separation is then utilised to produce a
RBM has four beach sand dredge mines located 10 to 50 km north of Richards Bay,	respectively. The remaining 49% and 50.55% are held by		heavy mineral concentrate. This concentrate is then

KwaZulu-Natal, South Africa

Rio Tinto. The overall net

The mining operations were expanded to five, with the last mine added in 2000. In 2006, this

Quaternary age coastal dune deposits-heavy mineral sands concentrated by wave action and aeolian processes

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Name, location, mineralisation	Ownership, operation and		
style, type of mine and access	title/lease	History	Facilities and power source
The mines are accessible via public rail, road and port.	income is shared equally.	was reduced to four, with the closure of one mining pond.	trucked to a central processing plant to produce the finished products, being rutile and zircon and the
	RBM management		limente for smeller feed.
The rail between the mine site, harbour and shipping facilities are owned by Spoornet and Portnet (both government business	independently operates the joint venture on behalf of the shareholders.		
enterprises supplying services on behalf of the state). The roads accessing the smelter are government-owned.			The smelter processes the ilmenite to produce titanium dioxide slag, with a titanium dioxide of approximately 85%.
	RBM holds long-term renewable leases from the state of South Africa.		and high-purity iron.
			The nominal titanium slag
	These leases are subject to the		capacity is 1.00 intpa.
	South African Mining Charter		
	and an application has been		
	lodged for a conversion to a		
	New Order Mining Rights		I ne power for the operation is
	regulations ).		African grid.

#### **Development projects**

#### Potash

We are currently undertaking a pre-feasibility study for the Jansen project, a potentially substantial greenfield potash mine in the province of Saskatchewan, Canada. The Jansen project envisages the development of an underground mining operation, processing plant and associated infrastructure. Exploration work comprising drilling and 3D seismic program has been completed, we have selected the mine site location and we are finalising the optimised mine design.

The next priority areas that have been identified are Boulder and Young, also in the province of Saskatchewan, Canada. These projects are currently conducting concept studies.

#### Diamonds

We are working on pre-feasibility and concept studies for developments at EKATI. Because of the nature of the kimberlite pipes in which diamonds are found, individual pipes are relatively short-lived, so we are continually working on options to bring new pipes on-stream.

#### **Corridor Sands**

During the year, we completed a pre-feasibility study on the Corridor Sands titanium minerals project (90 per cent BHP Billiton) in the Gaza province of southern Mozambique. The study found inadequate value to justify further development of the project at this time.

## 2.2.6 Stainless Steel Materials Customer Sector Group

Our Stainless Steel Materials business is primarily a supplier of nickel to the stainless steel industry. Nickel is an important component of the most commonly used types of stainless steel. In addition, we supply nickel and cobalt to other markets, including the specialty alloy, foundry, chemicals, and refractory material industries. We are the world s third-largest producer of nickel and we sell our nickel products under a mix of long-term, medium-term and spot contracts, with prices linked to the LME nickel price.

During FY2009, our nickel business comprised three sets of assets:

## Nickel West

Nickel West is the name for our wholly-owned Western Australian nickel assets, which consist of an integrated system of mines, concentrators, a smelter and refinery, together with our Ravensthorpe nickel operation. We mine nickel-bearing sulphide ore at our Mt Keith, Leinster and Cliffs operations north of Kalgoorlie, Western Australia. We operate concentrator plants at Mt Keith and at Leinster, which also concentrates ore from Cliffs. Leinster and Mt Keith have reserve lives of six and 15 years respectively at current rates of production, and both have options for further expansion. Cliffs is a high-grade underground mine with an expected reserve life of four years. The extraction of ore at Cliffs commenced in FY2008.

We also operate the Kambalda concentrator south of Kalgoorlie, which processes ore and concentrate purchased from third parties.

We transport concentrate from Leinster, Mt Keith and Kambalda to our Kalgoorlie smelter, which processes it into nickel matte, containing approximately 68 per cent nickel. In FY2009, we exported approximately 31 per cent of our nickel matte production. We processed the remaining nickel matte at our Kwinana nickel refinery, which produces nickel metal in the form of LME grade briquettes and nickel powder, together with a range of saleable by-products. In June 2008, we announced that we brought forward a planned furnace rebuild at the Kalgoorlie smelter and that, as a consequence, the smelter was shut down and the Kwinana nickel refinery had a concurrent period of extended maintenance. The smelter furnace rebuild was completed after approximately three months. Production in FY2009 was 88,700 tonnes of contained nickel, approximately 9,400 tonnes lower than in FY2008 principally due to the aforementioned smelter furnace rebuild and concurrent maintenance at the Kwinana nickel refinery.

Our Ravensthorpe nickel operation was commissioned during FY2008. Ravensthorpe comprises a large open-cut laterite nickel mine and an enhanced pressure acid leach concentrator plant. The plant s production, a mixed hydroxide precipitate (MHP) containing approximately 40 per cent nickel, was shipped to the expanded Yabulu refinery (see below) for refining into nickel metal. In January 2009, we announced the indefinite suspension of the Ravensthorpe operation due primarily to the marked decrease in the LME nickel price and the additional capital that would be required to complete ramp-up to and sustain production at projected operating levels.

The Ravensthorpe nickel operation is the subject of a future options study that is targeting completion during calendar year 2009. We are evaluating future options for this asset, which includes a potential divestment.

## Yabulu

This wholly-owned nickel refinery in Queensland, Australia, began operations in 1974 to service the nearby nickel laterite Greenvale mine, which closed in 1993. Since then, it has continued to process laterite ores purchased from third party mines in New Caledonia, Indonesia and the Philippines. In FY2008, we completed a significant expansion of the refinery to give it the capacity to process MHP from Ravensthorpe. The expansion more than doubled the nickel production capacity of the plant to an estimated 76,000 tonnes per annum of contained nickel. Since the announcement to indefinitely suspend the Ravensthorpe operation in January 2009, Yabulu has reverted to processing ore only.

In July 2009, we announced the sale of the Yabulu nickel refinery, which was completed on 31 July 2009.
#### Cerro Matoso

Cerro Matoso, our 99.94 per cent owned nickel operation in Colombia, combines a lateritic nickel ore deposit with a low-cost ferronickel smelter. Cerro Matoso is the world s second-largest producer of ferronickel and one of the lowest-cost producers of ferronickel. The smelter produces high-purity, low-carbon ferronickel granules. Production in FY2009 was 50,500 tonnes of contained nickel, approximately 8,700 tonnes higher than in FY2008 principally due to FY2008 production being affected by an industrial stoppage. Cerro Matoso has an estimated reserve life of 40 years, based on current production levels.

#### Information on Stainless Steel Materials mining operations

The following table contains additional details of our mining operations. This table should be read in conjunction with the production (see section 2.3.2) and reserve tables (see section 2.14.2).

Name, location, mineralisation style, type of mine and access NICKEL	Ownership, operation and title/lease	History	Facilities and power source
Mt Keith	We own and operate the mine at Mt Keith.	The Mt Keith mine was officially commissioned in January 1995 by WMC.	Concentration plant with a capacity of 11.5 mtpa of ore.
460 km north of Kalgoorlie, Western Australia, Australia	We hold leases over the land from the Western Australian Government. The key leases have expiry dates between 2011	In June 2005, we gained control of Nickel West (Leinster, Mt Keith and Cliffs) as part of the	Power at Mt Keith nickel operations is primarily derived from on-site third party gas-fired turbines. Gas for
Disseminated textured magmatic nickel-sulphide mineralisation, associated with metamorphosed ultramafic lava flows and intrusions	and 2029. Further renewals are at the government s discretion.	acquisition of WMC.	these turbines is sourced by us from the North West Shelf gas fields. The existing gas supply contract expires in 2013.
Open-cut mine			The gas is transported through the Goldfields Gas Pipeline, pursuant to an agreement with Southern Cross Pipeline
The mine is accessible by private road.			Austrana that expires in 2037.
Nickel concentrate is transported by road to Leinster nickel operations from where it is dried and transported by public road and rail to Kalgoorlie smelter.			
Leinster	We own and operate the mines at Leinster.	Production commenced in 1967.	Concentration plant with a capacity of 3 mtpa of ore.

375 km north of Kalgoorlie in Western Australia, Australia

Steeply dipping disseminated and massive textured nickel-sulphide mineralisation, associated with metamorphosed ultramafic lava flows and intrusions We hold leases over the land from the Western Australian Government. The key leases have expiry dates between 2019 and 2030. Further renewals are at the government s discretion. In June 2005, we gained control of Nickel West (Leinster, Mt Keith and Cliffs) as part of the acquisition of WMC. Power at Leinster nickel operations is primarily derived from on-site third party gas-fired turbines. Gas for these turbines is sourced by us from the North West Shelf gas fields. The existing gas

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Name, location, mineralisation style, type of mine and access Open-cut and underground mines	Ownership, operation and title/lease	History	Facilities and power source
			supply contract expires in 2013.
The mine is accessible by government-owned road and rail.			
Nickel concentrate is shipped by road and rail to the Kalgoorlie smelter.			The gas is transported through the Goldfields Gas Pipeline, pursuant to an agreement with Southern Cross Pipeline Australia that expires in 2037.
Cliffs	We own and operate the mine at Cliffs.	Production commenced in 2008.	Power at our Cliffs mining operations is primarily derived from Mt Keith s on-site third party gas-fired turbines. Gas
430 km north of Kalgoorlie in Western Australia, Australia	We hold leases over the land from the Western Australian Government. The key leases have expiry dates between 2025	In June 2005, we gained control of Nickel West (Leinster, Mt Keith and Cliffs) as part of the acquisition of WMC.	for these turbines is sourced by us from the North West Shelf gas fields. The existing gas supply contract expires in 2013.
Steeply dipping massive textured nickel-sulphide mineralisation,	and 2026. Further renewals are at the government s discretion.		
ultramafic lava flows			The gas is transported through the Goldfields Gas Pipeline, pursuant to an agreement with Southern Cross Pipeline Australia that expires in 2037.
Underground mine			
The mine is accessible by private road.			
Nickel ore is transported by road to the Leinster nickel operations for further processing.			
Ravensthorpe	We own and operated the mine at Ravensthorpe.	We announced approval of the Ravensthorpe Nickel Development Project in March 2004.	Ravensthorpe s processing plant has a capacity of up to 50,000 tpa of contained nickel and 1,400 tpa of cobalt.
155 km west of Esperance, Western Australia, Australia	We hold 21-year leases over the land from the Western Australian Government. Expiry dates of the key leases range between 2019 and 2025. Further renewals are at the government s	Ravensthorpe was officially opened in May 2008.	Ravensthorpe is a fully integrated operation, able to provide its own power.

Nickel-laterite mineralisation formed discretion. from residual weathering of metamorphosed ultramafic lava flows and associated intrusions

Open-cut mine

The mine is accessible by government-owned road.

We announced indefinite suspension of the operation in January 2009.

We are evaluating future options for this asset, which includes a potential divestment. Ravensthorpe nickel operation uses the enhanced pressure acid leach (EPAL) process, which combines pressure acid leaching and atmospheric leaching to recover nickel and cobalt from laterite ores, producing MHP.

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Name, location, mineralisation style, type of mine and access Cerro Matoso	Ownership, operation and title/lease We own 99.94% of CMSA. 0.06% is held by employees.	History Mining commenced in 1980 and nickel production started in 1982 under Colombian Government, BHP Billiton and Hanna Mining ownership.	<b>Facilities and power source</b> The ferronickel smelter and refinery are integrated with the mine.
Montelibano, Córdoba, Colombia Nickel-laterite mineralisation formed from residual weathering of ophiolitic peridotite	Existing mining concession rights are renewable in 2012 with a 30-year extension period until 2042. Further extension is possible at that time.	In 1989, we increased our ownership to 53%, in 1997 to 99.8% and in 2007 to 99.94%.	Beneficiation plant for the mine consists of a primary and secondary crusher, which is sent to a stacker for ore stockpiling and blending.
Open-cut mine The mine is accessible by public	Land on which reserves are located is owned.	In 1999, an expansion project to double installed capacity was started, and in January 2001 the first metal was tapped from this second line.	Process design capacity is 50,000 tpa of nickel in ferronickel form. Actual capacity depends on nickel
highway.			grade from the mine. Electricity is supplied from the national grid based on supply contracts negotiated for five-year periods. The existing electricity supply contract terminates in December 2010.
Information on Stainless Steel Mater	ials smelters, refineries and proces	ssing plants	A pipeline supplies domestic natural gas for drier and kiln operation. The existing gas supply contract terminates in 2011.
Operation and location Kambalda nickel concentrator	Ownership, operation and title We own and operate the Kambalda nickel concentrator and hold mineral leases over the land from the Western Australian government that	<b>Plant type/product</b> Mill and concentrator plant producing concentrate containing approximately 13% nickel.	<b>Capacity and power source</b> The Kambalda concentrator has a capacity of approximately 1.6 mtpa of ore.
56 km south of Kalgoorlie, Western Australia, Australia	expire in 2028. Further renewals are at the government s		

discretion.

Operation and location	Ownership, operation and title Ore is sourced through tolling and concentrate purchase arrangements with third parties in the Kambalda region.	Plant type/product	<b>Capacity and power source</b> Power at the Kambalda concentrator is primarily derived from on-site third party gas-fired turbines. Gas for these turbines is sourced by us from the North West Shelf gas fields. The existing gas supply contract expires in 2013.
			The gas is transported through the Goldfields Gas Pipeline, pursuant to an agreement with Southern Cross Pipeline Australia that expires in 2037.
Kalgoorne nickel smelter	Kalgoorlie nickel smelter operation and hold freehold title over the property.	produces matter containing approximately 68% nickel.	capacity of 110,000 tpa of nickel matte.
Kalgoorlie, Western Australia, Australia			Power at the Kalgoorlie smelter is primarily derived from on-site third party gas-fired turbines. Gas for these turbines is sourced by us from the North West Shelf gas fields. The existing gas supply contract expires in 2013.
			The gas is transported through the Goldfields Gas Pipeline, pursuant to an agreement with Southern Cross Pipeline Australia that expires in 2037.
Kwinana nickel refinery 30 km south of Perth, Western	We own and operate the Kwinana nickel refinery operation and hold freehold title over the property.	The refinery uses the Sherritt-Gordon ammonia leach process to convert nickel matte from the Kalgoorlie nickel smelter into LME-grade nickel briquettes and nickel powder.	The Kwinana nickel refinery has a capacity of approximately 65,000 tpa of nickel metal.
Australia, Australia		-	Power generated by Southern Cross Energy in the goldfields is distributed across Western Power s

	Ownership, operation and		
Operation and location	title	Plant type/product The refinery also produces a number of intermediate products, including copper sulphide, cobalt-nickel sulphide and ammonium sulphate.	<b>Capacity and power source</b> network for use at the Kwinana nickel refinery.
			The existing gas supply contract terminates in 2013.
Yabulu	During FY2009, we owned and operated Yabulu and held freehold title over the refinery property.	Yabulu consists of a laterite nickel refinery and cobalt refinery.	The Yabulu refinery has an annual production capacity of approximately 76,000 t of nickel and 3,200 t of cobalt.
25 km northwest of Townsville, Queensland, Australia			
	In July 2009, we announced the sale of the Yabulu nickel refinery. The sale was completed on 31 July 2009.		

## **Development projects**

#### Cerro Matoso expansion options

Cerro Matoso has undertaken conceptual studies on options for expanding production, including a heap leaching operation. A completed feasibility study and Board approval would be required before any project based on these studies proceeds.

#### Mt Keith Talc co-processing

We have recently completed a feasibility study into upgrading the existing concentrator facilities at Mt Keith to enable it to process talcose ore to supplement the current ore supply. The general scope of this project is the installation of additional grinding and flotation equipment within the existing circuits at Mt Keith and the addition of a high magnesium oxide concentrate flotation circuit. If approved, this project will allow us to treat talcose ores, which make up approximately 15 per cent of the Mt Keith orebody, and which have previously not been able to be economically processed with the existing processing technology.

#### 2.2.7 Iron Ore Customer Sector Group

Our Iron Ore CSG consists of our Western Australia Iron Ore (WAIO) business and a 50 per cent interest in the Samarco joint venture in Brazil.

#### Western Australia Iron Ore

WAIO s operations involve a complex integrated system of seven mines and more than 1,000 kilometres of rail and port facilities, all located in the Pilbara region of northern Western Australia.

In response to increasing demand for iron ore, we have been expanding our WAIO operations. Since 2001, we have completed five expansion projects to increase our system production capacity from 69 million tonnes per annum to 129 million tonnes per annum (100 per cent basis). All of these projects have been completed on time and on budget. We now have two projects under construction to further increase system capacity to 205 million tonnes per annum (100 per cent basis). Additional projects now undergoing pre-feasibility or

feasibility studies would, if approved and completed on schedule, increase system capacity to 300 million tonnes per annum by 2015 (100 per cent basis). Our share of FY2009 production was 106.1 million tonnes of ore.

Our Pilbara reserve base is relatively concentrated, allowing us to plan our development around a series of integrated mining hubs joined to the orebodies by conveyors or spur lines. The mining hub approach enables us to maximise the value of installed infrastructure by using the same processing plant and rail infrastructure for a number of orebodies. Blending ore at the hub gives us greater flexibility to respond to changing customer requirements and changing properties in the ore being mined, as well as reducing the risk of port bottlenecks.

In conjunction with our capacity expansion, we have continued to explore and refine our understanding of existing tenements. Our proven ore reserves are high-grade, with average iron content ranging from 57.2 per cent at Yandi to 63.6 per cent at Mt Newman. The reserves lives of our mines at current production levels range from 13 years at Mt Goldsworthy (Area C) to 92 years at Jimblebar.

Most of our sales take place under long-term volume contracts with steel producers in Asia. Prices are generally set through annual negotiations. In the longer term, we are promoting a shift away from annually negotiated prices to a system based on transparent market-indexed prices.

#### Samarco

We are a 50-50 joint venture partner with Vale at the Samarco operations in Brazil. During the 2008 fiscal year, Samarco completed an expansion project consisting of a third pellet plant, a mine expansion, a new concentrator, port enhancements and a second slurry pipeline. Our share of production in FY2009 was approximately 8.3 million tonnes of ore. Samarco has a mine life of 39 years at current production rates.

During FY2009, market conditions required Samarco to operate its three pellet plants intermittently in response to decreased global demand for pellet production. Operations are continually monitored to ensure that utilisation of all pellet plants are optimised.

#### Information on Iron Ore mining operations

The following table contains additional details of our mining operations. This table should be read in conjunction with the production (see section 2.3.2) and reserve tables (see section 2.14.2).

Name, location, mineralisation style, type of mine and access Mt Newman joint venture	Ownership, operation and title/lease We hold an 85% interest in the Mt Newman joint venture. The other 15% is held by Mitsui	<b>History</b> Production began at the Mt Whaleback orebody in 1969.	<b>Facilities and power source</b> At Mt Whaleback, primary and secondary crushing plants (capacity of 30 mtpa): a heavy
Pilbara region, Western Australia, Australia	ITOCHU Iron (10%), ITOCHU Minerals and Energy of Australia (5%).	Production continues to be sourced from the major Mt Whaleback orebody,	(capacity of 50 mpa), a neavy media beneficiation plant (capacity of 8 mtpa) and a train-loading facility.
Mt Newman joint venture iron ore products are derived from bedded ore types. These are classified as per the host Archaean or Proterozoic iron formation, which are Brockman, Marra Mamba and Nimingarra.	We are the operators of the Mt Whaleback orebody. Independent contractors operate the mining of orebodies 18, 23, 25, 29 and 30.	from orebodies 18, 23, 25, 29 and 30.	At orebody 25, an additional primary and secondary crushing plant (capacity of 10 mtpa).
Open-cut mine	Mining lease under the Iron Ore (Mt Newman)		A crusher and train-loading facility at orebody 18.

The mine is accessible by public road and Company-

Name, location, mineralisation style, type of mine and access owned rail to the joint venture s Nelson Point shipping facility at Port Hedland.	Ownership, operation and title/lease Agreement Act 1964, this expires in 2030 with the right to successive renewals of 21 years.	History	<b>Facilities and power source</b> Power comes from Alinta Dewap s Newman gas-fired power station via Company-owned powerlines under long-term contracts.
Yandi joint venture Pilbara region, Western Australia,	We hold an 85% interest in the Yandi joint venture. The other 15% is held by Mitsui Iron Ore Corporation (7%), ITOCHU Minerals and Energy of Australia (8%).	We began development of the orebody in 1991. The first shipment occurred in 1992.	Two processing plants and a primary crusher and overland conveyor are used to crush and screen ore and deliver it to one of two train-loading facilities.
Australia Yandi joint venture iron ore products are derived from bedded and channel ore types. Bedded ores are classified as per the host Proterozoic banded iron formation names, which for Yandi is Brockman and Channel Iron Deposits are Cainozoic fluvial sediments.	An independent contract mining company is the operator of the mine. Mining lease under the Iron Ore (Marillana Creek) Agreement Act 1991 expires in 2012 with renewal right to a further 42 years.	Capacity was progressively expanded between 1994 and 2003 and is currently in excess of 42 mtpa.	Power comes from Alinta Dewap s Newman gas-fired power station via Company-owned powerlines under long-term contracts.
Open-cut mine			
The mine is accessible by public road and Company-owned rail to the Finucane Island shipping facility and Nelson Point shipping facility at Port Hedland.			
Our railway spur links Yandi mine to the Newman main line.			
Jimblebar	We own 100% of the Jimblebar lease. We have a sublease agreement over the Wheelara deposit with ITOCHU Minerals and Energy of Australia Mitsui	Production at Jimblebar began in March 1989.	Primary and secondary crushing plant (capacity of 13.9 mtpa).
Pilbara region, Western Australia, Australia	Iron Ore and four separate subsidiaries of Chinese steelmakers. As a consequence of this arrangement, we are entitled to 85% of production	The ore currently being produced is blended with ore produced from Mt Whaleback and satellite orebodies 18, 23,	Power comes from Alinta Dewap s Newman gas-fired power station via
Jimblebar iron ore products are derived from bedded ore types. These are classified based on the host	from the Wheelara sublease.	25, 29 and 30 to create the Mt Newman blend.	Company-owned powerlines under long-term contracts.
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Archaean or Proterozoic banded iron formation names, which are Brockman and Marra Mamba. An independent contract mining company is the operator of the mine.

Open-cut mine

The mine is accessible by public road and Company-owned rail to Port Hedland via a 32 km spur line

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Name, location, mineralisation style, type of mine and access linking with the main Newman to Port Hedland railway.	Ownership, operation and title/lease Mining lease under the Iron Ore (McCamey s Monster) Agreement Authorisation Act 1972 expires in 2030 with the rights to successive renewals of 21 years.	History	Facilities and power source
<b>Mt Goldsworthy joint venture</b> Pilbara region, Western Australia, Australia	We hold an 85% interest in the Mt Goldsworthy joint venture. The other 15% is held by Mitsui Iron Ore Corporation (7%) and ITOCHU Minerals and Energy of Australia (8%).	Operations originally commenced at the Mt Goldsworthy project in 1966 and the Shay Gap mine in 1973. The original mine closed in 1982 and the associated Shay Gap mine closed in 1993. Mining at the Nimingarra mine ceased in 2007 and has since continued from the	The primary crushers at Yarrie and Nimingarra, with a combined capacity of 8 mtpa, have been placed into care and maintenance. Yarrie is currently using mobile in-pit crushing plant at a rate of 2 mtpa.
Mt Goldsworthy joint venture iron ore products are derived from bedded ore types. These are classified as per the host Archaean or Proterozoic iron formation names, which are Brockman, Marra Mamba and Nimingarra.	An independent contract mining company is the operator of the mine. Four mineral leases under the Iron Ore (Mt Goldsworthy) Agreement Act 1964 and the	adjacent Yarrie area. We opened Area C mine in 2003.	An ore processing plant, primary crusher and overland conveyor are located at Area C with capacity of 42 mtpa.
Open-cut mine includes Area C, Yarrie and Nimingarra.	Iron Ore (Goldsworthy Nimingarra) Agreement Act 1972, which have expiry dates between 2014 and 2028 with rights to successive renewals of 21 years.		Power for Yarrie and Nimingarra is sourced via overhead powerlines from the Port Hedland gas-fired powered station operated by Alinta Dewap under long-term contracts.
The mine is accessible by public road and Company-owned rail to the joint venture s Finucane Island shipping facilities and the Nelson Point shipping facilities, both located at Port Hedland.	A number of smaller mining leases granted under the Mining Act 1978 in 2005.		Area C sources its power from the Newman gas-fired power station also operated by Alinta Dewap under long-term contracts.
Our railway spur links Area C mine to the Newman main line.			
Samarco Southeast Brazil	We own 50% of Samarco. The other 50% is owned by Vale. Samarco is operated as an independent business with its own management team.	Production began at the Germano mine in 1977 and at the Alegria complex in 1992. The Alegria complex has now replaced the depleted Germano mine.	There are two 396 km iron ore slurry pipelines integrating the mining complex to pellet plants.
Samarco iron ore products are derived from Itabirites (metamorphic	The Brazilian Government has granted mining concessions to Samarco as long as it mines the		With the addition of the third pellet plant expansion, Samarco has the capacity to process and pump a total of 24 mtpa of ore
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quartz-hematite rock) and friable hematite ores.

Alegria

An expansion occurred in 1997 when a second pellet plant was built. In 2005, an optimisation project increased pellet concentrate and produce and ship approximately

Open-cut mine

The mine is accessible by public road. Conveyor belts transport iron ore to the

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Name, location, mineralisation style, type of mine and access beneficiation plant and a 396 km slurry pipeline transports pellet feed to the pellet plants on the coast.	Ownership, operation and title/lease complex according to an agreed plan.	<b>History</b> feed and pellet production.	<b>Facilities and power source</b> 21.6 mtpa of pellets (100% basis).
Iron pellets are exported via private port facilities.		The most recent expansion occurred in 2008 when a third pellet plant was built as well as a second pipeline. Current capacity, on a 100% basis, is 21.6 mtpa.	Samarco holds interests in two hydro-electric power plants. These plants furnish approximately 19.2% of Samarco s electricity requirements.
			Samarco has signed two

Samarco has signed two agreements expiring in 2014 to purchase remaining power needs from two local concessionaires that operate other hydro-electric power plants.

#### **Development projects**

#### Western Australia Iron Ore

Construction of Rapid Growth Project (RGP) 4 is continuing. This project was approved in March 2007 and is designed to deliver an additional 26 million tonnes per annum of capacity, bringing the total installed capacity of our WAIO operations to 155 million tonnes per annum (100 per cent share). The projected cost of RGP 4 is US\$1,850 million.

The Board approved project expenditure of US\$4.8 billion in November 2008 for RGP 5. The focus of this expansion project is to substantially double track the Newman mainline rail and construct two new shipping berths on the Finucane Island side of the Port Hedland harbour. RGP 5 is expected to increase the installed capacity of our WAIO operations by a further 50 million tonnes per annum to 205 million tonnes per annum (100 per cent share). The additional mine capacity will be predominantly at Yandi (40 million tonnes per annum) with the 10 million tonnes per annum balance coming from the Area C and Newman mines.

#### Western Australia Iron Ore Rio Tinto Joint Venture

On 5 June 2009, we signed a non-binding agreement with Rio Tinto to form a 50-50 production joint venture combining the economic interests of both companies current and future iron ore assets in Western Australia. We are progressing the development of definitive agreements with Rio Tinto based on the announced agreed principles and intend to sign these documents as soon as practicable.

The joint venture offers a unique opportunity to capture substantial production and development synergies from the companies overlapping world-class resources. These synergies are anticipated to come from:

combining adjacent mines into single operations;

reducing costs through shorter rail hauls and more efficient allocations of port capacity;

blending opportunities which will maximise product recovery and provide further operating efficiencies;

optimising future growth opportunities through the development of consolidated, larger and more capital efficient expansion projects; and

combining the management, procurement and general overhead activities into a single entity. The non-binding agreement provides, in addition to other matters, that:

the joint venture will operate as a cost centre and deliver iron ore to each company to market independently (except for 10 to 15 per cent of the joint venture volumes that will be sold on the spot market);

in order to equalise the value of the two economic interests, BHP Billiton will, subject to finalisation adjustments, invest US\$5.8 billion at financial close; and

senior management of the entity will be determined jointly on the basis of the best person for the job with broadly equal initial participation from BHP Billiton and Rio Tinto.

It is intended that BHP Billiton s Iron Ore President, Ian Ashby, will be appointed as the initial Chief Executive Officer of the joint venture, while Sam Walsh, currently Rio Tinto s Chief Executive Iron Ore will be appointed as initial Chairman of the non-executive owners council.

Formation of the joint venture is expected to be completed by mid-2010. Pre-conditions for formation of the joint venture include receipt of regulatory and relevant governmental clearances and approval from the shareholders of both Rio Tinto and BHP Billiton.

#### West Africa

We are currently carrying out exploration activities and concept studies in Guinea at our Nimba deposit to determine the economic viability, sustainability impacts and management implications of a potential mine development in this area. In addition, we are carrying out exploration activities on various exploration leases we hold in Liberia.

#### 2.2.8 Manganese Customer Sector Group

Our Manganese operations produce a combination of ores, alloys and metal from sites in South Africa and Australia. We are the world s largest producer of seaborne manganese ore and among the top three global producers of manganese alloy.

Manganese alloy is a key input into the steelmaking process. Our high-grade ore is particularly valuable to alloy producers because of the value in use differential over low-grade ore, which is the degree to which high-grade ore is proportionately more efficient in the alloying process than low-grade ore.

Although our corporate strategy is to focus on upstream resources businesses, our low-cost alloy smelters have been significant contributors to our profit in recent years. In addition, they add value to the overall manganese business because they enable us to access markets with an optimal mix of ore and alloy, optimise production to best suit market conditions and give us insights into the performance of our ores in smelters.

Approximately 80 per cent of our ore production is sold directly to external customers and the remainder is used as feedstock in our alloy smelters.

We own and manage all of our manganese mining assets and alloy plants through a 60-40 joint venture with Anglo-American. The joint venture assets are Samancor Manganese, which owns Hotazel Manganese Mines (HMM) and Metalloys, both situated in South Africa and the Groote Eylandt Mining Company (GEMCO) and Tasmanian Electro Metallurgical Company (TEMCO) located in Australia. In July 2009, Samancor sold 26 per cent of HMM in a series of transactions designed to comply with South Africa's Black Economic Empowerment requirements.

The joint venture also owns 51 per cent of the Manganese Metal Company, which operates a manganese metal plant in South Africa. Our manganese metal and alloy sales are principally to carbon steelmakers.

### Mines:

#### Hotazel

HMM owns the Mamatwan open-cut mine and the Wessels underground mine. The ore contained in these mines requires only crushing and screening to create saleable product with no further upgrade steps required. These assets produced 2.1 million tonnes of ore during FY2009 and have opportunities for further expansion. In FY2009, production was reduced in response to lower demand as a result of the global economic slow down. At FY2008 production rates, Mamatwan and Wessels have reserve lives of 22 and 49 years.

#### GEMCO

As a result of its location near our own port facilities and its simple, open-cut mining operation, GEMCO is one of the lowest-cost manganese ore producers in the world. Simple operations combined with its high-grade of ore and relative proximity to Asian export markets make GEMCO unique among the world s manganese mines. GEMCO produced over 3.5 million tonnes of ore in FY2008. In FY2009, production was reduced to 2.3 million tonnes in response to lower demand. At a production rate of four million dry tonnes per annum, it has a reserve life of 14 years. The GEMCO expansion project was completed in FY2009 and we are studying other expansion options (see Development projects below).

#### **Alloy Plants:**

#### Metalloys

The Samancor Manganese Metalloys alloy plant is one of the largest manganese alloy producers in the world. Due to its size and access to high-quality feedstock from our Hotazel operations, it is also one of the lowest-cost alloy producers. Metalloys produces high and medium-carbon ferromanganese and silicomanganese. In FY2009, production rates were curtailed due to the global economic slowdown and 301,000 tonnes of alloy were produced.

#### TEMCO

TEMCO is a medium-sized, captive producer of high-carbon ferromanganese, silicomanganese and sinter using ore shipped from GEMCO, primarily using hydroelectric power. Like Metalloys, production rates were reduced compared with FY2008 and 212,000 tonnes of alloy were produced.

#### Information on Manganese mining operations

The following table contains additional details of our mining operations. These tables should be read in conjunction with the production (see section 2.3.2) and reserve tables (see section 2.14.2).

Name, location, mineralisation style, type of mine and access Hotazel Manganese Mines Ownership, operation and title/lease Hotazel Manganese Mines, a division of Samancor Manganese, is the owner of Mamatwan and Wessels. BHP Billiton is the operator of the

History Mamatwan was commissioned in 1964. Facilities and power source Mamatwan s capacity is currently 3.5 mtpa of ore and sinter based on the current product mix at the mine. The beneficiation plant consists of

Kalahari Basin, South Africa Mamatwan is an open-cut mine. mines.

Wessels was commissioned in 1973.

primary,

The ore occurs in Proterozoic volcanogenetic

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Name, location, mineralisation style, type of mine and access sediments associated with banded iron formation hosted by the Hotazel Formation Wessels is an underground mine. The mines are accessible by rail and public road. Most ore and sinter	Ownership, operation and title/lease To comply with the South African Mining Charter and scorecard, Samancor Manganese has entered into four transactions that have resulted in 26% Black Economic Empowerment ownership of Hotazel Manganese Mines. These transactions closed in July 2009.	History	<b>Facilities and power source</b> secondary and tertiary crushing with associated screening plants. There is a dense medium separator and a sinter plant with a capacity of 1 mtpa of sinter.
products are transported by government-owned rail. Approximately one third of the ore produced is beneficiated locally with the balance exported via Port Elizabeth and Durban.			Wessels has two loaders and four haulers with an annual capacity of approximately 1 mtpa of ore. The processing is a simple crushing and screening circuit consisting of primary and secondary crushing circuits with associated screening capacity.
			The power source is the national utility company Eskom.
Groote Eylandt Mining Company Pty Ltd (GEMCO) Groote Eylandt, Northern Territory,	We own 60% of GEMCO, which owns and operates the mine. The remaining 40% is owned by Anglo American.	The mine was first commissioned in 1965.	The beneficiation process consists of crushing, screening, washing and dense media separation with lump and fines products being produced. The existing capacity is 4.0 dry
Australia	All leases situated on Aboriginal land held under the Aboriginal		тера.
The ore occurs in partially supergene enriched stratiform Cretaceous sandstone claystone associated type sedimentary orebodies	Land Rights (Northern Territory) Act 1976. Leases have been renewed for a period of 25 years from 2006.		GEMCO owns and operates its own on-site diesel power generation facility.
Open-cut mine			

Ore is transported from the concentrator by road train directly to our shipping facilities at the port at Milner Bay.

## Information on Manganese smelters, refineries and processing plants

Operation and location	Ownership, operation and title	Plant type/product	Capacity and power source
Manganese Metal Company (Pty) Ltd	Samancor Manganese owns 51% of Manganese Metal Company. Delta Plc indirectly owns the remaining 49%.	A manganese production plant at Nelspruit processing and electrowinning of manganese ore into electrolytic manganese metal (via a selenium-free hydrometallurgical electroplating extraction process).	Manganese Metal Company has a capacity to produce 27,000 tpa of electrolytic manganese metal.
	Manganese Metal Company holds freehold title over the property, plant and equipment.		The power source is from Eskom.
Metalloys	Metalloys is a division of Samancor Manganese.	The manganese alloy plant uses eight electric arc furnaces to produce manganese alloys such as high carbon farromanganese	370,000 tpa of high-carbon ferromanganese (including hot metal), 120,000 tpa of silicomanganese and 82 000 tpa
Meyerton, South Africa	Samancor Manganese holds freehold title over the property, plant and equipment.	and silicomanganese and an oxygen blast converter process producing refined (medium-carbon ferromanganese) alloy.	of medium-carbon ferromanganese in various fractions.
			The power source is the national utility company Eskom plus 30 MW of internal power generated from waste heat.
Tasmanian Electro Metallurgical Company Pty Ltd (TEMCO)	We own 60% of TEMCO. Anglo American owns the remaining 40%.	Four electric arc furnaces and a sinter plant produce ferroalloys, including high-carbon ferromanganese, silicomanganese and sinter.	Nominal capacity based on the 2008 product mix is 147,000 tpa of high-carbon ferromanganese, 115,000 tpa of silicomanganese and 341,000 tpa of sinter.
Bell Bay, Tasmania, Australia	TEMCO holds freehold title over the property, plant and equipment		
			TEMCO sources its electrical power from Aurora Energy, the state-owned power distribution and retailing company. Power in Tasmania is principally generated from hydro stations, but supplemented with a 240 MW gas generation station. TEMCO also self-generates 11 MW for

internal use from an on-site energy recovery unit.

### **Development projects**

#### **GEMCO** expansion

The expansion of the GEMCO s processing plant by an estimated one million tonnes per annum at a cost of US\$93 million (BHP Billiton share) was completed in the FY2009. This project was delivered on time and under budget. We are undertaking a pre-feasibility study into further expansion options. The project commissioning is under way and will continue into the first quarter of FY2010.

#### **Hotazel Manganese Mines**

Two expansion projects in South Africa are expected to add one million tonnes per annum of capacity (100 per cent, or about 0.6 million tonnes per annum BHP Billiton share) for an estimated capital expenditure of US\$55 million (BHP Billiton share).

#### 2.2.9 Metallurgical Coal Customer Sector Group

Our Metallurgical Coal CSG is the world s largest supplier of seaborne metallurgical coal. Metallurgical coal, along with iron ore and manganese, is a key input in the production of steel.

We have production assets in two major resource basins: the Bowen Basin in Central Queensland, Australia and the Illawarra region of New South Wales, Australia. We are currently reviewing options in relation to a significant basin at Maruwai on the Indonesian island of Borneo in the East Kalimantan province, where we ceased exploration and development works in June 2009.

#### **Bowen Basin**

In comparison with other coal producing regions, the Bowen Basin is extremely well positioned to supply the seaborne market because of:

its high-quality metallurgical coals, which are more efficient in blast furnace use

the relatively low cost of production because of its extensive near-surface deposits

its geographical proximity to Asian customers.

We have access to key infrastructure, including a modern, integrated electric rail network and our own coal loading terminal at Hay Point, Mackay. This infrastructure enables us to maximise throughput and blending products from multiple mines to optimise the value of our production and satisfy customer requirements.

Our Bowen Basin mines are owned through a series of joint ventures. We share 50-50 ownership with Mitsubishi Development Pty Ltd of BHP Billiton Mitsubishi Alliance (BMA), which operates the Goonyella Riverside, Peak Downs, Saraji, Norwich Park, Blackwater and Gregory Crinum mines, together with the Hay Point terminal. We own 80 per cent of the South Walker Creek and Poitrel mines, with Mitsui and Co. owning the other 20 per cent. All operations are managed by BMA. The reserve lives of the Bowen Basin mines at current production rates range from seven years to 66 years.

We export Bowen Basin metallurgical coal under long-term or annual volume contracts with prices negotiated yearly. Our customers are steel producers around the world, particularly in Asia and India.

Total attributable production in FY2009 was approximately 30.1 million tonnes, compared with 27.9 million tonnes in FY2008. Production in FY2008 was affected by two episodes of heavy rain and flooding.

#### Illawarra

We own and operate three underground coal mines in the Illawarra region of New South Wales, which supply metallurgical coal to the nearby BlueScope Port Kembla steelworks, and domestic and export markets

under contracts with annually negotiated prices. Total production in FY2009 was approximately 6.3 million tonnes and the reserve lives of the Illawarra mines at current production rates range from five years to 14 years.

Production figures for both the Bowen Basin and Illawarra include some energy coal (less than 7 per cent and 11 per cent, respectively).

### Information on Metallurgical Coal mining operations

The following table contains additional details of our mining operations. The tables should be read in conjunction with the production (see section 2.3.2) and reserves tables (see section 2.14.2).

Name, location, mineralisation style, type of mine and access Central Queensland Coal Associates joint venture	Ownership, operation and title/lease We own 50% of the CQCA joint venture. Mitsubishi owns the other 50%.	<b>History</b> Goonyella mine, which commenced in 1971, merged with the adjoining Riverside mine in 1989 and is operated as the Goonyella Riverside mine. Reserves at the Riverside mine	<b>Facilities and power source</b> All coal is beneficiated at on-site processing facilities, which have a combined capacity in excess of 53.5 mtpa.
Bowen Basin, Queensland, Australia	BMA operates the mines.	were depleted in 2005.	
Produces a range of products from high-quality, low volatile hard coking coal with high vitrinite content, to medium volatile hard coking to weak coking coal, and some medium ash thermal coal. Seams currently mined are from the Moranbah Coal Measures and are commissed of lawared fine to medium	Leases for the CQCA mines have expiry dates between 2009 and 2037 and are renewable for such further periods as the Queensland Government allows.	Peak Downs commenced production in 1972. Saraji mine commenced production in 1974. Norwich Park commenced production in 1979.	Power is sourced from the State of Queensland s electricity grid.
grade sedimentary units intermixed with coal.	The joint venture holds additional undeveloped leases in the Bowen Basin.	Blackwater mine commenced production in 1967. South Blackwater and Blackwater mines were integrated from late 2000.	
Goonyella Riverside, Peak Downs, Saraji, Norwich Park and Blackwater are open-cut mines. Broadmeadow is a longwall underground mine.		Broadmeadow, an underground mine developed on the Goonyella mining lease, commenced longwall operations	
The mines are accessible by public road. All coal is transported on government-owned railways to the port of Hay Point near Mackay (incorporating CQCA s Hay Point Coal Terminal and the Dalrymple Bay Coal Terminal) and the port of Gladstone.		in 2005.	

Name, location, mineralisation style, type of mine and access Gregory joint venture

Bowen Basin, Queensland, Australia

Ownership, operation and title/lease We own 50% of the Gregory joint venture. Mitsubishi owns the other 50%.

BMA operates the mines.

Leases have expiry dates

renewable for such further

periods as the Oueensland

Government allows.

between 2013 and 2027, and are

History The Gregory mine became operational in 1979.

Crinum mine commenced longwall production in 1997.

**Facilities and power source** All coal is beneficiated at on-site processing facilities, which have a combined capacity in excess of 5 mtpa.

Power is sourced from the State of Queensland s electricity grid.

Produces a high volatile, low ash hard coking coal, and a medium ash thermal coal. Mining is limited to the Lilyvale (German Creek) Seam, which grades to the Moranbah Coal Measures, primarily composed of layered fine to medium grained sedimentary units intermixed with coal.

Gregory is an open-cut mine. Crinum is a longwall underground mine.

The mines are accessible by public road. All coal is transported on government-owned railways to the port of Hay Point near Mackay (incorporating CQCA s Hay Point Coal Terminal and the Dalrymple Bay Coal Terminal) and the port of Gladstone.

### BHP Mitsui Coal Pty Limited

Bowen Basin, Queensland, Australia

Produces a range of coking coal, pulverised coal injection (PCI) coal, and thermal coal products with medium to high phosphorus and ash properties. The Rangal Coal Measures are the main economic stratum and are comprised of layered sedimentary formations. We own 80% of BHP Mitsui Coal Pty Limited. Mitsui and Co owns the other 20%.

BMA manages the mines, which are operated through independent contractors.

Leases have expiry dates between 2010 and 2020, and are renewable for such further periods as the Queensland Government allows. South Walker Creek became operational in 1996, producing PCI product and minor quantities of thermal coal.

Construction for the Poitrel mine commenced in early 2006 and first coal was produced in October 2006. South Walker Creek coal is beneficiated at on-site processing facilities with a capacity to produce 3.5 mtpa of coal.

Poitrel mine has a joint venture agreement (Red Mountain Joint Venture) with the adjacent Millennium Coal mine to share coal processing and rail loading facilities. Poitrel has access to 3.0 mtpa capacity from the processing facilities. South Walker Creek and Poitrel are open-cut mines.

BHP Mitsui Coal Pty Limited holds additional undeveloped leases in the Bowen Basin. Power is sourced from the State of Queensland s electricity grid.

Name, location, mineralisation style, type of mine and access The mines are accessible by public road. All coal is transported on government-owned railways to the port of Hay Point near Mackay (incorporating CQCA s Hay Point Coal Terminal and the Dalrymple Bay Coal Terminal).	Ownership, operation and title/lease	History	Facilities and power source
Illawarra Coal	We are owner and operator of the Illawarra Coal mines.	Appin commenced in 1962 with longwall mining starting in 1969.	Coal is beneficiated at two processing facilities with a capacity to produce approximately 8.0 mtpa.
Illawarra, New South Wales,			
Australia Produces premium quality hard	Leases have expiry dates between 2010 and 2026, with renewal rights under the NSW Mining Act 1992 for periods of 21 years.	West Cliff was commissioned in 1976.	Power is sourced from the State of New South Wales electricity grid.
coking coal and some thermal coal from the Wongawilli and Bulli seams contained in layered sedimentary formations.		Dendrobium Mine opened in 2005.	

Dendrobium, Appin and West Cliff are all underground mines.

All the mines are accessible by public road. All coal is transported by road or on government-owned railways to our major customer, BlueScope Steel s Port Kembla steelworks, or to Port Kembla for export. **Development projects** 

#### Maruwai (Lampunut, Indonesia)

In June 2009, we announced our intention not to proceed with the Haju trial mine as it was determined that the project was not a sufficient fit with the Company s long-term investment strategy. Work on the Lampunut feasibility study has also ceased while other activities are under review. Further evaluation of our remaining interests is under way to determine the best future commercial options.

### **Bowen Basin Expansions**

BMA is currently investigating a number of brownfield and greenfield expansion options in the Bowen Basin, including:

Daunia Coal Mine (greenfield project)

Caval Ridge Mine (greenfield project)

Goonyella Riverside Mine Expansion (brownfield project).

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Daunia, located to the east of the Poitrel mine, has been designed with capacity to produce four million tonnes per annum, and the production capacity of Caval Ridge, located to the north of the Peak Downs mine, would be up to 5.5 million tonnes per annum (100 per cent, or 2.75 million tonnes per annum BHP Billiton share) in addition to potential expansion of Peak Downs mine of 2.5 million tonnes per annum (100 per cent, or 1.25 million tonnes per annum BHP Billiton share). Both developments would include coal handling preparation plants. We are assessing the optimal time to advance these projects and we are continuing to progress the statutory and owner approvals for our growth projects.

In September 2008, BMA acquired the New Saraji exploration project from New Hope for approximately US\$1 billion (BHP Billiton share). This project is located to the east of the Saraji mine and is now known as Saraji East.

#### 2.2.10 Energy Coal Customer Sector Group

Our Energy Coal CSG is one of the world s largest producers and marketers of export energy coal (also known as thermal or steaming coal) and is also a significant domestic supplier to the electricity generation industry in Australia, South Africa and the United States. Our global portfolio of energy coal assets, our insights into the broader energy market through our sales of other fuels such as gas, uranium and oil, and our control of options for bulk freight provide our business with key advantages as a supplier. Like our other businesses, our Energy Coal CSG owns large, long-life assets with substantial options for expansion.

We generally make our domestic sales under long-term fixed-price contracts with power stations that are located in close proximity to the mine. We make export sales to power generators and some industrial users in Asia, Europe and the United States, usually under contracts for delivery of a fixed volume of coal. Pricing is either index-linked, or fixed, in which case we use financial instruments to swap our fixed-price exposure for exposure to market indexed prices.

We recognise that the need to control carbon dioxide emissions has substantial implications for the use of thermal coal as an energy source. Our Company has committed to invest US\$300 million over the five years from June 2007 to support the research, development and demonstration of low-emissions technologies, including clean coal and carbon sequestration technologies. We have also developed the capacity to offer our export customers emissions credits in conjunction with their coal purchases.

We operate three sets of assets: a group of mines and associated infrastructure collectively known as BHP Billiton Energy Coal South Africa (BECSA); our New Mexico Coal operations in the United States; and our Hunter Valley Energy Coal operations in New South Wales, Australia. We also own a one-third share of the Cerrejón Coal Company, which operates a coal mine in Colombia.

#### **BHP Billiton Energy Coal South Africa**

BECSA operates three coal mines in the Witbank region of Mpumalanga province of South Africa, which produced a total of approximately 31.7 million tonnes in FY2009. We have two major mine expansion projects under way in South Africa (see Development projects below). In FY2009, BECSA sold approximately 73 per cent of its production to Eskom, the government-owned electricity utility in South Africa, and exported the rest via the Richards Bay Coal Terminal, in which we own a 24 per cent share. The reserve lives of the BECSA mines at current production rates range from 12 to 22 years.

#### New Mexico Coal

We own and operate the Navajo mine, located on Navajo land in New Mexico, and the nearby San Juan mine. Each of these mines transports its production directly to a nearby power station. The reserve lives of Navajo and San Juan at current production rates are 22 and 11 years, respectively. We are considering expansion options at Navajo (see Development projects below).

### Hunter Valley Energy Coal

Our Hunter Valley operating asset is the Mt Arthur open-cut coal mine, which produced approximately 11.8 million tonnes in FY2009 and has a reserve life at current production rates of 51 years. We also have projects in execution and pre-feasibility that if completed, will form part of the Hunter Valley Energy Coal portfolio (see Development projects below). In FY2009, we delivered approximately one-quarter of Mt Arthur s production to a local power station and exported the rest via the port of Newcastle.

#### Cerrejón Coal Company

Cerrejón Coal Company owns and operates the largest open-cut export coal mine in the world in La Guajira province of Colombia, together with integrated rail and port facilities through which the majority of production is exported. In FY2008, Cerrejón completed an expansion that increased capacity to 32 million tonnes per annum (100 per cent terms). At Cerrejón s current rate of production, Cerrejón has a reserve life of 23 years.

#### Information on Energy Coal mining operations

The following table contains additional details of our mining operations. The tables should be read in conjunction with the production (see section 2.3.2) and reserves tables (see section 2.14.2).

Name, location, mineralisation style, type of mine and access SOUTH AFRICA	Ownership, operation and title/lease	History	Facilities and power source
Khutala	We own and operate the mine at Khutala.	Khutala was commissioned in 1984.	Beneficiation facilities consist of a crushing plant, for the energy coal with a nominal capacity of 18 mtpa. A separate smaller crusher and
Province, South Africa	BECSA is the holder of an Old Order Mining Right.	Open-cut operations began in 1996.	wash plant with a nominal capacity of 0.6 mtpa is used to beneficiate the metallurgical coal supplied from the opencast operation.
Produces a medium rank bituminous thermal coal (non-coking)	An application for conversion to a New Order Mining Right, submitted in 2004, is still being processed (see	The mining of a thermal/metallurgical coal deposit for a domestic market commenced in 2003.	Power is supplied by Eskom under long-term contracts.
Combination of open-cut and underground mines. The mine is accessible by public roads.	government regulations, section 2.7).		
Domestic coal is transported via overland conveyor to the Kendal Power Station.			
Douglas/Middelburg	We own 84% of the Middelburg mine in a joint venture. The remaining 16% is owned by Xstrata Plc	Middelburg mine was commissioned in 1982. Middelburg Mine Services (MMS) and Duvha Opencast	Beneficiation facilities consist of the following: tips and crushing plants, two export wash plants, a middlings wash
20 km southeast of Witbank, Mpumalanga Province, South Africa	through Tavistock Collieries Plc (Tavistock).	FY1996.	The overall capacity is 30 mtpa.

Produces a medium rank bituminous thermal coal, most of which can be beneficiated for the European or Asian export market We are the operator of the mine.

Power is supplied by Eskom under long-term contracts.

Open-cut mine

BECSA and Tavistock are the joint holders of

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Name, location, mineralisation style, type of mine and access The mine is accessible by public roads. Export coal is transported to RBCT by rail, while the domestic coal is transported via conveyor belt to the nearby Duvha Power Station.	Ownership, operation and title/lease three Old Order Mining Rights in the joint venture ratio (84:16) and BECSA is the 100% holder of a fourth Old Order Mining Right. All four Old Order Rights were lodged for conversion in December 2008. BECSA and Tavistock have amended their joint venture agreement such that, upon conversion of the four Old Order Mining Rights, the mining area will be divided into an area wholly-owned and operated by Tavistock and an area wholly-owned and operated by BECSA as the new Middelburg mine.	History	Facilities and power source
	A number of regulatory approvals are being sought to give effect to this restructure.		
Klipspruit	We own and operate the mine at Klipspruit.	The project was approved by the Mpumalanga Department of Agriculture, Conservation and Environment in 2003. An	During 2009 the beneficiation facilities consisted of a tip and crushing plant, as well as an export wash plant 32 km from the mine. The ouerall connective
30 km west of Witbank, Mpumalanga Province, South Africa	BECSA is the holder of an Old Order Mining Right. An application for conversion to a New Order Mining Right	August 2003 as a truck and shovel contractor operation.	was 4.8 mtpa.
Produces a medium rank bituminous thermal coal, most of which can be beneficiated for the European or Asian export market	was submitted in 2004 and is still being processed (see government regulations, section 2.7).		These facilities were closed in early August 2009 and product diverted to the new Phola Plant that is currently being commissioned (see Development projects below).
Open-cut mine			
			Power is supplied by Eskom under long-term contracts.
Access to the mine is via public roads.			-

Export coal is transported to RBCT via Spoornet (a government business enterprise) railway.

Name, location, mineralisation style, type of mine and access AUSTRALIA	Ownership, operation and title/lease	History	Facilities and power source
Mt Arthur Coal	We own and operate the mine at Mt Arthur.	Coal production from the Mt Arthur area commenced in 2002.	Main beneficiation facilities include coal handling, preparation and washing plants with a total capacity of
Approximately 125 km from Newcastle, New South Wales, Australia	We hold various mining leases and licences that expire between March 2010 and April 2028.		9.8 mtpa. Washery by-pass coal is also sold.
Produces a medium rank bituminous thermal coal (non-coking)			Power is supplied by local energy providers, from the eastern Australia power grid.
Open-cut mine			
The mine is accessible by public road.			
Domestic coal is transported by an overland conveyor to Bayswater Power Station.			
Export coal is transported by a combination of private and public rail, approximately 125 km to the port of Newcastle.			
AMERICA			
BHP Navajo Coal Company	We own and operate the mine.	The mine has been in operation since 1963, and coal sales are contracted to July 2016.	The mine has the capacity to produce and process 7.7 mtpa. Mined coal is sized and blended to contract
30 km southwest of Farmington, New Mexico, US	The mine is subject to a long-term lease from the Navajo Nation. The lease continues for as long as coal		specifications using stackers and reclaimers with no further beneficiation.
Produces a medium rank bituminous thermal coal. (non-coking suitable for the domestic market only)	can be economically produced and sold in paying quantities.		Power is supplied from FCPP.
Navajo mine is accessible by public roads located on the Navajo Nation Indian Reservation. We transport all coal 25 km from the production areas via our dedicated railroad to the Four Corners Power Plant (FCPP).

San Juan/La Plata Mines	We own and operate the	The San Juan
	mines.	operating in 1
		mine. In Octo
		approved the
25 km west of Farmington, New Mexico,		the San Juan
US	We hold mining leases from	mine to repla
	federal and state	
	governments. The leases have	
	five-year terms that are	
	automatically	
Produces a medium rank bituminous thermal	2	
coal. (non-coking suitable for the domestic		
market only)		

The San Juan mine began operating in 1974 as a surface nine. In October 2000, we approved the development of he San Juan underground nine to replace production The mine has the capacity to produce 6.4 mtpa of coal. Mined coal is sized and blended to contract specifications using stockpiles with no further beneficiation.

Name, location, mineralisation style, type of mine and access The San Juan mine is accessible by public roads.	Ownership, operation and title/lease extendable upon meeting minimum production criteria.	History from the existing San Juan and La Plata surface mines. Coal sales are contracted to December 2017.	<b>Facilities and power source</b> The La Plata Mine reclamation was completed in November 2008.
Transport of coal to the San Juan Generating Station is by truck and conveyor belt.			
COLOMBIA			
<b>Cerrejón Coal Company</b> Maicao, La Guajira state, Colombia	We own 33.33% of the Cerrejón Coal Company in a joint venture. The remaining 66.67% interest is owned by Anglo American Plc (33.33%) and Xstrata Plc	The original mine began as a joint venture between Exxon s Intercor and the Colombian Government entity Carbocol in 1976. Over time, the partners have changed, nearby	Beneficiation facilities include a crushing plant with a capacity of 32 mtpa and a washing plant.
Produces a medium rank bituminous thermal coal (non-coking, suitable for the export market)	(33.33%). Mining leases expire in 2034.	operations have been merged and progressive expansion resulted in the current 32 mtpa operation.	Electricity is supplied through the local Colombian power system.

Open-cut mine

The export facility is 150 km northeast of the mine on the Caribbean coast at Puerto Bolivar and is connected to the mine by a single-track railway. Access to the mine is via public roads and by charter aircraft to the mine s airstrip. **Development projects** 

#### Klipspruit

We are expanding the production capacity of BECSA s Klipspruit mine by approximately 1.8 million tonnes per annum (export coal) and 2.1 million tonnes per annum (domestic coal). The project also involves the construction of a 16 million tonnes per annum coal processing plant on Klipspruit land as a 50-50 joint venture with Anglo Coal, which is constructing the Phola Coal Plant. First coal was produced in July 2009. Our share of the cost of the project is approximately US\$450 million. We expect the expanded mine to have a reserve life of approximately 12 years.

#### **Douglas-Middelburg Optimisation Project**

This project involves works to optimise the development of existing reserves across the Douglas and Middelburg collieries, the development of additional mining areas and the construction of a new 14 million tonnes per annum coal processing plant, which will replace the less efficient existing plant at Douglas. The work will enable us to maintain energy coal exports from the combined Douglas and Middelburg colliery at around current levels (approximately 10 million tonnes per annum) while also fulfilling our domestic contractual commitments. The expected capital investment is US\$975 million and the new plant is scheduled to receive its first coal in mid CY2010.

#### Navajo South

We are undertaking a feasibility study on a project called the Navajo Mine Extension project, which would expand the Navajo mine to supply a proposed new power station to be built immediately adjacent to the mine with up to 5.7 million tonnes per annum. The project schedule is tied to the approval process for the power station. The final air permit for the proposed power plant was issued by the United States Environmental Protection Agency on 31 July 2008. In April 2009, the US EPA filed a request with the Environmental Appeals Board to have the air permit remanded for further review. There has been no decision on this request to date. The timing of the Navajo Mine Extension Project will be dependent on the satisfactory resolution of the air permitting process.

#### Mt Arthur open-cut expansion

On 24 July 2009, we announced the Mt Arthur Coal (MAC) mine expansion, which is designed to increase production of saleable thermal coal from 11.5 million tonnes per annum to approximately 15 million tonnes per annum. Known as the MAC 20 Project, it is expected to commence operation in the first half of CY2011 at an estimated capital investment of US\$260 million.

#### Newcastle Third Export Coal Terminal

We are a 35.5 per cent shareholder in a joint venture company that is constructing a new 30 million tonnes per annum export coal loading facility to supplement existing public facilities in the port of Newcastle. Our share of the construction cost is estimated at US\$390 million. The first ship loading of coal is scheduled for CY2010.

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1	I

## 2.3 Production

## 2.3.1 Petroleum

The table below details our Petroleum CSG s historical net crude oil and condensate, natural gas and natural gas liquids production, primarily by asset, for each of the three years ended 30 June 2009, 2008 and 2007. We have shown volumes of marketable production after deduction of applicable royalties, fuel and flare. We have included in the table average production costs per unit of production and average sales prices for oil and condensate and natural gas for each of those periods.

	BHP Bil of Year 2009	BHP Billiton Group shar of production Year ended 30 June 2009 2008 2007	
Petroleum			
Crude oil and condensate ( 000 of barrels)			
Bass Strait	13,443	12,843	14,231
North West Shelf <sup>(1)</sup>	8,877	9,090	10,765
Stybarrow <sup>(2)</sup>	9,477	7,523	
Atlantis <sup>(3)</sup>	10,333	7,406	
Shenzi <sup>(4)</sup>	3.023	548	
Liverpool Bay & Bruce/Keith	3,122	3,640	4,656
ROD & Ohanet	7,356	6,722	7,591
Other Australia/Asia <sup>(5)</sup>	1,066	1,254	1,365
Other Americas <sup>(6)</sup>	9.631	8.418	6,560
		-, -	- ,
Total crude oil and condensate	66,328	57,444	45,168
Natural gas (billion cubic feet)			
Bass Strait <sup>(7)</sup>	108.20	123 93	114 50
North West Shelf <sup>(1)(7)</sup>	123.40	108 49	105 49
Atlantis <sup>(3)</sup>	5.68	3 73	105.17
Shenzi <sup>(4)</sup>	0.77	0.14	
Liverpool Bay & Bruce/Keith	34.27	45.21	53.27
Other Australia/Asi $a^{(5)}$	85.02	78 47	74.83
Other Americas <sup>(6)</sup>	7.52	8.05	8 73
Outer Americas	1.52	8.05	0.75
Total natural gas	364.86	368.02	356.82
Natural Gas Liquids ( 000 of barrels) (7)			
Bass Strait	6,358	7,755	7,756
North West Shelf <sup>(1)</sup>	1,619	1,498	1,689
Liverpool Bay & Bruce/Keith	258	426	563
ROD & Ohanet	1,813	1,045	1,514
Total NGL	10,048	10,724	11,522
<b>Total petroleum products production</b> (million barrels of oil equivalent) <sup>(8)</sup>	137.19	129.50	116.19
Average sales price		0 < 0=	(2.0=
Oil and condensate (US\$ per barrel)	66.18	96.27	63.87

Natural gas (US\$ per thousand cubic feet)	3.68	3.87	3.19
Average production cost <sup>(9)</sup>			
US\$ per barrel of oil equivalent	5.50	4.92	4.76

- (1) North West Shelf LNG Train 5 was commissioned during the September 2008 quarter. North West Shelf Angel was commissioned during the December 2008 quarter.
- (2) The Stybarrow operation was commissioned during the December 2007 quarter.

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1	4

- (3) The Atlantis operation was commissioned during the December 2007 quarter. Atlantis North achieved first production on 5 June 2009.
- (4) The Genghis Khan operation was commissioned during the December 2007 quarter and is reported in Shenzi. The Shenzi operation was commissioned during the March 2009 quarter.
- (5) Other Australia/Asia includes Griffin and Minerva. Griffin will cease production in October 2009.
- (6) Other Americas includes Neptune, Mad Dog, West Cameron 76, Mustang, Genesis and Starlifter. The Neptune operation was commissioned during the September 2008 quarter.
- (7) LPG and Ethane are reported as Natural Gas Liquids (NGL). Product-specific conversions are made and NGL is reported in boe.
- (8) Total boe conversion is based on the following: 6,000 scf of natural gas equals 1 boe.
- (9) Average production costs include direct and indirect costs relating to the production of hydrocarbons and the foreign exchange effect of translating local currency denominated costs into US dollars but excludes all taxes.

## 2.3.2 Minerals

The table below details our mineral and derivative product production for all CSGs except Petroleum for the three years ended 30 June 2009, 2008 and 2007. Production shows our share unless otherwise stated.

		<b>BHP Billiton Group sha</b>			
	BHP Billiton	0	of production Year ended 30 June		
	Group	Year			
	interest %	2009	2008	2007	
Aluminium					
Alumina					
Production ( 000 tonnes)					
Worsley, Australia	86	2,924	3,035	2,956	
Paranam, Suriname	45	935	983	978	
Alumar, Brazil	36	537	536	526	
Total alumina		4.396	4.554	4,460	
		,			
Aluminium					
Production (000 tonnes)					
Hillside, RSA	100	702	695	704	
Bayside, RSA	100	99	168	194	
Alumar, Brazil	40	177	178	177	
Mozal Mozambique	47	255	257	265	
notal, notalion de			201	200	
Total aluminium		1 222	1 200	1 240	
		1,235	1,298	1,540	
Base Metals (1)					
Copper					
Payable metal in concentrate (000 tonnes)					

Escondida, Chile	57.5	417.6	679.5	638.9
Antamina, Peru	33.8	109.0	111.7	113.7
Pinto Valley, US <sup>(2)</sup>	100	33.3	26.8	
Total copper concentrate		559.9	818.0	752.6

		BHP Billiton Group sh		
	BHP Billiton Group	Yea	of productior or ended 30 J	une
	interest %	2009	2008	2007
Cathode ( 000 tonnes)				
Escondida, Chile	57.5	172.1	131.6	126.1
Cerro Colorado, Chile	100	102.1	106.4	105.8
Spence, Chile	100	172.7	142.7	75.5
Pinto Valley, US <sup>(2)</sup>	100	6.2	6.9	7.6
Olympic Dam, Australia	100	194.1	169.9	182.5
Total copper cathode		647.2	557.5	497.5
Total copper concentrate and cathode		1,207.1	1,375.5	1,250.1
Lead				
Payable metal in concentrate ( 000 tonnes)				
Cannington, Australia	100	226.8	251.5	210.8
Antamina, Peru	33.8	3.3	1.6	1.5
Total lead		230.1	253.1	212.3
Zinc				
Pavable metal in concentrate ( 000 tonnes)				
Cannington, Australia	100	54.8	61.0	45.7
Antamina, Peru	33.8	108.4	83.5	73.0
Total zinc		163.2	144.5	118.7
Gold				
Payable metal in concentrate ( 000 ounces)				
Escondida, Chile	57.5	67.3	79.7	84.4
Olympic Dam, Australia (refined gold)	100	108.0	80.5	91.7
Pinto Valley, US <sup>(2)</sup>	100	0.9	1.3	
Total gold		176.2	161.5	176.1
Silver				
Payable metal in concentrate ( 000 ounces)				
Escondida, Chile	57.5	2,765	3,604	3,514
Antamina, Peru	33.8	4,090	3,505	3,132
Cannington, Australia	100	33,367	35,485	29,105
Olympic Dam, Australia (refined silver)	100	937	780	814
Pinto Valley, US <sup>(2)</sup>	100	182	113	
Total silver		41,341	43,487	36,565
Uranium oxide				
Payable metal in concentrate (tonnes)				
Olympic Dam, Australia	100	4,007	4,144	3,486
Total uranium oxide		4,007	4,144	3,486
Molybdenum				

Payable metal in concentrate (tonnes)

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Antamina, Peru	33.8	1,363	2,542	2,268
Pinto Valley, US <sup>(2)</sup>	100	159		
Total molybdenum		1,522	2,542	2,268

	BHP Billiton Gr			up share	
	BHP Billiton Group interest %	Yea 2009	of production ar ended 30 June 2008	2007	
Diamonds and Specialty Products		2003	2000	2007	
Diamonds					
Production (000 carats)					
EKATI, Canada	80	3,221	3,349	3,224	
Total diamonds		3,221	3,349	3,224	
Titanium minerals <sup>(3)</sup>					
Production ( 000 tonnes)					
Titanium slag					
Richards Bay Minerals, RSA	50	490	480	465	
Rutile					
Richards Bay Minerals, RSA	50	44	43	35	
Zircon					
Richards Bay Minerals, RSA	50	120	120	120	
Total titanium minerals		654	643	620	
Phosphates					
Production ( 000 tonnes)					
Southern Cross Fertiliser (formerly Queensland Fertilizer) <sup>(4)(5)</sup>	100			84.3	
Total phosphates				84.3	
Stainless Steel Materials					
Nickel					
Production ( 000 tonnes)					
Cerro Matoso, Colombia	99.9	50.5	41.8	51.0	
Yabulu, Australia <sup>(6)</sup>	100	33.9	28.0	32.1	
Nickel West, Australia	100	88.7	98.1	104.1	
Total nickel		173.1	167.9	187.2	
Cobalt					
Production ( 000 tonnes)					
Yabulu, Australia <sup>(6)</sup>	100	1.4	1.7	1.7	
Total cobalt		1.4	1.7	1.7	
Iron Ore <sup>(7)</sup>					
Production ( 000 tonnes)					
Mt Newman Australia	85	26 437	30 330	29 306	
Mt Goldsworthy Australia	85	1.416	941	1 227	
Mt Goldsworthy, Area C joint venture Australia	85	35.513	27 130	20.086	
Yandi, Australia	85	37.818	40.276	35.548	
Jimblebar, Australia	85	4,913	5.119	5.457	
Samarco, Brazil	50	8.318	8,464	7.800	
		0,010	5,101	,000	
Total iron ore		114,415	112,260	99,424	
Manganese					

Manganese ores				
Saleable production ( 000 tonnes)				
Hotazel, South Africa <sup>(8)</sup>	60	2,191	3,040	2,570
GEMCO, Australia <sup>(8)</sup>	60	2,284	3,535	3,439
Total manganese ores		4,475	6,575	6,009

		BHP B	illiton Grou	p share
	BHP Billiton Group interest %	of production Year ended 30 June 2009 2008 2007		
Manganese alloys				
Saleable production ( 000 tonnes)				
South Africa <sup>(8)(9)</sup>	60	301	513	493
Australia <sup>(8)</sup>	60	212	262	239
Total manganese alloys		513	775	732
Metallurgical Coal (10)				
Production ( 000 tonnes)				
Blackwater		5,382	5,632	6,138
Goonyella		6,685	6,037	7,352
Peak Downs		4,390	4,094	4,484
Saraji		3,505	2,896	3,397
Norwich Park		1,984	2,026	2,850
Gregory Joint Venture		2,762	2,110	2,462
Total BMA, Australia	50	24,708	22,795	26,683
South Walker Creek		2,978	2,862	3,422
Poitrel		2,457	2,271	1,438
Total BHP Mitsui Coal, Australia <sup>(11)</sup>	80	5,435	5,133	4,860
Illawarra, Australia	100	6,273	7,265	6,886
Total metallurgical coal		36,416	35,193	38,429
Energy Coal				
Production (000 tonnes)				
Navajo	100	8,363	7,533	8,174
San Juan	100	5,773	6,119	6,906
Total New Mexico		14,136	13,652	15,080
Middelburg	84	11.853	12.113	13.513
Douglas	84	3.184	4,890	5.218
Khutala	100	12,700	13,327	13,526
Klipspruit	100	3.964	3.440	3.223
Ontimum	100	0,001	11 302	11 304
Koornfontein			11,502	4,858
Total BECSA <sup>(12)</sup>		31,701	45,072	51,642
Mt Arthur Coal, Australia	100	11,775	11,776	10,897
Cerrejón Coal Company, Colombia	33.3	10,594	10,368	9,406
Total energy coal		68 206	80 868	87 025
i our cherzy coar		00,400	00,000	01,040

- (1) Metal production is reported on the basis of payable metal.
- (2) The Pinto Valley operations were restarted during the December 2007 quarter. During February 2009, the sulphide mining and milling operations were placed in care and maintenance.
- (3) Data was sourced from the TZ Minerals International Pty Ltd Mineral Sands Annual Review 2009 and amounts represent production for the preceding year ended 31 December.
- (4) We sold Southern Cross Fertiliser (formerly Queensland Fertilizer) in FY2007.
- (5) Includes di-ammonium phosphate and mono-ammonium phosphate.
- (6) The Yabulu operation was sold effective 31 July 2009.

- (7) Iron ore production is reported on a wet tonnes basis with the exception of Samarco, being reported in dry (pellet) tonnes.
- (8) Shown on 100 per cent basis. BHP Billiton interest in saleable production is 60 per cent.
- (9) Production includes Medium Carbon Ferro Manganese.
- (10) Metallurgical coal production is reported on the basis of saleable product. Production figures include some thermal coal.
- (11) Shown on 100 per cent basis. BHP Billiton interest in saleable production is 80 per cent.
- (12) FY2008 includes 11.3 million tonnes of production from our South African Optimum operation (3.96 million tonnes export and 7.3 million tonnes domestic). Earnings on these tonnes were excluded as the entitlement to those earnings was vested with the purchaser effective from 1 July 2007.

## 2.4 Marketing

Our customer-centric marketing activities are centralised in Singapore, The Hague and Antwerp. The focus of the Singapore office is on the Asian energy market, base metals, stainless steel materials and carbon steelmaking raw materials. The emphasis in The Hague office is on aluminium, petroleum, energy marketing and freight. Our Antwerp office serves our diamonds customers around the world.

These three marketing offices incorporate all the functions required to manage product marketing and distribution from the point of production to final customer delivery. In addition, specialised marketers are located in 20 regional offices around the globe. Our product offering is enhanced by our logistics capability and expertise in trading and transaction structuring.

#### **Energy Marketing**

Energy Marketing has the responsibility of coordinating our marketing activities in the energy commodity markets, namely energy coal, European gas, emissions credits and electricity. This group is based in The Hague.

Energy Marketing is currently active in purchasing and selling third party gas and emissions credits in Europe. Small volumes of third party electricity in the UK have been purchased and sold, an activity which will not be continued in the future. Where required, Energy Marketing also buys or sells pipeline capacity to transport gas onto the UK gas grid. Most products are transacted over the counter and are principal-to-principal transactions in the wholesale market.

### Freight

We have a centralised ocean freight business that manages our in-house freight requirements. The primary purpose of the freight business is to create competitive advantage for internal shipments through the procurement and operation of quality, cost-effective shipping. It also aims to contribute to our profitability by trading in the freight market and carrying complementary external cargoes.

The freight business primarily participates in the dry bulk sector handling approximately 120 million tonnes of cargo per year. This makes the Group one of the world s largest users of dry bulk shipping. At any one time, we have approximately 120 ships employed. The majority of these vessels are chartered under commercial terms but we hold equity interests in a small number of vessels. External freight revenue was US\$1.03 billion for FY2009.

In addition to its freight management and trading activities, the freight business incorporates a skill base to manage its marine risk and provide technical support. It holds a number of marine-related investments, including a shareholding in shipping risk manager Rightships of Melbourne.

## 2.5 Minerals exploration

Our exploration program is integral to our growth strategy and is focused on identifying and capturing new world-class projects for future development or projects that add significant value to existing operations. Targets for exploration are generally large low-cost mining projects in a range of minerals, including diamonds, copper, nickel, bauxite, iron ore, manganese, coal and potash. The process of discovery runs from early-stage mapping through to drilling and evaluation. The program is global and prioritises targets based on our assessment of the relative attractiveness of each mineral.

We continue to pursue opportunities and build our position in prospective countries, including exploring for diamonds in Canada and copper in Zambia, Kazakhstan and Chile. In nickel, we have an exploration program focused on finding new nickel sulphide deposits to sustain and grow our existing operations in Western Australia. In the bulk commodities, activities are focused on a smaller number of highly prospective terrains in Australia and Africa.

Our exploration activities are organised from five principal offices in Singapore, Perth (Australia), Johannesburg (South Africa), Moscow (Russia) and Santiago (Chile).

In addition to our activities focused on finding new world-class deposits, several of our CSGs undertake exploration, principally aimed at delineating and categorising mineral deposits near existing operations, and advancing projects through the development pipeline.

In FY2009, we spent US\$695 million on minerals exploration. Of this, US\$134 million was spent on greenfield exploration, US\$561 million was spent on brownfield exploration and advanced projects.

## 2.6 Resource and Business Optimisation

Resource and Business Optimisation (RBO) is a group of approximately 45 professionals that is responsible for leading a range of internal processes that promote Group-wide excellence in developing, managing and optimising our mineral resources. The group s professionals include experts in resource governance, reserve estimation, mine planning, brownfields exploration, geometallurgy, mineral processing, maintenance processes and resource research and development.

Our Group-wide procedures provide for RBO involvement at significant stages of the asset acquisition and development processes, including resource evaluation and mine planning. RBO is responsible for overseeing Group-wide short-term and long-term business planning processes at our operating assets, designed to drive optimal value recovery from our mineral and petroleum resources.

RBO is also the governance function responsible for setting minimum standards and verifying compliance in resource and reserve estimation for our internal and external ore reserve reporting.

## 2.7 Government regulations

Government regulations touch all aspects of our operations. However, because of the geographical diversity of our operations, no one set of government regulations is likely to have a material effect on our business, taken as a whole.

The ability to extract minerals, oil and natural gas is fundamental to our business. In most jurisdictions, the rights to undeveloped mineral or petroleum deposits are owned by the state. Accordingly, we rely upon the rights granted to us by the government that owns the mineral, oil or natural gas. These rights usually take the form of a lease or licence, which gives us the right to access the land and extract the product. The terms of the lease or licence, including the time period for which it is effective, are specific to the laws of the relevant government. Generally, we own the product we extract and royalties or similar taxes are payable to the government. Some of

our operations, such as our oil and gas operations in Trinidad and Tobago and Algeria, are subject to production sharing contracts under which both we as the contractor and the government are entitled to a share of the production. Under such production sharing contracts, the contractor is entitled to recover its exploration and production costs from the government s share of production.

Related to the ability to extract is the ability to process the minerals, oil or natural gas. Again, we rely upon the relevant government to grant the rights necessary to transport and treat the extracted material in order to ready it for sale.

Underlying our business of extracting and processing natural resources is the ability to explore for those orebodies. The rights to explore for minerals, oil and natural gas are granted to us by the government that owns those natural resources that we wish to explore. Usually, the right to explore carries with it the obligation to spend a defined amount of money on the exploration or to undertake particular exploration activities.

Governments also impose obligations on us in respect of environmental protection, land rehabilitation, occupational health and safety, and native land title with which we must comply in order to continue to enjoy the right to conduct our operations within that jurisdiction. These obligations often require us to make substantial expenditures to minimise or remediate the environmental impact of our operations, to ensure the safety of our employees and contractors and the like. For further information on these types of obligations, refer to section 2.8 and 2.9 of this Report.

Of particular note are the following regulatory regimes:

#### 2.7.1 South African Mining Charter and Black Economic Empowerment

In 2003, the government released a strategy for broad-based black economic empowerment (BBBEE) that defined empowerment as an integrated and coherent socio-economic process that directly contributes to the economic transformation of South Africa and brings significant increases in the numbers of black people who manage, own and control the country s economy, as well as significant decreases in income inequalities . This strategy laid the foundation for the Black Economic Empowerment Act of 2003, which granted government the power to legislate how it wanted black economic empowerment (BEE) to be implemented in South Africa.

As outlined in section 1.5 of this Report, on 1 May 2004 the Mineral and Petroleum Resources Development Act 2002 (MPRDA) took effect, providing for state custodianship of all mineral deposits and abolishing the prior system of privately held mineral rights. It is administered by the Department of Minerals and Energy of South Africa. In February 2007, the codes of good practice were gazetted, further crystallising government s BEE strategy into a single binding document. The codes make provision for businesses to measure their success in contributing to the economic transformation and empowerment of historically disadvantaged South Africans (HDSAs) in the local economy and a scorecard comprising seven metrics was also developed to assist businesses in achieving this success.

In terms of the MPRDA, holders of mining rights granted under the previous system, known as Old Order Rights , must have applied to convert their rights to New Order Rights prior to 30 April 2009. In order for the conversions to be effected, applicants are required to comply with the terms of the Black Economic Empowerment Act of 2003 and the Mining Charter, which has been published under the MPRDA. The Mining Charter requires holders of mining rights to achieve 26 per cent ownership participation by historically disadvantaged South Africans in their mining operations by 30 April 2014, of which 15 per cent needed to have been achieved by 30 April 2009. We have submitted to the Department of Minerals & Energy of South Africa transactions to meet the legislative requirements and support the conversion to New Order Rights .

BHP Billiton supports broad-based black economic empowerment in South Africa. We believe it is imperative to both the growth and stability of the South African economy and the Company s strategic objectives and long-term sustainability in that country.

The principles of transformation and empowerment are in line with the BHP Billiton Charter, which underscores the organisation s Courage to Lead Change .

We have established a transformation and empowerment technical committee comprising senior managers with diverse skills to ensure our transformation and empowerment agenda is coordinated and comprehensive.

## 2.7.2 Uranium production in Australia

To mine, process, transport and sell uranium from within Australia, we are required to hold possession and export permissions, which are also subject to regulation by the Australian Government or bodies that report to the Australian Government.

To possess nuclear material, such as uranium, in Australia, a Permit to Possess Nuclear Materials (Possession Permit) must be held pursuant to the Australian Nuclear Non-Proliferation (Safeguards) Act 1987 (Non-Proliferation Act). A Possession Permit is issued by the Australian Safeguards and Non-Proliferation Office, an office established under the Non-Proliferation Act, which administers Australia s domestic nuclear safeguards requirements and reports to the Australian Government.

To export uranium from Australia, a Permit to Export Natural Uranium (Export Permit) must be held pursuant to the Australian Customs (Prohibited Exports) Regulations 1958. The Export Permit is issued by the Minister for Industry, Tourism and Resources.

A special transport permit will be required under the Non-Proliferation Act by a party that transports nuclear material from one specified location to another specified location. As we engage service providers to transport uranium, those service providers are required to hold a special transport permit.

#### 2.7.3 Exchange controls and shareholding limits

### **BHP Billiton Plc**

There are no laws or regulations currently in force in the UK that restrict the export or import of capital or the remittance of dividends to non-resident holders of BHP Billiton Plc s shares. However, there are certain sanctions adopted by the UK Government which implement resolutions of the Security Council of the United Nations and sanctions imposed by the European Union against certain countries, entities and individuals. Such sanctions may be in force from time to time and include those against: (i) certain entities and/or individuals associated with the Burmese regime (Myanmar), Cote d Ivoire, The Democratic People s Republic of Korea (North Korea), the Democratic Republic of Congo, Lebanon, Liberia, Iran, Sudan and the previous regimes of Iraq and Yugoslavia; (ii) certain officials of Belarus, Syria and Zimbabwe; (iii) individuals indicted by the International Criminal Tribunal for the former Yugoslavia; and (iv) entities and individuals linked with the Taliban, Al-Qaeda and other terrorist organisations.

There are no restrictions under BHP Billiton Plc s Articles of Association or (subject to the effect of any sanctions) under English law that limit the right of non-resident or foreign owners to hold or vote BHP Billiton Plc s shares.

There are certain restrictions on shareholding levels under BHP Billiton Plc s Articles of Association described under the heading BHP Billiton Limited below.

#### **BHP Billiton Limited**

The Australian Banking (Foreign Exchange) Regulations 1959 may impose restrictions on certain financial transactions and require the consent of the Reserve Bank of Australia for the movement of funds into and out of Australia. Based on our searches, restrictions currently apply if funds are to be paid to or received from specified

supporters of the former Government of the Federal Republic of Yugoslavia, specified ministers and senior officials of the Government of Zimbabwe, certain specified entities associated with the Democratic People s Republic of Korea (North Korea) and specified individuals associated with the Burmese regime. In addition, legislation and regulations are in place restricting transactions with certain individuals or entities linked with the Taliban, Al-Qaeda and other terrorist organisations and certain entities and individuals associated with the Democratic Republic of Congo, Cote d Ivoire, Iran, Lebanon, Liberia, Sudan, Afghanistan, Rwanda and Somalia. The controls impose certain approval and reporting requirements on transactions involving such countries, entities and individuals and/or assets controlled or owned by them. Transfers into or out of Australia of amounts greater than A\$10,000 in any currency are also subject to reporting requirements.

Remittances of any dividends, interest or other payments by BHP Billiton Limited to non-resident holders of BHP Billiton Limited s securities are not restricted by exchange controls or other limitations, save that in certain circumstances, BHP Billiton may be required to withhold Australian taxes.

There are no limitations, either under the laws of Australia or under the Constitution of BHP Billiton Limited, to the right of non-residents to hold or vote BHP Billiton Limited ordinary shares other than as set out below.

The Australian Foreign Acquisitions and Takeovers Act 1975 (the FATA) restricts certain acquisitions of interests in shares in BHP Billiton. Generally, under the FATA, the prior approval of the Australian Treasurer must be obtained for proposals by a foreign person (either alone or together with associates) to acquire control of 15 per cent or more of the voting power or issued shares in BHP Billiton Limited.

The FATA also empowers the Treasurer to make certain orders prohibiting acquisitions by foreign persons in BHP Billiton Limited (and requiring divestiture if the acquisition has occurred) where he considers the acquisition to be contrary to the national interest and the 15 per cent threshold referred to above would be exceeded as a result. Such orders may also be made in respect of acquisitions by foreign persons where two or more foreign persons (and their associates) in aggregate already control 40 per cent or more of the issued shares or voting power in BHP Billiton Limited.

There are certain other statutory restrictions, and restrictions under BHP Billiton Limited s Constitution and BHP Billiton Plc s Articles of Association, that apply generally to acquisitions of shares in BHP Billiton (i.e. the restrictions are not targeted at foreign persons only). These include restrictions on a person (and associates) breaching a voting power threshold of:

20 per cent in relation to BHP Billiton Limited on a stand alone basis, i.e. calculated as if there were no special voting share and only counting BHP Billiton Limited s ordinary shares.

30 per cent of BHP Billiton Plc. This is the threshold for a mandatory offer under Rule 9 of the UK takeover code and this threshold applies to all voting rights of BHP Billiton Plc (therefore including voting rights attached to the BHP Billiton Plc Special Voting Share).

30 per cent in relation to BHP Billiton Plc on a stand alone basis, i.e. calculated as if there were no special voting share and only counting BHP Billiton Plc s ordinary shares.

20 per cent in relation to the BHP Billiton Group, calculated having regard to all the voting power on a joint electorate basis, i.e. calculated on the aggregate of BHP Billiton Limited s and BHP Billiton Plc s ordinary shares.

Under BHP Billiton Limited s Constitution and BHP Billiton Plc s Articles of Association, sanctions for breach of any of these thresholds, other than by means of certain permitted acquisitions, include withholding of dividends, voting restrictions and compulsory divestment of shares to the extent a shareholder and its associates exceed the relevant threshold.

## 2.8 Sustainable Development Health, Safety, Environment and Community

As the world s largest diversified natural resources company, our operations touch every corner of the globe. We recognise and embrace our responsibility to consider and respond to the needs of many different stakeholders.

Our success depends on access to natural resources and on our licence to operate. Maximising our bottom line also means recognizing the value protection and value creation achieved by enhancing non-financial or sustainability dimensions.

Our Charter sets out what we value. In particular, we must remain committed to ensuring the safety of our people, respecting our environment and the communities where we work.

In addition to the wider Group corporate governance processes, we have systems in place to implement our policy commitment to sustainable development. The Sustainability Committee of the Board continues to oversee our sustainability strategy, policy, initiatives and activities. Management holds primary responsibility for our Health, Safety, Environment and Community (HSEC) processes and performance.

Our Code of Business Conduct applies to every member of our workforce and provides a framework for decision-making. It is based on the values contained in our Charter and highlights that we care as much about how results are obtained as we do about delivering good results.

Our revised HSEC Standards and Procedures are now part of a wider suite of formal Group Policies, Standards and Procedures. They provide the basis for developing and applying management systems at all sites operated by BHP Billiton.

These documents highlight four key components of sustainable development:

Health focusing on the elimination of risks through the control of potential workplace exposures to noise and substances which could result in long-term harm

Safety providing a workplace where people can work without being injured

Environment delivering efficient resource use, reducing and preventing pollution and enhancing biodiversity protection

Community engaging with those affected by our operations, including employees, contractors and communities; and respecting and upholding fundamental human rights.

#### Health

The health and wellbeing of our people is central to our business success. Our focus is on eliminating risks through the control of workplace exposures to noise and substances, such as manganese, silica, diesel exhaust particulate and coal tar pitch, which may result in long-term harm.

Our approach is to identify and manage sources of exposure to reduce to the minimum the number of people required to undertake additional protective measures, such as the wearing of personal protective equipment. Our new Health and Hygiene Standard requires all sites to implement programs to control exposure at source.

Significant community-based health risks, such as HIV/AIDS and malaria, also exist in our business. We continue to contribute to the management of these issues, on both a local and global basis.

#### Safety

Providing a safe and healthy workplace and ensuring our activities do not adversely impact on our host communities are core values.

We were deeply saddened and disappointed by loss of seven colleagues due to work-related incidents during the year. Five of the fatalities were at our Western Australian iron ore business, which completed, or is in the process of completing a number of actions in response. Among them is improving control of site access, electronically linking it to monitoring of individual worked hours to enhance the management of risk arising from worker fatigue, and enhancing site traffic management standards.

Broader initiatives in the past 12 months include a major review of our Group HSEC Standards and Procedures to improve the clarity of our expectations by reducing the number of documents and simplifying the content. An analysis from a sample of over 900 Significant Incident reports for the period April 2008 to March 2009 was also conducted. The findings are being assessed and will be incorporated into our safety strategies going forward.

It is clear that some of our sites have room to improve, however, we are encouraged by the excellent performance delivered by many of our operations and the significant improvements shown by others. Positive safety performance included an incremental improvement in our Total Recordable Injury Frequency (TRIF) to 5.6 per million hours worked (TRIF includes fatalities, lost-time cases, restricted work cases and medical treatment cases).

#### Environment

We operate a diverse range of businesses in different countries and different ecosystems around the world. These businesses, by their nature, have the potential to affect the environment. We run programs to improve our environmental performance, set specific targets, such as for energy use and greenhouse gas emissions, and track our progress against our targets.

Our operations are subject to various national and regional laws and regulations governing environmental protection, rehabilitation and closure. To assist in meeting increased reporting obligations in relation to energy and greenhouse gas, we are investing in improvements to our energy and greenhouse data collection processes. Recent developments include launching a new data reporting system.

The Australian Government passed the Energy Efficiency Opportunities Act (EEO) in 2006 to improve the identification and evaluation of energy-efficiency opportunities by large energy users. The results of our second year in the EEO program will be available publicly on our website in December 2009.

We have strengthened our biodiversity commitments related to protected areas and threatened species. We committed not to explore or mine within International Union for the Conservation of Nature (IUCN) Protected Area Categories I to IV unless an action plan, commensurate with the level of biodiversity impacts and designed to deliver measurable benefits to biodiversity, has been developed. We also committed not to proceed with activities where the direct impacts would result in extinction of IUCN threatened species.

We define a significant environmental incident as one with a severity rating of 3 or above based on our internal severity rating scale (tiered from 1 to 5 by increasing severity). There were no incidents that reached this level during FY2009. While there were a number of incidents that had the potential to be significant, controls and mitigation actions prevented these incidents escalating in severity.

#### Community

Our operations have the potential to impact, both positively and negatively, our host communities. Regular, open and honest dialogue is the key to building win-win relationships. Our goal is to minimise negative social impacts while maximising the opportunities and benefits our presence brings.

While our businesses tailor their community relations programs to suit the local context, our Community Standard provides the mandatory requirements to be implemented by all our operations. For example, our sites

are required to have community relations plans that aim to contribute to sustainable communities. As part of the community planning process, all key stakeholders, including local and Indigenous communities, must be identified and an analysis undertaken to understand their interests and relationship with the business.

We require all our sites to record and track the management of community concerns.

During FY2009 we established a new requirement that all businesses are to have dispute resolution processes to enable individuals or groups impacted by our activities to openly raise concerns and to facilitate resolution of any grievances.

The BHP Billiton Forum on Corporate Responsibility, which comprises our executive management and leaders from non-government organisations (NGOs) chaired by our Chief Executive Officer, met twice during FY2009.

No significant human rights-related issues were identified in this reporting period and there were no reported community resettlements.

We continue to invest one per cent of our pre-tax profits (based on the average of the previous three years pre-tax profit publicly reported in each of those years) in community programs.

## 2.9 Closure and rehabilitation

From development projects, through operations and finally closure, our assets integrate our vision for sustainable development.

Significant projects are governed by the performance requirements of our Project Quality, Execution and HSEC Management Procedure. The plans to manage quality, execution and HSEC risk are included in the overall project plan. Stakeholder requirements, as well as legislated obligations, form an important input to the planning and execution process.

Once in operation, our assets implement annual Life of Asset planning, a disciplined process that incorporates identification of stakeholder needs and concerns. Closure planning is integrated into the Life of Asset planning. Our internal audit group is responsible for auditing Life of Asset plans, including the financial provisioning for closure.

We are responsible for a number of legacy sites that are in various stages of decommissioning, rehabilitation or post-closure care and maintenance. These sites are managed by our Customer Sector Groups, where closure is treated as a project.

Closure plans provide the basis for estimating the financial costs of closure and the associated financial provisions. Information on our closure provisions can be found in notes 1 and 18 of the Financial Statements.

## 2.10 Employees

We recognise that people are the foundation of our business. It is the body of talented and motivated employees with behaviours that are aligned to our Charter values that is the most important ingredient for our success.

The BHP Billiton Way has been developed to outline for all our people, wherever they are located, what work we do and how we are expected to do it. It consists of our Charter, Leadership Model, Strategy and Operating Model.

The Charter defines our corporate objective as the creation of long-term shareholder value through the discovery, development and conversion, and marketing of natural resources. It also outlines the values we hold dear and describes how we will measure success.

The Leadership Model defines the attributes that we look for in our leaders and forms the basis of how we develop and reward our people.

The Strategy defines the six strategic drivers that we have identified as the means by which we will strive to deliver our corporate objective.

The Operating Model explains how each part of the business works and interconnects to ensure we are all striving for the same outcome.

We are a global business and our success depends on fostering a culture where diverse and often remotely located people behave in a manner that reflects our Charter and drives superior performance. Diversity of gender, skill, thought, experience, ethnicity, style and language are all important elements of our people strategy and are key drivers for our success. In May 2009, we announced changes to our parental leave policy as a means of encouraging a more effective balance between family and work responsibilities following the birth or adoption of a child. We have extended the minimum paid parental leave period to 18 weeks for the primary caregiver in all of the countries in which we operate. We see this as a positive step in improving equity and in enhancing our profile as an employer of choice.

We have a mix of collective and individually regulated employment arrangements. Whatever the nature of those arrangements, we recognise the right of our employees to freely associate and join trade unions. In FY2009, around 48 per cent of our global workforce was covered by collective agreements. We had no significant strikes or other industrial action during the year. We believe that successful relations with all our employees, unionised and non-unionised, must be built on values of mutual trust and respect.

In FY2009, we had an average of 40,990 employees working in more than 100 operations worldwide. We had an average of 58,000 contractors globally. A multitude of cultures and nationalities are represented with a diversity that enriches the working lives of all.

The table below provides a breakdown of our average number of employees, in accordance with our IFRS reporting requirements, which includes our proportionate share of jointly controlled entities employees and includes executive Directors, by CSG for each of the past three financial years.

CSG	2009	2008	2007
Petroleum	2,105	2,143	2,299
Aluminium	4,938	5,145	4,903
Base Metals	7,731	7,443	6,545
Diamonds and Specialty Products	1,923	2,043	1,853
Stainless Steel Materials	4,039	4,223	3,626
Iron Ore	3,254	3,105	2,809
Manganese	2,532	2,142	2,076
Metallurgical Coal	3,892	3,680	3,564
Energy Coal	8,437	9,183	9,595
Group and unallocated	2,139	2,625	2,677
-			
Total <sup>(1)</sup>	40,990	41.732	39,947

<sup>(1)</sup> Average employee numbers include executive Directors, 100 per cent of employees of subsidiary companies and our share of proportionally consolidated entities and operations. Part-time employees are included on a full-time equivalent basis. Employees of businesses acquired or disposed of during the year are included for the period of ownership. People employed by contractors are not included.

The table below provides a breakdown of our average number of employees by geographic location for each of the past three financial years.

	2009	2008	2007
Australia	15,697	15,426	14,897
Southern Africa	9,626	10,860	11,414
South America	9,897	9,342	8,455
North America	2,824	2,994	2,898
Europe	563	606	586
Rest of World	2,383	2,504	1,697
Total	40,990	41.732	39.947

## 2.11 Organisational structure

#### 2.11.1 General

The BHP Billiton Group consists of the BHP Billiton Limited Group and the BHP Billiton Plc Group as a combined enterprise, following the completion of the Dual Listed Company (DLC) merger in June 2001. Refer to note 27 Subsidiaries in the financial statements for a list of BHP Billiton Limited and BHP Billiton Plc significant subsidiaries.

The BHP Billiton DLC merger was designed to place shareholders of both companies in a position where they effectively have an interest in a single group that combines the assets and are subject to the liabilities of both companies. BHP Billiton Limited and BHP Billiton Plc have each retained their separate corporate identities and maintained separate stock exchange listings, but they are operated and managed as if they are a single unified economic entity, with their boards and senior executive management comprising the same people.

#### 2.11.2 DLC structure

The principles of the BHP Billiton DLC are reflected in the BHP Billiton Sharing Agreement and include the following:

the two companies are to operate as if they are a single unified economic entity, through Boards of Directors that comprise the same individuals and a unified senior executive management;

the Directors of both companies will, in addition to their duties to the company concerned, have regard to the interests of BHP Billiton Limited shareholders and BHP Billiton Plc shareholders as if the two companies were a single unified economic entity and, for that purpose, the Directors of each company take into account in the exercise of their powers the interests of the shareholders of the other; and

certain DLC equalisation principles must be observed. These are designed to ensure that for so long as the Equalisation Ratio between a BHP Billiton Limited share and a BHP Billiton Plc share is 1:1, the economic and voting interests in the combined BHP Billiton Group resulting from the holding of one BHP Billiton Limited share are equivalent to that resulting from one BHP Billiton Plc share. Further details are set out in the sub-section Equalisation of economic and voting rights below.

Additional documents that effect the DLC include:

**BHP** Billiton Limited Constitution

BHP Billiton Plc Memorandum and Articles of Association

BHP Billiton Special Voting Shares Deed

BHP Billiton Limited Deed Poll Guarantee

BHP Billiton Plc Deed Poll Guarantee.

#### Australian Foreign Investment Review Board (FIRB) conditions

The Treasurer of Australia approved the DLC merger subject to certain conditions, the effect of which was to require that, among other things, BHP Billiton Limited continues to:

be an Australian company, which is managed from Australia; and

ultimately manage and control the companies conducting the business that was conducted by it at the time of the merger for as long as those businesses form part of the BHP Billiton Group.

The conditions have effect indefinitely, subject to amendment of the Australian Foreign Acquisitions Takeover Act 1975 or any revocation or amendment by the Treasurer of Australia. If BHP Billiton Limited no longer wishes to comply with these conditions, it must obtain the prior approval of the Treasurer. Failure to comply with the conditions attracts substantial penalties under the Act.

#### Equalisation of economic and voting rights

BHP Billiton Limited shareholders and BHP Billiton Plc shareholders have economic and voting interests in the combined BHP Billiton Group. The economic and voting interests represented by a share in one company relative to the economic and voting interests of a share in the other company is determined by reference to a ratio known as the Equalisation Ratio . Presently, the economic and voting interests attached to each BHP Billiton Limited share and each BHP Billiton Plc share are the same, since the Equalisation Ratio is 1:1. The Equalisation Ratio would change if either BHP Billiton Limited or BHP Billiton Plc returned value to only its shareholders and no matching action were taken.

This means that the amount of any cash dividend paid by BHP Billiton Limited in respect of each BHP Billiton Limited share is normally matched by an equivalent cash dividend by BHP Billiton Plc in respect of each BHP Billiton Plc share, and vice versa. If one company has insufficient profits or is otherwise unable to pay the agreed dividend, BHP Billiton Limited and BHP Billiton Plc will, as far as practicable, enter into such transactions as are necessary so as to enable both companies to pay the amount of pre-tax dividends per share.

#### **Joint Electorate Actions**

Under the terms of the DLC agreements, the BHP Billiton Limited Constitution and the BHP Billiton Plc Articles of Association special voting arrangements have been implemented so that the shareholders of both companies vote together as a single decision-making body on matters affecting the shareholders of each company in similar ways (such matters are referred to as Joint Electorate Actions). For so long as the Equalisation Ratio remains 1:1, each BHP Billiton Limited share will effectively have the same voting rights as each BHP Billiton Plc share on Joint Electorate Actions.

A Joint Electorate Action requires approval by ordinary resolution (or special resolution if required by statute, regulation, applicable listing rules or other applicable requirements) of BHP Billiton Limited, with both the BHP Billiton Limited ordinary shareholders and the holder of the BHP Billiton Limited Special Voting Share voting as a single class and also of BHP Billiton Plc, with the BHP Billiton Plc ordinary shareholders and the holder of the BHP Billiton Plc Special Voting Share voting as a single class.

#### **Class Rights Actions**

In the case of certain actions in relation to which the two bodies of shareholders may have divergent interests (referred to as Class Rights Actions), the company wishing to carry out the Class Rights Action requires the prior approval of the shareholders in the other company voting separately and, where appropriate, the approval of its own shareholders voting separately. Depending on the type of Class Rights Action undertaken, the approval required is either an ordinary or special resolution of the relevant company.

These voting arrangements are secured through the constitutional documents of the two companies, the BHP Billiton Sharing Agreement, the Special Voting Shares Deed and rights attaching to a specially created Special Voting Share issued by each company and held in each case by a Special Voting Company. The shares in the Special Voting Companies are held legally and beneficially by Law Debenture Trust Corporation Plc.

#### **Cross guarantees**

BHP Billiton Limited and BHP Billiton Plc have each executed a Deed Poll Guarantee, pursuant to which creditors entitled to the benefit of the BHP Billiton Limited Deed Poll Guarantee and the BHP Billiton Plc Deed Poll Guarantee will, to the extent possible, be placed in the same position as if the relevant debts were owed by both BHP Billiton Limited and BHP Billiton Plc combined.

#### Restrictions on takeovers of one company only

The BHP Billiton Limited Constitution and the BHP Billiton Plc Articles of Association have been drafted to ensure that, except with the consent of the Board, a person cannot gain control of one company without having made an equivalent offer to the shareholders of both companies on equivalent terms. Sanctions for breach of these provisions would include withholding of dividends, voting restrictions and the compulsory divestment of shares to the extent a shareholder and its associates exceed the relevant threshold.

## 2.12 Material contracts

## 2.12.1 DLC agreements

On 29 June 2001, BHP Billiton Limited (then known as BHP Limited) and BHP Billiton Plc (then known as Billiton Plc) merged by way of a DLC structure. To effect the DLC, BHP Limited and Billiton Plc (as they were then known) entered into the following agreements designed to place the shareholders of both companies in a position where they effectively have an interest in a single group that combines the assets, and is subject to all the liabilities, of both companies:

BHP Billiton Sharing Agreement

BHP Billiton Special Voting Shares Deed

BHP Billiton Limited Deed Poll Guarantee

BHP Billiton Plc Deed Poll Guarantee.

The effect of each of these agreements and the manner in which they operate are described in section 2.11 of this Report. It is expected that these agreements will remain in effect until such time as a change in control of the BHP Billiton Group may occur.

## 2.13 Constitution

The following text summarises the Constitution of BHP Billiton Limited and the Articles of Association of BHP Billiton Plc. The effect of the Constitution of BHP Billiton Limited and the Articles of Association of BHP Billiton Plc is, so far as possible, identical. Where the term BHP Billiton is used in this description of the Constitution and Articles of Association, it can be read to mean either BHP Billiton Limited or BHP Billiton Plc.

Certain provisions of the Constitution of BHP Billiton Limited and the Articles of Association of BHP Billiton Plc can only be amended where such amendment is approved by special resolution either:

by approval as a Class Rights Action, where the amendment results in a change to an Entrenched Provision ; or

otherwise, as a Joint Electorate Action.

A description of Joint Electorate Actions and Class Rights Actions is contained under the heading Equalisation of economic and voting rights in section 2.11.2 of this Report.

### 2.13.1 Directors

The management and control of the business and affairs of BHP Billiton are vested in the Board of Directors, which may exercise all powers and do everything that is within the power of BHP Billiton, other than what is required to be exercised or done by BHP Billiton in a general meeting.

#### 2.13.2 Power to issue securities

BHP Billiton may, pursuant to the Constitution and Articles of Association, issue any shares or other securities with preferred, deferred or other special rights, obligations or restrictions as and when the Directors may determine and on any other terms the Directors consider appropriate, provided that any such issue:

does not affect any special rights conferred on the holders of any shares; and

is subject to the provisions regarding shareholder approval in the Constitution and Articles of Association. The rights attaching to a class other than ordinary shares are expressed at the date of issue.

#### 2.13.3 Restrictions on voting by Directors

A Director may not vote in respect of any contract or arrangement or any other proposal in which he or she has a material personal interest. A Director shall not be counted in the quorum at a meeting in relation to any resolution on which he or she is not entitled to vote.

In addition, under the UK Companies Act 2006, a Director has a duty to avoid a situation in which he or she has (or can have) a direct or indirect interest that conflicts (or may conflict) with the interests of the company. The duty is not infringed, if among other things, the situation is authorised by non-interested Directors. In 2008, the Articles of Association of BHP Billiton Plc were amended to enable the Board to authorise a matter that might otherwise involve a Director breaching his or her duty to avoid conflicts of interest. An interested Director may not vote or be counted towards a quorum for a resolution authorising such a situation. Where the Board gives such authorisation, the Board may prohibit, or may establish regulations which prohibit, the relevant Director from voting on any matter relating to the conflict. The Board has adopted procedures to manage these voting restrictions.

Subject to applicable laws, a Director is entitled to vote, and be counted in the quorum, in respect of any resolution concerning any of the following matters, namely where the material personal interest:

arises because the Director is a shareholder of BHP Billiton and is held in common with the other shareholders of BHP Billiton;

arises in relation to the Director s remuneration as a Director of BHP Billiton;

relates to a contract BHP Billiton is proposing to enter into that is subject to approval by the shareholders and will not impose any obligation on BHP Billiton if it is not approved by the shareholders;

arises merely because the Director is a guarantor or has given an indemnity or security for all or part of a loan, or proposed loan, to BHP Billiton;

arises merely because the Director has a right of subrogation in relation to a guarantee or indemnity referred to above;

relates to a contract that insures, or would insure, the Director against liabilities the Director incurs as an officer of BHP Billiton, but only if the contract does not make BHP Billiton or a related body corporate the insurer;

relates to any payment by BHP Billiton or a related body corporate in respect of an indemnity permitted by law, or any contract relating to such an indemnity; or

is in a contract, or proposed contract with, or for the benefit of, or on behalf of, a related body corporate and arises merely because the Director is a director of a related body corporate.

#### 2.13.4 Loans by Directors

Any Director may lend money to BHP Billiton at interest with or without security or may, for a commission or profit, guarantee the repayment of any money borrowed by BHP Billiton and underwrite or guarantee the subscription of shares or securities of BHP Billiton or of any corporation in which BHP Billiton may be interested without being disqualified as a Director and without being liable to account for BHP Billiton for any commission or profit.

#### 2.13.5 Retirement of Directors

At every Annual General Meeting one-third of the Directors or, if their number is not a multiple of three, then the number nearest to but not less than one-third, must retire from office. The Directors to retire are those longest in office since last being elected. As between Directors who were elected on the same day, the Directors to retire are determined by lot (in default of agreement between them). Further, a Director must retire from office at the conclusion of the third Annual General Meeting after which the Director was elected or re-elected. A retiring director is eligible for re-election.

The Board continues to have a policy that requires a non-executive Director who has served on the Board for nine years from the date of their first election to stand for annual re-election from the first Annual General Meeting after the expiration of their current term.

#### 2.13.6 Rights attaching to shares

#### **Dividend rights**

By law, dividends on shares may only be paid out of profits available for distribution. The Constitution and Articles of Association provide that payment of any dividend may be made in any manner, by any means and in any currency determined by the Board.

All unclaimed dividends may be invested or otherwise used by the Board for the benefit of whichever of BHP Billiton Limited or BHP Billiton Plc declared that dividend, until claimed or, in the case of BHP Billiton Limited, otherwise disposed of according to law. In the case of BHP Billiton Plc, any dividend unclaimed after a period of 12 years from the date on which such dividend was declared or became due for payment shall be forfeited and shall revert to BHP Billiton Plc.

#### Voting rights

Voting at any general meeting of BHP Billiton Limited shareholders is in the first instance to be conducted by a show of hands unless a poll is demanded by any of the following (except in relation to the election of a chairman of a meeting or, unless the Chairman otherwise determines, the adjournment of a meeting):

the Chairman;

any shareholder under the law; or

the holder of the BHP Billiton Limited Special Voting Share.

Voting at any general meeting of BHP Billiton Plc is in the first instance to be conducted by a show of hands unless a poll is demanded by any of the following:

the Chairman;

not less than five members present in person or by proxy and entitled to vote;

a member or members present in person or by proxy and representing not less than five per cent of the total voting rights of all the members having the right to vote at the meeting; or

#### the holder of the Billiton Special Voting Share.

As described under the heading Equalisation of economic and voting rights in section 2.11.2 of this Report, certain matters may be decided as Joint Electorate Actions or Class Rights Actions. Any matter considered by shareholders at an Annual General Meeting of BHP Billiton Limited or BHP Billiton Plc constitutes a Joint Electorate Action and shall therefore be decided on a poll. Therefore, in practice, generally all items of business at Annual General Meetings proceed directly to poll.

In addition, at any general meeting a resolution, other than a procedural resolution, put to the vote of the meeting on which the holder of the relevant BHP Billiton Special Voting Share is entitled to vote shall be decided on a poll.

For the purposes of determining which shareholders are entitled to attend or vote at a meeting of BHP Billiton Plc or BHP Billiton Limited, and how many votes such shareholder may cast, the relevant company will specify in any notice of meeting a time, not more than 48 hours before the time fixed for the meeting, by which a shareholder must be entered on the Register of Shareholders in order to have the right to attend or vote at the relevant meeting.

Shareholders who wish to appoint a proxy to attend, vote or speak at a meeting of BHP Billiton Plc or BHP Billiton Limited (as appropriate) on their behalf, must deposit the relevant form appointing a proxy in accordance with the instructions contained in any notice of meeting, so as to be received in the specified manner not less than 48 hours before the time appointed for holding the meeting to which the appointment of a proxy relates.

### Rights to share in BHP Billiton Limited s profits

The rights attached to the shares of BHP Billiton Limited, as regards the participation in the profits available for distribution, are as follows:

The holders of any preference shares shall be entitled, in priority to any payment of dividend to the holders of any other class of shares, to a preferred right to participate as regards dividends up to but not beyond a specified amount in distribution.

Subject to the special rights attaching to any preference shares, but in priority to any payment of dividends on all other classes of shares, the holder of the Equalisation Share (if any) shall be entitled to be paid such dividends as are declared.

Any surplus remaining after payment of the distributions above shall be payable to the holders of BHP Billiton Limited ordinary shares and the BHP Billiton Limited Special Voting Share in equal amounts per share.

#### Rights to share in BHP Billiton Plc s profits

The rights attached to the shares of BHP Billiton Plc, in relation to the participation in the profits available for distribution, are as follows:
The holders of the cumulative preference shares shall be entitled, in priority to any payment of dividend to the holders of any other class of shares, to be paid a fixed cumulative preferential dividend (Preferential Dividend) at a rate of 5.5 per cent per annum, to be paid annually in arrears on 31 July in

each year or, if any such date shall be a Saturday, Sunday or public holiday in England, on the first business day following such date in each year. Payments of Preferential Dividends shall be made to holders on the register at any date selected by the Directors up to 42 days prior to the relevant fixed dividend date.

Subject to the rights attaching to the cumulative preference shares, but in priority to any payment of dividends on all other classes of shares, the holder of the BHP Billiton Plc Special Voting Share shall be entitled to be paid a fixed dividend of US\$0.01 per annum, payable annually in arrears on 31 July.

Subject to the rights attaching to the cumulative preference shares and the BHP Billiton Plc Special Voting Share, but in priority to any payment of dividends on all other classes of shares, the holder of the Equalisation Share shall be entitled to be paid such dividends as the Board may decide to pay thereupon.

Any surplus remaining after payment of the distributions above shall be payable to the holders of the BHP Billiton Plc ordinary shares in equal amounts per BHP Billiton Plc ordinary share.

# 2.13.7 Right on a return of assets on liquidation

On a return of assets on liquidation of BHP Billiton Limited, subject to the payment of all prior ranking amounts owed to all creditors of BHP Billiton Limited and preference shareholders, the assets of BHP Billiton Limited remaining available for distribution among shareholders, after giving effect to the payment of all prior ranking amounts owed to all creditors and holders of preference shares, shall be applied in paying to the holders of the BHP Billiton Limited Special Voting Share and the Equalisation Share (if any) an amount of up to A\$2.00 on each such share, on an equal priority with any amount paid to the holders of BHP Billiton Limited ordinary shares, and any surplus remaining shall be applied in making payments solely to the holders of BHP Billiton Limited ordinary shares in accordance with their entitlements.

On a return of assets on liquidation of BHP Billiton Plc, subject to the payment of all prior ranking amounts owed to the creditors of BHP Billiton Plc and prior ranking statutory entitlements, the assets of BHP Billiton Plc to be distributed on a winding-up shall be distributed to the holders of shares in the following order of priority:

To the holders of the cumulative preference shares, the repayment of a sum equal to the nominal capital paid up or credited as paid up on the cumulative preference shares held by them and accrual, if any, of the Preferential Dividend, whether such dividend has been earned or declared or not, calculated up to the date of commencement of the winding-up.

To the holders of the BHP Billiton Plc ordinary shares and to the holders of the BHP Billiton Plc Special Voting Share and the Equalisation Share (if any), the payment out of surplus, if any, remaining after the distribution above of an equal amount for each BHP Billiton Plc ordinary share, the BHP Billiton Plc Special Voting Share and the Equalisation Share, if issued, subject to a maximum in the case of the BHP Billiton Plc Special Voting Share and the Equalisation Share of the nominal capital paid up on such shares.

### 2.13.8 Redemption of preference shares

If BHP Billiton Limited at any time proposes to create and issue any preference shares, the preference shares may be issued on the terms that they are to be redeemed or, at the option of either or both BHP Billiton Limited and the holder, are liable to be redeemed, whether out of share capital, profits or otherwise.

The preference shares confer on the holders the right to convert the preference shares into ordinary shares if, and on the basis, the Board determines at the time of issue of the preference shares.

The preference shares are to confer on the holders:

the right (on redemption and on a winding up) to payment in cash in priority to any other class of shares of (i) the amount paid or agreed to be considered as paid on each of the preference shares; (ii) the amount, if any, equal to the aggregate of any dividends accrued but unpaid and of any arrears of dividends; and

the right, in priority to any payment of dividend on any other class of shares, to the preferential dividend. There is no equivalent provision in the Articles of Association of BHP Billiton Plc.

#### 2.13.9 Capital calls

Subject to the terms on which any shares may have been issued, the Board may make calls on the shareholders in respect of all monies unpaid on their shares. BHP Billiton has a lien on every partly paid share for all amounts payable in respect of that share. Each shareholder is liable to pay the amount of each call in the manner, at the time and at the place specified by the Board (subject to receiving at least 14 days notice specifying the time and place for payment). A call is considered to have been made at the time when the resolution of the Board authorising the call was passed.

#### 2.13.10 Borrowing powers

Subject to relevant law, the Directors may exercise all powers of BHP Billiton to borrow money, and to mortgage or charge its undertaking, property, assets (both present and future) and all uncalled capital or any part or parts thereof and to issue debentures and other securities, whether outright or as collateral security for any debt, liability or obligation of BHP Billiton or of any third party.

### 2.13.11 Changes to rights of shareholders

Rights attached to any class of shares issued by either BHP Billiton Limited or BHP Billiton Plc can only be varied (whether as a Joint Electorate Action or a Class Rights Action) where such variation is approved both:

by the Company that issued the relevant shares, as a special resolution; and

by the holders of the issued shares of the affected class, either by a special resolution passed at a separate meeting of the holders of the issued shares of the class affected, or with the written consent of members with at least 75 per cent of the votes of that class.2.13.12 Conditions governing general meetings

All provisions relating to general meetings apply with any necessary modifications to any special meeting of any class of shareholders that may be held. Therefore, the following information relates equally to general meetings and any special meeting of any class of shareholders.

The Board may and shall on requisition in accordance with applicable laws call a general meeting of the shareholders at the time and place or places and in the manner determined by the Board. No shareholder may convene a general meeting of BHP Billiton except where entitled under law to do so. Any Director may convene a general meeting whenever the Director thinks fit. General meetings can also be cancelled, postponed or adjourned. Notice of a general meeting must be given to each shareholder entitled to vote at the meeting and such notice of meeting must be given in the form and manner in which the Board thinks fit. Five shareholders of the relevant company present in person or by proxy constitute a quorum for a meeting. A shareholder who is entitled to attend and cast a vote at a general meeting of BHP Billiton Limited may appoint a person as a proxy to attend and vote for the shareholder in accordance with the law.

### 2.13.13 Limitations on rights to own securities

Neither the Constitution of BHP Billiton Limited nor the Articles of Association of BHP Billiton Plc impose any limitations on the rights to own securities other than restrictions that reflect the takeovers codes under relevant Australian and UK law. In addition, the Australian Foreign Acquisitions and Takeovers Act 1975 imposes a number of conditions that restrict foreign ownership of Australian-based companies.

Share control limits imposed by the Constitution and the Articles of Association, as well as relevant laws, are described in section 2.7 and 2.11.2 of this Report.

### 2.13.14 Documents on display

You can consult reports and other information about BHP Billiton Limited that it has filed pursuant to the rules of the ASX at *www.asx.com.au*. You can consult reports and other information filed for publication by BHP Billiton Plc pursuant to the rules of the UK Listing Authority at the Authority s document viewing facility. Information filed on the ASX, or pursuant to the rules of the UK Listing Authority is not incorporated by reference into this Annual Report. The documents referred to in this Annual Report as being available on our website, *www.bhpbilliton.com*, are not incorporated by reference and do not form part of this Annual Report.

BHP Billiton Limited and BHP Billiton Plc both file annual and special reports and other information with the SEC. You may read and copy any document that either BHP Billiton Limited or BHP Billiton Plc files at the SEC s public reference room located at 100 F Street, NE, Room 1,580, Washington, DC 20549. Please call the SEC at 1-800-SEC-0330 or access the SEC website at *www.sec.gov* for further information on the public reference room. The SEC filings of BHP Billiton Limited since November 2002, and those of BHP Billiton Plc since April 2003, are also available on the SEC website.

### 2.14 Reserves

# 2.14.1 Petroleum reserves

### **Reserves and production**

Proved oil and gas reserves are the estimated quantities of crude oil, natural gas and natural gas liquids (NGL) that geological and engineering data demonstrate with reasonable certainty to be recoverable in future years from known reservoirs under existing economic and operating conditions, i.e. prices and costs as of the date the estimate is made. Proved developed oil and gas reserves are reserves that can be expected to be recovered through existing wells with existing equipment and operating methods.

Estimates of oil and gas reserves are inherently imprecise, require the application of judgement and are subject to future revision. Accordingly, financial and accounting measures (such as the standardised measure of discounted cash flows, depreciation, depletion and amortisation charges, the assessment of impairments and the assessment of valuation allowances against deferred tax assets) that are based on reserve estimates are also subject to change.

Proved reserves are estimated by reference to available seismic, well and reservoir information, including production and pressure trends for producing reservoirs and, in some cases, to similar data from other producing reservoirs in the immediate area. Proved reserves estimates are attributed to future development projects only where there is a significant commitment to project funding and execution, and for which applicable governmental and regulatory approvals have been secured or are reasonably certain to be secured. Furthermore, estimates of proved reserves only include volumes for which access to market is assured with reasonable certainty. All proved reserve estimates are subject to revision, either upward or downward, based on new information, such as from development drilling and production activities or from changes in economic factors, including product prices, contract terms or development plans.

The tables below detail estimated oil, condensate, NGL and gas reserves at 30 June 2009, 30 June 2008 and 30 June 2007, with a reconciliation of the changes in each year. Reserves have been calculated using the economic interest method and represent net interest volumes after deduction of applicable royalty, fuel and flare volumes. Reserves include quantities of oil, condensate, NGL and gas that will be produced under several production and risk sharing arrangements that involve the BHP Billiton Group in upstream risks and rewards without transfer of ownership of the products. At 30 June 2009, approximately seven per cent (2008: six per cent; 2007: nine per cent) of proved developed and undeveloped oil, condensate and NGL reserves and five per cent (2008: five per cent; 2007: six per cent) of natural gas reserves are attributable to those arrangements. Reserves also include volumes calculated by probabilistic aggregation of certain fields that share common infrastructure. These aggregation procedures result in enterprise-wide proved reserves volumes which may not be realised upon divestment on an individual property basis.

Millions of barrels	Australia/ Asia	Americas	UK/Africa/ Middle East	Total
Proved developed and undeveloped oil, condensate and NGL reserves <sup>(a)</sup>				
Reserves at 30 June 2006	303.9	190.1	57.0	551.0
Improved recovery				
Revisions of previous estimates	13.6	(0.9)	5.6	18.3
Extensions and discoveries	50.9	1.7		52.6
Purchase/sales of reserves		(0.1)		(0.1)
Production <sup>(b)</sup>	(35.8)	(6.6)	(14.3)	(56.7)
Total changes	28.7	(5.9)	(8.7)	14.1
Reserves at 30 June 2007 <sup>(c)</sup>	332.6	184.2	48.3	565.1
Improved recovery	17.6			17.6
Revisions of previous estimates	20.0	16.2	(2.2)	34.0
Extensions and discoveries	26.6	23.4	()	50.0
Purchase/sales of reserves				
Production <sup>(b)</sup>	(40.0)	(16.3)	(11.8)	(68.1)
Total changes	24.2	23.3	(14.0)	33.5
Reserves at 30 June 2008 <sup>(c)</sup>	356.8	207.5	34.3	598.6
Improved recovery	1.2	0.0	0.0	1.2
Revisions of previous estimates	13.3	5.2	23.7	42.2
Extensions and discoveries	5.9	14.0	0.0	19.9
Purchase/sales of reserves	0.0	0.0	0.0	0.0
Production <sup>(b)</sup>	(40.8)	(23.1)	(12.5)	(76.4)
Total changes	(20.4)	(3.9)	11.2	(13.1)
Reserves at 30 June 2009 (c)	336.4	203.6	45.5	585.5
Proved developed oil, condensate and NGL reserves <sup>(a)</sup>				
Reserves at 30 June 2006	199.3	21.5	54.6	275.4
Reserves at 30 June 2007	180.8	35.3	46.0	262.1
Reserves at 30 June 2008	190.9	99.6	30.6	321.1
Reserves at 30 June 2009	183.8	106.4	42.2	332.4

- (a) In Bass Strait, the North West Shelf, Ohanet and the North Sea, NGL is extracted separately from crude oil and natural gas.
- (b) Production for reserves reconciliation differs slightly from marketable production due to timing of sales and corrections to previous estimates.
- (c) Total proved oil, condensate and NGL reserves include 6.9 million barrels derived from probabilistic aggregation procedures.

Billions of cubic feet         Asia (a)         Americas         Middle East         Total           Proved developed and undeveloped natural gas reserves         4,532.7         116.5         218.1         4,867.3           Improved recovery         15.3         (0.4)         1.4         16.3         280.7         280.7         280.7         280.7         280.7         280.7         280.7         (0.4)         1.4         16.3         (0.4)         1.4         16.3         (0.4)         1.4         16.3         (0.4)         1.4         16.3         (0.4)         1.4         16.3         (80.1)           Purchases/sales of reserves in a discoveries         (295.0)         (8.7)         (53.3)         (357.0)         (356.2)         268.0         (51.9)         (140.1)           Reserves at 30 June 2007 (a)         4,176.5         384.5         166.2         4,727.2           Improved recovery         22.7         (42.3)         62.2         42.6         25.6         9         25.6         9         16.5         366.5         166.2         4,727.2           Improved recovery         (310.9)         (11.8)         (45.8)         (368.5)         166.2         4,65.5         26.6         26.6         26.6         26.6		Australia/		UK/Africa	
Proved developed and undeveloped natural gas reserves         4,532.7         116.5         218.1         4,867.3           Improved recovery         15.3         (0.4)         1.4         16.3           Revisons of previous estimates         15.3         (0.4)         1.4         16.3           Extensions and discoveries         280.7         280.7         280.7           Purchases/sales of reserves         (76.5)         (3.6)         (80.1)           Production <sup>(%)</sup> (295.0)         (8.7)         (53.3)         (357.0)           Total changes         (356.2)         268.0         (51.9)         (140.1)           Reserves at 30 June 2007 <sup>(c.)</sup> 4,176.5         384.5         166.2         4,727.2           Improved recovery         Revisions of previous estimates         22.7         (42.3)         62.2         42.6           Extensions and discoveries         23.98         17.1         256.9         Purchases/sales of reserves         23.98         17.1         256.9           Purchases/sales of reserves         (310.9)         (11.8)         (45.8)         (368.5)           Total changes         (48.4)         (37.0)         16.4         (69.0)           Reserves at 30 June 2008 <sup>(c.)</sup> 17.5 <t< th=""><th>Billions of cubic feet</th><th>Asia <sup>(a)</sup></th><th>Americas</th><th>Middle East</th><th>Total</th></t<>	Billions of cubic feet	Asia <sup>(a)</sup>	Americas	Middle East	Total
Reserves at 30 June 2006       4,532.7       116.5       218.1       4,867.3         Improved recovery       280.7       280.7       280.7         Revisions of previous estimates       15.3       (0,4)       1.4       16.3         Extensions and discoveries       (76.5)       (3.6)       (80.1)         Production <sup>(b)</sup> (295.0)       (8.7)       (53.3)       (357.0)         Total changes       (356.2)       268.0       (51.9)       (140.1)         Reserves at 30 June 2007 <sup>(c)</sup> 4,176.5       384.5       166.2       4,727.2         Improved recovery       Revisions of previous estimates       22.7       (42.3)       62.2       42.6         Extensions and discoveries       23.9.8       17.1       256.9       256.9         Purchase/sales of reserves       (310.9)       (11.8)       (45.8)       (368.5)         Total changes       (48.4)       (37.0)       16.4       (69.0)         Reserves at 30 June 2008 <sup>(c)</sup> 179.5       0.0       0.0       179.5         Revisions of previous estimates       216.7       7.5       0.0       275.0         Purchase/sales of reserves       267.5       7.5       0.0       275.0         Purchase	Proved developed and undeveloped natural gas reserves				
Improved recovery         15.3         0.4)         1.4         16.3           Extensions and discoveries         280.7         280.7         280.7           Purchases/acles of reserves         (76.5)         (3.6)         (80.1)           Production <sup>(b)</sup> (295.0)         (8.7)         (53.3)         (357.0)           Total changes         (356.2)         268.0         (51.9)         (140.1)           Reserves at 30 June 2007 <sup>(c)</sup> 4,176.5         384.5         166.2         4,727.2           Improved recovery         Revisions of previous estimates         22.7         (42.3)         62.2         42.6           Extensions and discoveries         23.8         17.1         256.9         25.9           Production <sup>(b)</sup> (310.9)         (11.8)         (45.8)         (368.5)           Total changes         (48.4)         (37.0)         16.4         (69.0)           Reserves at 30 June 2008 <sup>(c)</sup> 17.9.5         0.0         0.0         179.5           Revisions of previous estimates         267.5         7.5         0.0         275.0           Revisions of reserves         0.0         (2.4)         0.0         (2.4)           Production <sup>(b)</sup> (316.8) <t< td=""><td>Reserves at 30 June 2006</td><td>4,532.7</td><td>116.5</td><td>218.1</td><td>4,867.3</td></t<>	Reserves at 30 June 2006	4,532.7	116.5	218.1	4,867.3
Revisions of previous estimates       15.3       (0.4)       1.4       10.3         Extensions and discoveries       280.7       280.7       280.7         Purchases/sales of reserves       (76.5)       (3.6)       (80.1)         Production <sup>(6)</sup> (295.0)       (8.7)       (53.3)       (357.0)         Total changes       (356.2)       268.0       (51.9)       (140.1)         Reserves at 30 June 2007 <sup>(c)</sup> 4,176.5       384.5       166.2       4,727.2         Improved recovery       Revisions of previous estimates       2.2.7       (42.3)       62.2       42.6         Extensions and discoveries       239.8       17.1       256.9       256.9         Purchases/sales of reserves	Improved recovery				
Extensions and discoveries         280.7         280.7           Purchases/sales of reserves         (76.5)         (3.6)         (80.1)           Production <sup>(b)</sup> (295.0)         (8.7)         (53.3)         (357.0)           Total changes         (356.2)         268.0         (51.9)         (140.1)           Reserves at 30 June 2007 <sup>(c)</sup> 4,176.5         384.5         166.2         4,727.2           Improved recovery         Revisions of previous estimates         22.7         (42.3)         62.2         42.6           Extensions and discoveries         239.8         17.1         256.9         256.9           Purchases/sales of reserves	Revisions of previous estimates	15.3	(0.4)	1.4	16.3
Purchases/sales of reserves       (76.5)       (3.6)       (80.1)         Production <sup>(b)</sup> (295.0)       (8.7)       (53.3)       (357.0)         Total changes       (356.2)       268.0       (51.9)       (140.1)         Reserves at 30 June 2007 <sup>(c)</sup> 4,176.5       384.5       166.2       4,727.2         Improved recovery       Reserves at 30 Forevious estimates       22.7       (42.3)       62.2       42.6         Extensions and discoveries       239.8       17.1       256.9         Purchases/sales of reserves       (310.9)       (11.8)       (45.8)       (368.5)         Total changes       (48.4)       (37.0)       16.4       (69.0)         Reserves at 30 June 2008 <sup>(c)</sup> 4,128.1       347.5       182.6       4,658.2         Improved recovery       179.5       0.0       0.0       179.5         Revisions of previous estimates       21.4       (3.5)       0.8       28.7         Purchases/sales of reserves       0.0       (2.4)       0.0       (2.4)         Purchases/sales of reserves       0.0       (2.4)       0.0       (2.4)         Purchases/sales of reserves       0.0       (2.4)       0.0       (2.4)         Producti	Extensions and discoveries		280.7		280.7
Production <sup>(b)</sup> (295.0)       (8.7)       (53.3)       (357.0)         Total changes       (356.2)       268.0       (51.9)       (140.1)         Reserves at 30 June 2007 <sup>(c)</sup> 4,176.5       384.5       166.2       4,727.2         Improved recovery       Revisions of previous estimates       22.7       (42.3)       62.2       42.6         Extensions and discoveries       239.8       17.1       256.9         Purchase/sales of reserves       (310.9)       (11.8)       (45.8)       (368.5)         Total changes       (48.4)       (37.0)       16.4       (69.0)         Reserves at 30 June 2008 <sup>(c)</sup> 17.1       256.9       20.0       0.0       17.9         Reserves at 30 June 2008 <sup>(c)</sup> (310.9)       (11.8)       (45.8)       (368.5)         Improved recovery       179.5       0.0       0.0       179.5         Revisions of previous estimates       31.4       (3.5)       0.8       28.7         Purchase/sales of reserves       0.0       (2.4)       0.0       (2.4)         Purchase/sales of reserves       0.0       (2.4)       0.0       (2.4)         Purchase/sales of reserves       0.0       (2.4)       0.0       (2.4)	Purchases/sales of reserves	(76.5)	(3.6)		(80.1)
Total changes       (356.2)       268.0       (51.9)       (140.1)         Reserves at 30 June 2007 (°)       4,176.5       384.5       166.2       4,727.2         Improved recovery       Revisions of previous estimates       22.7       (42.3)       62.2       42.6         Extensions and discoveries       239.8       17.1       256.9         Purchases/Sales of reserves       31.0       (11.8)       (45.8)       (368.5)         Total changes       (48.4)       (37.0)       16.4       (69.0)         Reserves at 30 June 2008 (°)       4,128.1       347.5       182.6       4,658.2         Improved recovery       179.5       0.0       0.0       179.5         Revisions of previous estimates       21.4       (3.5)       0.8       28.7         Revisions of previous estimates       21.4       (3.4)       (34.4)       (364.6)         Production (°)       (316.8)       (13.4)       (34.4)       (364.6)         Total changes       161.6       (11.8)       (33.6)       116.2         Reserves at 30 June 2009 (°)       4,289.7       335.7       149.0       4,774.4         Proved developed natural gas reserves       2,286.4       16.5       206.4       2,509.3	Production <sup>(b)</sup>	(295.0)	(8.7)	(53.3)	(357.0)
Reserves at 30 June 2007 (c)       4,176.5       384.5       166.2       4,727.2         Improved recovery       Revisions of previous estimates       22.7       (42.3)       62.2       4.6         Extensions and discoveries       239.8       17.1       256.9         Purchases/sales of reserves	Total changes	(356.2)	268.0	(51.9)	(140.1)
Improved recovery         Revisions of previous estimates       22.7       (42.3)       62.2       42.6         Extensions and discoveries       239.8       17.1       256.9         Purchases/sales of reserves	Reserves at 30 June 2007 <sup>(c)</sup>	4,176.5	384.5	166.2	4,727.2
Revisions of previous estimates       22.7       (42.3)       62.2       42.6         Extensions and discoveries       239.8       17.1       256.9         Purchases/sales of reserves       (310.9)       (11.8)       (45.8)       (368.5)         Total changes       (48.4)       (37.0)       16.4       (69.0)         Reserves at 30 June 2008 <sup>(c)</sup> 4,128.1       347.5       182.6       4,658.2         Improved recovery       179.5       0.0       0.0       179.5         Revisions of previous estimates       31.4       (3.5)       0.8       28.7         Extensions and discoveries       267.5       7.5       0.0       275.0         Purchases/sales of reserves       0.0       (2.4)       0.0       (2.4)         Production <sup>(b)</sup> (316.8)       (13.4)       (34.4)       (364.6)         Total changes       161.6       (11.8)       (33.6)       116.2         Reserves at 30 June 2009 <sup>(c)</sup> 2,286.4       16.5       206.4       2,509.3         Reserves at 30 June 2009 <sup>(c)</sup> 2,137.4       15.9       162.4       2,315.7         Reserves at 30 June 2008       2,286.4       16.5       206.4       2,509.3         Reserves at 30 June	Improved recovery				
Extensions and discoveries       239.8       17.1       236.9         Purchases/sales of reserves       (310.9)       (11.8)       (45.8)       (368.5)         Total changes       (48.4)       (37.0)       16.4       (69.0)         Reserves at 30 June 2008 <sup>(c)</sup> 4,128.1       347.5       182.6       4,658.2         Improved recovery       179.5       0.0       0.0       179.5         Revisions of previous estimates       231.4       (3.5)       0.8       28.7         Extensions and discoveries       267.5       7.5       0.0       179.5         Purchases/sales of reserves       0.0       (2.4)       0.0       (2.4)         Production <sup>(h)</sup> (316.8)       (13.4)       (34.4)       (364.6)         Total changes       161.6       (11.8)       (33.6)       116.2         Reserves at 30 June 2009 <sup>(c)</sup> 4,289.7       335.7       149.0       4,774.4         Proved developed natural gas reserves       2,286.4       16.5       206.4       2,509.3         Reserves at 30 June 2009 <sup>(c)</sup> 2,134.6       46.4       175.1       2,370.1         Reserves at 30 June 2008       2,148.6       46.4       175.1       2,370.1         Reserv	Revisions of previous estimates	22.7	(42.3)	62.2	42.6
Purchases/sales of reserves       (310.9)       (11.8)       (45.8)       (368.5)         Total changes       (48.4)       (37.0)       16.4       (69.0)         Reserves at 30 June 2008 (c)       4,128.1       347.5       182.6       4,658.2         Improved recovery       179.5       0.0       0.0       179.5         Revisions of previous estimates       31.4       (3.5)       0.8       28.7         Extensions and discoveries       267.5       7.5       0.0       275.0         Purchases/sales of reserves       0.0       (2.4)       0.0       (2.4)         Production (b)       (316.8)       (13.4)       (34.4)       (364.6)         Total changes       161.6       (11.8)       (33.6)       116.2         Reserves at 30 June 2009 (c)       4,289.7       335.7       149.0       4,774.4         Proved developed natural gas reserves       2,286.4       16.5       206.4       2,509.3         Reserves at 30 June 2006       2,137.4       15.9       162.4       2,315.7         Reserves at 30 June 2008       2,148.6       46.4       175.1       2,370.1         Reserves at 30 June 2008       2,148.6       46.4       175.1       2,370.1 <td>Extensions and discoveries</td> <td>239.8</td> <td>17.1</td> <td></td> <td>256.9</td>	Extensions and discoveries	239.8	17.1		256.9
Production <sup>(b)</sup> (310.9)       (11.8)       (45.8)       (368.5)         Total changes       (48.4)       (37.0)       16.4       (69.0)         Reserves at 30 June 2008 <sup>(c)</sup> 4,128.1       347.5       182.6       4,658.2         Improved recovery       179.5       0.0       0.0       179.5         Revisions of previous estimates       31.4       (3.5)       0.8       28.7         Extensions and discoveries       267.5       7.5       0.0       275.0         Purchases/sales of reserves       0.0       (2.4)       0.0       (2.4)         Production <sup>(b)</sup> (316.8)       (13.4)       (34.4)       (364.6)         Total changes       161.6       (11.8)       (33.6)       116.2         Reserves at 30 June 2009 <sup>(c)</sup> 4,289.7       335.7       149.0       4,774.4         Proved developed natural gas reserves       2,286.4       16.5       206.4       2,509.3         Reserves at 30 June 2006       2,286.4       16.5       206.4       2,509.3         Reserves at 30 June 2007       2,137.4       15.9       162.4       2,315.7         Reserves at 30 June 2008       2,148.6       46.4       175.1       2,370.1         R	Purchases/sales of reserves				
Total changes       (48.4)       (37.0)       16.4       (69.0)         Reserves at 30 June 2008 (c)       4,128.1       347.5       182.6       4,658.2         Improved recovery       179.5       0.0       0.0       179.5         Revisions of previous estimates       31.4       (3.5)       0.8       28.7         Extensions and discoveries       267.5       7.5       0.0       275.0         Purchases/sales of reserves       0.0       (2.4)       0.0       (2.4)         Production (b)       (316.8)       (13.4)       (34.4)       (364.6)         Total changes       161.6       (11.8)       (33.6)       116.2         Reserves at 30 June 2009 (c)       4,289.7       335.7       149.0       4,774.4         Proved developed natural gas reserves       2,286.4       16.5       206.4       2,509.3         Reserves at 30 June 2006       2,286.4       16.5       206.4       2,509.3         Reserves at 30 June 2007       2,137.4       15.9       162.4       2,315.7         Reserves at 30 June 2008       2,148.6       46.4       175.1       2,370.1         Reserves at 30 June 2008       2,136.6       38.5       146.1       2.321.2	Production <sup>(b)</sup>	(310.9)	(11.8)	(45.8)	(368.5)
Reserves at 30 June 2008 (c)       4,128.1       347.5       182.6       4,658.2         Improved recovery       179.5       0.0       0.0       179.5         Revisions of previous estimates       31.4       (3.5)       0.8       28.7         Extensions and discoveries       267.5       7.5       0.0       275.0         Purchases/sales of reserves       0.0       (2.4)       0.0       (2.4)         Production (b)       (316.8)       (13.4)       (34.4)       (364.6)         Total changes       161.6       (11.8)       (33.6)       116.2         Reserves at 30 June 2009 (c)       4,289.7       335.7       149.0       4,774.4         Proved developed natural gas reserves       2,286.4       16.5       206.4       2,509.3         Reserves at 30 June 2006       2,286.4       16.5       206.4       2,509.3         Reserves at 30 June 2006       2,286.4       16.5       206.4       2,509.3         Reserves at 30 June 2007       2,137.4       15.9       162.4       2,315.7         Reserves at 30 June 2008       2,148.6       46.4       175.1       2,370.1         Reserves at 30 June 2008       2,148.6       46.4       175.1       2,321.2	Total changes	(48.4)	(37.0)	16.4	(69.0)
Improved recovery       179.5       0.0       0.0       179.5         Revisions of previous estimates       31.4       (3.5)       0.8       28.7         Extensions and discoveries       267.5       7.5       0.0       275.0         Purchases/sales of reserves       0.0       (2.4)       0.0       (2.4)         Production <sup>(b)</sup> (316.8)       (13.4)       (34.4)       (364.6)         Total changes       161.6       (11.8)       (33.6)       116.2         Reserves at 30 June 2009 <sup>(c)</sup> 4,289.7       335.7       149.0       4,774.4         Proved developed natural gas reserves       2,286.4       16.5       206.4       2,509.3         Reserves at 30 June 2006       2,137.4       15.9       162.4       2,315.7         Reserves at 30 June 2007       2,137.4       15.9       162.4       2,315.7         Reserves at 30 June 2008       2,148.6       46.4       175.1       2,370.1         Reserves at 30 June 2009       2,136.6       38.5       146.1       2,321.2	Reserves at 30 June 2008 <sup>(c)</sup>	4,128.1	347.5	182.6	4,658.2
Revisions of previous estimates       31.4       (3.5)       0.8       28.7         Extensions and discoveries       267.5       7.5       0.0       275.0         Purchases/sales of reserves       0.0       (2.4)       0.0       (2.4)         Production <sup>(b)</sup> (316.8)       (13.4)       (34.4)       (364.6)         Total changes       161.6       (11.8)       (33.6)       116.2         Reserves at 30 June 2009 <sup>(c)</sup> 4,289.7       335.7       149.0       4,774.4         Proved developed natural gas reserves       2,286.4       16.5       206.4       2,509.3         Reserves at 30 June 2006       2,137.4       15.9       162.4       2,315.7         Reserves at 30 June 2008       2,148.6       46.4       175.1       2,370.1         Reserves at 30 June 2009       2,136.6       38.5       146.1       2.321.2	Improved recovery	179.5	0.0	0.0	179.5
Extensions and discoveries       267.5       7.5       0.0       275.0         Purchases/sales of reserves       0.0       (2.4)       0.0       (2.4)         Production <sup>(b)</sup> (316.8)       (13.4)       (34.4)       (364.6)         Total changes       161.6       (11.8)       (33.6)       116.2         Reserves at 30 June 2009 <sup>(c)</sup> 4,289.7       335.7       149.0       4,774.4         Proved developed natural gas reserves       2,286.4       16.5       206.4       2,509.3         Reserves at 30 June 2007       2,137.4       15.9       162.4       2,315.7         Reserves at 30 June 2008       2,148.6       46.4       175.1       2,370.1         Reserves at 30 June 2009       2,136.6       38.5       146.1       2.321.2	Revisions of previous estimates	31.4	(3.5)	0.8	28.7
Purchases/sales of reserves       0.0       (2.4)       0.0       (2.4)         Production <sup>(b)</sup> (316.8)       (13.4)       (34.4)       (364.6)         Total changes       161.6       (11.8)       (33.6)       116.2         Reserves at 30 June 2009 <sup>(c)</sup> 4,289.7       335.7       149.0       4,774.4         Proved developed natural gas reserves       2,286.4       16.5       206.4       2,509.3         Reserves at 30 June 2006       2,137.4       15.9       162.4       2,315.7         Reserves at 30 June 2008       2,148.6       46.4       175.1       2,370.1         Reserves at 30 June 2009       2,136.6       38.5       146.1       2.321.2	Extensions and discoveries	267.5	7.5	0.0	275.0
Production (b)       (316.8)       (13.4)       (34.4)       (364.6)         Total changes       161.6       (11.8)       (33.6)       116.2         Reserves at 30 June 2009 (c)       4,289.7       335.7       149.0       4,774.4         Proved developed natural gas reserves       2,286.4       16.5       206.4       2,509.3         Reserves at 30 June 2006       2,137.4       15.9       162.4       2,315.7         Reserves at 30 June 2008       2,148.6       46.4       175.1       2,370.1         Reserves at 30 June 2009       2,136.6       38.5       146.1       2.321.2	Purchases/sales of reserves	0.0	(2.4)	0.0	(2.4)
Total changes       161.6       (11.8)       (33.6)       116.2         Reserves at 30 June 2009 <sup>(c)</sup> 4,289.7       335.7       149.0       4,774.4         Proved developed natural gas reserves       2,286.4       16.5       206.4       2,509.3         Reserves at 30 June 2006       2,137.4       15.9       162.4       2,315.7         Reserves at 30 June 2008       2,148.6       46.4       175.1       2,370.1         Reserves at 30 June 2009       2.136.6       38.5       146.1       2.321.2	Production <sup>(b)</sup>	(316.8)	(13.4)	(34.4)	(364.6)
Reserves at 30 June 2009 <sup>(c)</sup> 4,289.7335.7149.04,774.4Proved developed natural gas reservesReserves at 30 June 20062,286.416.5206.42,137.415.9162.42,137.415.9162.42,148.646.4175.12,370.1Reserves at 30 June 20092,136.638.5146.12.321.2	Total changes	161.6	(11.8)	(33.6)	116.2
Proved developed natural gas reservesReserves at 30 June 20062,286.416.5206.42,509.3Reserves at 30 June 20072,137.415.9162.42,315.7Reserves at 30 June 20082,148.646.4175.12,370.1Reserves at 30 June 20092,136.638.5146.12.321.2	Reserves at 30 June 2009 <sup>(c)</sup>	4,289.7	335.7	149.0	4,774.4
Reserves at 30 June 20062,286.416.5206.42,509.3Reserves at 30 June 20072,137.415.9162.42,315.7Reserves at 30 June 20082,148.646.4175.12,370.1Reserves at 30 June 20092.136.638.5146.12.321.2	Proved developed natural des reserves				
Reserves at 30 June 20092,200.410.5200.42,309.5Reserves at 30 June 20082,137.415.9162.42,315.7Reserves at 30 June 20092,148.646.4175.12,370.1Reserves at 30 June 20092.136.638.5146.12.321.2	Reserves at 30 June 2006	2 286 1	16.5	206.4	2 500 3
Reserves at 30 June 20092,137.415.7102.42,515.7Reserves at 30 June 20092,148.646.4175.12,370.1Reserves at 30 June 20092.136.638.5146.12.321.2	Reserves at 30 June 2000	2,200.4	15.0	162.4	2,309.3
Reserves at 30 June 2009       2,146.0       38.5       146.1       2.321.2	Reserves at 30 June 2007	2,137.4	46.4	175.1	2,313.7
	Reserves at 30 June 2009	2,136.6	38.5	146.1	2,321.2

(a) Production for Australia includes gas sold as LNG.

(b) Production for reserves reconciliation differs slightly from marketable production due to timing of sales and corrections to previous estimates.

(c) Total proved natural gas reserves include 117.1 billion cubic feet derived from probabilistic aggregation procedures.

# 2.14.2 Ore Reserves

# Introduction

Ore Reserves are estimates of the amount of ore that can be economically and legally extracted and processed from our mining properties. In order to estimate reserves, assumptions are required about a range of geological, technical and economic factors, including quantities, grades, production techniques, recovery rates, production costs, transport costs, commodity demand, commodity prices and exchange rates. Estimating the quantity and/or grade of reserves requires the size, shape and depth of ore bodies to be determined by analysing geological data such as drilling samples. Because the economic assumptions used to estimate reserves change from period to period, and because additional geological and operational data is generated during the course of operations, estimates of reserves may change from period to period. All of the Ore Reserve figures presented are

reported in 100 per cent terms and represent estimates at 30 June 2009 (unless otherwise stated). All tonnes and grade information has been rounded, hence small differences may be present in the totals. Reserve life is calculated as Total Ore Reserve divided by the current nominal capacity of the operation.

Our mineral leases are of sufficient duration (or convey a legal right to renew for sufficient duration) to enable all reserves on the leased properties to be mined in accordance with current production schedules. Our Ore Reserves may include areas where some additional approvals remain outstanding but where, based on the technical investigations we carry out as part of our mine planning process and our knowledge and experience of the approvals process, we expect that such approvals will be obtained as part of the normal course of business and within the timeframe required by the current life-of-mine schedule.

The reported reserves contained in this annual report do not exceed the quantities that we estimate could be extracted economically if future prices were at similar levels to the average historical prices for traded metals for the three years to 31 December 2008, or for bulk commodities the three year historical contracted prices. However, we do not use a bauxite, aluminium or alumina price to determine bauxite reserves. The primary criteria for determining bauxite reserves are the feed specifications required by the captive alumina refinery. In addition to these specifications a number of modifying factors are used to differentiate bauxite reserves from other mineralised material. For our Manganese assets, historical price is used to determine reserves at only one asset (GEMCO). Geological stratigraphic controls, cut-off grade and plant feed requirements are used to determine reserves at our other Manganese assets.

Current operating costs have been matched to the average historical prices in our test for impairment in accordance with Industry Guide 7. The reported reserves may differ in some respects from the reserves we report in our home jurisdictions of Australia and the UK. Those jurisdictions require the use of the Australasian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves, December 2004 (the JORC Code), which contemplates the use of reasonable investment assumptions in calculating reserve estimates.

The three-year historical average prices used for each commodity to test for impairment of the reserves of traded metals contained in this annual report are as follows:

Commodity Price	US\$
Copper <sup>(a)</sup>	3.14/lb
Gold	724.27/oz
Nickel	12.48/lb
Silver	13.32/oz
Lead	0.90/lb
Zinc	1.27/lb
Uranium	70.26/lb

(a) All our copper operations have used a copper price at or below the three-year historical average copper price to estimate, or test for impairment of, the copper reserves disclosed in this report.

# **Aluminium Customer Sector Group**

### Ore Reserves

The table below details the Ore Reserves for the Aluminium Customer Sector Group estimated as at 30 June 2009 in 100 per cent terms (unless otherwise stated).

					As at 3	30 June 20	)09									As at 3	30 June 2	2008
	Ore	Pi Millions of dry metric	roved Ore %	Reserve	%	Pro Millions of dry metric	obable Or %	e Reserv %	e %	Millions of dry metric	Fotal Ore	Reserve %	%	Reserve life	Millions of dry metric	Fotal Ore 1	Reserve %	%
sit (1)(2)(3)(4)	Туре	tonnes	A.Al <sub>2</sub> O <sub>3</sub>	R.SiO <sub>2</sub>	Fe <sub>2</sub> O <sub>3</sub>	tonnes	A.Al <sub>2</sub> O <sub>3</sub>	R.SiO <sub>2</sub>	Fe <sub>2</sub> O <sub>3</sub>	tones	A.Al <sub>2</sub> O <sub>3</sub>	R.SiO <sub>2</sub>	Fe <sub>2</sub> O <sub>3</sub>	(years)	tonnes	A.Al <sub>2</sub> O <sub>3</sub>	R.SiO <sub>2</sub>	Fe <sub>2</sub> O <sub>3</sub>
	Laterite	265	31.1	1.8		59	30.4	1.8		324	31.0	1.8		19	311	30.9	1.8	
	MRN																	
	Washed	141	50.8	3.6		59	50.2	4.1		200	50.6	3.8		13	214	50.7	3.7	
	Laterite	0.4	45.5	3.5	13.4	0.3	38.1	3.4	23.2	0.6	42.4	3.5	17.5	0.4	0.7	42.5	3.4	17.4
	Laterite	5.9	47.2	4.4	10.9					5.9	47.2	4.4	10.9	4	9.4	48.4	4.0	10.6

(1) Approximate drill hole spacings used to classify the reserves are:

Deposit	<b>Proved Ore Reserves</b>	<b>Probable Ore Reserves</b>
Worsley	Maximum 80m	Maximum 160m
MRN	A bauxite intersection grid of 200m. Mining and metallurgical characterisation (test pit/bulk sample), plus a reliable suite of chemical and size distribution data	Those areas with a bauxite intersection grid spacing of less than 400m and/or a 400m spaced grid with a 200m offset fill in, plus a reliable suite of chemical and size distribution data
Coermotibo	61m x 61m	$122 \text{m} \times 122 \text{m}$
Onverdacht	61m x 61m	122m x 122m

(2) Metallurgical recoveries for the operations are:

Deposit		Estimated % metallurgical recovery of A.Al <sub>2</sub> O <sub>3</sub>
Worsley (Worsley Refinery)	90%	
MRN (Alumar Refinery)	94%	
Coermotibo (Paranam Refinery)	93.1%	
Onverdacht (Paranam Refinery)	93.1%	

(3) A.Al<sub>2</sub>O<sub>3</sub> is available alumina determined for expected refinery conditions. R.SiO<sub>2</sub> is silica that is reactive in the refinery process. Fe<sub>2</sub>O<sub>3</sub> is iron oxide.

(4) For Worsley, MRN, Coermotibo and Onverdacht bauxite deposits the reserves are determined based on applicable A.Al<sub>2</sub>O<sub>3</sub> and R.SiO<sub>2</sub>. For one of the Onverdacht deposits Fe<sub>2</sub>O<sub>3</sub> cut-off is also applied.

(5) MRN Washed tonnes and grade represent expected product based on forecast beneficiated yield in the reserve area.

- (6) The MRN reserves are located on mining leases that provide MRN the right to mine. Current mining areas have full environmental approval. Land clearing licences for these areas require yearly renewal. Environmental approvals for the new mine developments within the reserve area have not yet been granted. The area covering the remaining reserves is subject to further environmental applications that will be submitted by MRN within the time frame required by the current life of mine schedule.
- (7) Suriname On 31 July 2009 BHP, Billiton Maatschappij Suriname (BMS) was sold to Suralco, an Alcoa subsidiary.

### **Base Metals Customer Sector Group**

### Ore Reserves

The table below details the total Ore Reserves for the Base Metals Customer Sector Group estimated as at 30 June 2009 in 100 per cent terms (unless otherwise stated).

	Millions of dry metric	Proved	Ore Rese	erve		As at 30 Millions of dry metric	) June 200 Probabl	)9 e Ore Res	erve		Millions of dry metric	Total	Ore Rese	ve		Reserve life	Millions of dry metric	A: Total (	s at 30 Ju Ore Resei	ne 20 rve
pe	tonnes	% TCu	% SCu			tonnes	% TCu	% SCu			tonnes	% TCu	% SCu			(years)	tonnes	% TCu	% SCu	
	85	0.71				56	0.08				142	0.82				21	144	0.02		
	758	1.16				941	1.00				1.699	1.07				21	1.731	1.10		
;	,00					2.12	1100				1,077	1107					1,701			
	611	0.53				1,809	0.54				2,421	0.54					2,260	0.55		
	62	0.62	0.47			55	0.64	0.45			117	0.63	0.46			9	105	0.65	0.48	
;	28	0.69	0.13			23	0.74	0.14			51	0.71	0.13			10	48	0.71	0.15	
ow	20	1.10	0.80			0.9	0.82	0.71			57	1.09	0.82			10	00	1.00	0.70	
y	14	1.39	0.70			14	1.00	0.50			28	1.19	0.60							
•	131	1.15				89	0.75				219	0.99					205	1.06		
1						33	0.50	0.10			33	0.50	0.10							
de	6.0	0.22				7.0	0.21				13	0.21				4	15	0.21		
;	36	0.22				53	0.42				89	0.21				-	98	0.21		
;																				
es																	446	0.11		
	Millions of dry metric	Ø C	kg/tonne	- /4	-// • -	Millions of dry metric	Ø C	kg/tonne	/4 . 4		Millions of dry metric	Ø C	kg/tonne	- 14 . 4	-4 4 -		Millions of dry metric	Ø C	kg/tonne	-14 4
	tonnes	% Cu	0308	g/t Au	g/t Ag	tonnes	% Cu	0308	g/t Au	g/t Ag	tonnes	% Cu	$0_{3}0_{8}$	g/t Au	g/t Ag		tonnes	% Cu	U <sub>3</sub> U <sub>8</sub>	g/t A
•	188	1.96	0.60	0.54	3.79	401	1.73	0.59	0.72	3.16	589	1.81	0.59	0.66	3.36	54	473	1.86	0.60	0.7
	Millions of dry metric tonnes	% Cu	% Zn	g/t Ag	% Mo	Millions of dry metric tonnes	% Cu	% Zn	g/t Ag	% Mo	Millions of dry metric tonnes	% Cu	% Zn	g/t Ag	% Mo		Millions of dry metric tonnes	% Cu	% Zn	g/t A
	87	1.09	0.2	8.6	0.04	449	1.04	0.2	9.7	0.03	536	1.05	0.2	9.5	0.03	21	292	1.11	0.16	9
•	20	0.02		10.1	0.01	1.40	1.05	2.0	17.7	0.01	101	1.02	0.1	10.0	0.01		100	1.12	0.75	10
	39 Millions of dry metric tonnes	0.92 g/t Ag	2.3 % Pb	% Zn	0.01	Millions of dry metric tonnes	1.05 g/t Ag	2.0 % Pb	% Zn	0.01	Millions of dry metric tonnes	1.02 g/t Ag	2.1 % Pb	% Zn	0.01		Millions of dry metric tonnes	1.13 g/t Ag	2.75 % Pb	19 % Z
		226	o -			<b>a</b> :	a./=	× -			a :		0.0			~	<b>a</b> :	0.10	0.5	~

(1) % TCu per cent total copper, % SCu per cent soluble copper, % Cu per cent copper, kg/tonnOU kilograms per tonne uranium oxide, g/tAu grams per tonne gold, g/tAg grams per tonne silver, % Zn per cent zinc, % Pb per cent lead, % Mo per cent molybdenum.

(2) Approximate drill hole spacings used to classify the reserves are:

<b>Proved Ore Reserves</b>	<b>Probable Ore Reserves</b>			
Sulphide: 50m x 50m	Sulphide: 80m x 80m			
Sulphide leach: 60m x 60m	Sulphide leach: 100m x 100m			
Oxide: 35m x 35m	Oxide: 50m x 50m			
55m x 55m on first kriging pass	120m x 120m on second kriging pass			
Oxides: less than approximately 50m continuous square grid	Oxides and Sulphides: less than approximately 100m continuous square grid, estimation on second kriging pass			
Sulphides: less than approximately 75m continuous square grid				
60m x 120m rectangular grid	200m x 200m			
Drilling grid of 20m to 30m	Drilling grid of 30m to 70m			
High Grade Cu/Zn: 3 composites of the same grade zone and	3 composites of the same grade zone & different holes within			
different holes within 30m, closest within 20m.	55m, closest within 40m or 2 composites of the same grade zone and different holes within 65m, closest within 30m or at least 50			
Low Grade Cu/Zn: 3 composites of the same grade zone &	composites within /5m with at least 90% in the same grade zone			
different holes within 35m, closest within 25m	as the block			
12.5m sectional x 15m vertical	25m sectional x 25m vertical			
	Proved Ore ReservesSulphide: 50m x 50mSulphide leach: 60m x 60mOxide: 35m x 35mS5m x 55m on first kriging passOxides: less than approximately 50m continuous square gridSulphides: less than approximately 75m continuous square gridGom x 120m rectangular gridDrilling grid of 20m to 30mHigh Grade Cu/Zn: 3 composites of the same grade zone and different holes within 30m, closest within 20m.Low Grade Cu/Zn: 3 composites of the same grade zone & different holes within 35m, closest within 25m12.5m sectional x 15m vertical			

#### (3) Metallurgical recoveries for the operations are:

		]	Metallı	irgical Recovery			
Deposit	Cu	Ag	Pb	Zn	Au	U <sub>3</sub> O <sub>8</sub>	Мо
Escondida	Sulphide: 82% of TCu Sulphide Leach: 33% of TCu Oxide: 68% TCu						
Cerro Colorado	69% of TCu						
Spence	Oxide: 80% of TCu						
	Oxide low solubility: 70% of TCu Sulphide: 70% of TCu						
	ROM: 30% of TCu						
Pinto Valley	Low-grade leach: 25% Sulphide: 86%						
Olympic Dam	95%	65%			65%	73%	
Antamina	Sulphide Cu: 94%	Sulphide Cu: 70%		Sulphide Cu: 0%			Sulphide Cu: 71%
	Sulphide Cu-Zn: 82%	Sulphide Cu-Zn: 59%		Sulphide Cu-Zn: 80%			Sulphide Cu-Zn: 0%
Cannington		85%	89%	68%			

(4) Spence Changes from 2008 include the addition of run of mine (ROM) heap leach reserves due to increased confidence on the estimated recovery from production experience, and the identification and separation of the low solubility oxide ore type that had previously been reported within the oxide reserves. Depletion of reserves due to production was offset by the addition of reserves in the revised mine plan as a result of changes in economic assumptions. ROM run of mine leach stockpile for low-grade oxide, supergene sulphide mineralisation and transitional sulphides.

(5) Pinto Valley The Pinto Valley mine and mill operations were placed on care and maintenance status as of 20 January 2009 due to depressed copper prices. Changes to the intact reserves are due to depletion by production only. The sulphide stockpiles were removed from reserve status due to the tenuous long-term viability of remnant mineralisation in the stockpile.

- (6) Olympic Dam The increase in overall Ore Reserve is due to additional mineralisation being available for conversion to Probable Reserves.
- (7) Antamina The increase in reserves is the result of a drilling program completed in April 2008 that identified additional mineralisation which has been incorporated into the November 2008 mine plan.

### **Diamonds and Specialty Products Customer Sector Group**

# Ore Reserves

The table below details the total Ore Reserves for the Diamonds and Specialty Products Customer Sector Group estimated as at 30 June 2009 in 100 per cent terms (unless otherwise stated).

Commodity Deposit <sup>(1)(2)</sup>	Ore Type <sup>(3)</sup>	As at 30 Ju Proved Rese Millions of dry metric tonnes	ine 2009 d Ore rve Carats per tonne	Probab Rese Millions of dry metric tonnes	le Ore rve Carats per tonne	Total Rese Millions of dry metric tonnes	Ore erve Carats per tonne	Reserve life (vears)	As at Total Rese Millions of dry metric tones	30 June Ore erve Carats per tonne	2008 Reserve life (years)	BHP Billiton Interest %
Diamonds											•	
EKATI Core Zone <sup>(4)</sup>	OC	16	0.3	15	0.6	31	0.4	8	34.6	0.4	10	80
	UG	3.2	0.8	4.1	0.9	7.3	0.8		9.1	0.9		
	SP			0.2	0.5	0.2	0.5		0.4	0.2		
		Millio tonı	ns of 1es	Millio tonı	ns of 1es	Millio toni	ons of nes		Millio toni	ns of nes		
Mineral Sands												
Richards Bay Minerals <sup>(5)</sup>	TiO <sub>2</sub> slag		5.7		19		24	24		24	24	50

(1) Approximate drill hole spacings used to classify the reserves are:

Deposit	<b>Proved Ore Reserves</b>	Probable Ore Reserves
EKATI Core Zone	Approximately less than 30m	Approximately less than 60m
Richards Bay Minerals	50m x 50m	800m x 100m

### (2) Metallurgical recoveries for the operations are:

Deposit	Metallurgical Recovery
EKATI Core Zone	Factors are assigned per geological domain and deposit
Richards Bay Minerals	48.1% including conversion to slag

(3) OC open-cut, UG underground, SP stockpile, Titanium dioxide.

- (4) EKATI Core Zone An effective 1.5mm square aperture stone size cut-off is used to estimate the reserves.
- (5) Richards Bay Minerals Reserves are reported in tonnes of slag as at 31 December 2008.

### Stainless Steel Materials Customer Sector Group

# Ore Reserves

The table below details the total Ore Reserves for the Stainless Steel Materials Customer Sector Group estimated as at 30 June 2009 in 100 per cent terms (unless otherwise stated).

	As at 3	0 June 20 Proved	09 Ore	Probabl	e Ore	Total	Ore		As at Total (	30 June Ore	2008	
Commodity Deposit (1)(2)	Ore Type <sup>(3)</sup>	Reser Millions of dry metric tonnes	ve % Ni	Reser Millions of dry metric tonnes	ve % Ni	Reser Millions of dry metric tonnes	rve % Ni	Reserve life (years)	Reser Millions of dry metric tonnes	ve % Ni	Reserve life (years)	BHP Billiton Interest
Nickel Colombia	ore type	tonnes	/0 1 (1	tonnes	/0 1 (1	tonnes	/0 111	(jeurs)	tonnes	<i>/0</i> 1 (1	(Jears)	10
Cerro Matoso	Laterite	54	1.30	42	1.22	96	1.27	40	103	1.29	42	99.94
	SP	29	1.38			29	1.38		24	1.38		
	MNR Ore	23	0.20			23	0.20		23	0.2		
Nickel West												
Leinster	OC	2.9	1.3	0.2	0.9	3.1	1.3	6	3.7	1.30	7	100
	UG	7.1	2.0	2.0	1.5	9.1	1.9		11	1.85		
Mt Keith	OC	127	0.57	2.0	0.45	129	0.57	15	137	0.58	14	100
	SP	24	0.53			24	0.53		27	0.52		
Cliffs	UG	0.3	3.5	1.1	4.0	1.4	3.9	4	1.6	3.6	5	100
Ravensthorpe <sup>(4)</sup>	Laterite								227	0.66	21	100
	SP								8	0.77		

(1) Approximate drill hole spacings used to classify the reserves are:

Deposit	<b>Proved Ore Reserves</b>	<b>Probable Ore Reserves</b>
Cerro Matoso	25m x 25m	Greater than 25m and less than 70m
Leinster	25m x 25m	25m x 50m
Mt Keith	60m x 40m	80m x 80m
Cliffs	25m x 25m	50m x 50m

(2) Metallurgical recoveries for the operations are:

Deposit		Metallurgical Recovery				
Cerro Matoso		90% (Reserve to metal)				
Leinster:	UG	87.2% (Reserve to Ni in concentrate)				
	OC	83.5% (Reserve to Ni in concentrate)				
Mt Keith:	OC	68.4% (Reserve to Ni in concentrate)				
	SP	55% (Reserve to Ni in concentrate)				
Cliffs		90.3% (Reserve to Ni in concentrate)				

(3) OC open-cut, UG underground, SP stockpile, MNR Ore Metal Nickel Recovery ore, % Ni per cent nickel.

(4) Ravensthorpe operations were indefinitely suspended in January 2009 and no reserve is reported.

### Iron Ore Customer Sector Group

#### Ore Reserves

The table below details the total Ore Reserves for the Iron Ore Customer Sector Group estimated as at 30 June 2009 in 100 per cent terms (unless otherwise stated).

	As at 30 June 2009											As at Total								
	Millions	I	Proved	Ore Rese	erve		Millions	P	robabl	e Ore Res	serve		Millions		Total (	Ore Reser	rve			Rese
Ore	of wet metric						of wet metric						of wet metric						Reserve life	of w meti
ype	tonnes	% Fe	% P	% SiO <sub>2</sub>	% Al <sub>2</sub> O <sub>3</sub>	% LOI	tonnes	% Fe	% P	% SiO <sub>2</sub>	% Al <sub>2</sub> O <sub>3</sub>	% LOI	tonnes	% Fe	% P	% SiO <sub>2</sub>	% Al <sub>2</sub> O <sub>3</sub>	% LOI	(years)	tonn
KM	340	63.6	0.08	4.3	2.0	2.0	528	62.6	0.09	5.3	2.1	2.5	868	63.0	0.08	4.9	2.1	2.3	28	
ſМ	8.1	61.1	0.07	2.6	1.6	7.8	55	62.1	0.07	2.9	1.8	6.0	63	61.9	0.07	2.8	1.7	6.2		
KM	96	63.2	0.09	3.4	2.4	3.4	325	62.6	0.10	3.3	2.4	4.1	420	62.7	0.10	3.4	2.4	4.0	92	
1M							131	62.1	0.08	2.8	1.8	5.8	131	62.1	0.08	2.8	1.8	5.8		
IM	8.6	59.7	0.06	9.5	1.7	2.6	19	60.2	0.05	9.7	1.1	2.1	27	60.0	0.05	9.6	1.3	2.3	14	
KM	54	62.7	0.14	2.8	1.9	5.0	128	61.7	0.13	3.7	2.1	5.2	182	62.0	0.13	3.4	2.1	5.1	13	
ſМ	151	62.3	0.06	2.9	1.7	5.9	222	61.4	0.06	3.8	1.9	6.0	372	61.8	0.06	3.4	1.8	6.0		
ID	668	57.2	0.04	5.7	1.5	10.6	383	57.2	0.05	5.9	1.5	10.6	1,051	57.2	0.04	5.8	1.5	10.6	23	1
	Millions of dry metric tonnes	% Fe	% Pc				Millions of dry metric tonnes	% Fe	% Pc				Millions of dry metric tonnes	% Fe	% Pc					Millie of d meti tonr
.OM	769	44.3	0.05				821	41.5	0.05				1,590	42.9	0.05				39	

(1) Approximate drill hole spacings used to classify the reserves are:

Deposit	Proved Ore Reserves	Probable Ore Reserves				
Mt Newman JV	50m x 50m	300m x 50m				
Jimblebar	50m x 50m	300m x 50m				
Mt Goldsworthy JV Northern	25m x 25m	50m x 50m				
Mt Goldsworthy JV Area C	50m x 50m	300m x 50m				
Yandi JV	50m x 50m	150m x 150m				
Samarco JV	200m x 200m x 16m	400m x 400m x 16m				

(2) Metallurgical recovery is 100%, except for Mt Newman JV Whaleback BKM where recovery is 92%, and Samarco where recovery is 83.8%.

- (3) For Western Australian Iron Ore (WAIO) the reserves are divided into joint ventures and material types that reflect the various products produced. BKM Brockman, MM Marra Mamba, NIM Nimingarra and CID Channel Iron Deposits. ROM is run of mine for Samarco.
- (4) The reserve grades listed: Fe iron, P phosphorous, SjOsilica, AD<sub>3</sub> alumina, LOI loss on ignition, refer to *in situ* mass percentage on a dry weight basis. For Samarco %Pc is phosphorous in concentrate. For Mt Newman, Jimblebar, Mt Goldsworthy and Yandi joint ventures tonnages represent wet tonnes based on the following moisture contents: BKM 3%, MM 4%, CID 8%, NIM 3.5%. Iron ore is marketed as Lump (direct blast furnace feed), Fines (sinter plant feed) and direct reduction and blast furnace pellets (Samarco).

- (5) Cut-off grades used to estimate reserves: Mt Newman 50-62% Fe for BKM, 59% Fe for MM; Jimblebar 59% Fe for BKM, 58% Fe for MM; Mt Goldsworthy 50% Fe for NIM, 57% Fe for MM, 59.5% Fe for BKM; Yandi 55.0-55.5% Fe for CID; Samarco Fe>=34%.
- (6) Our WAIO reserves are all located on State Agreement mining leases that guarantee the right to mine, except the Cattle Gorge mine (part of Mt Goldsworthy JV Northern), which is an operating mine on a standard Western Australian mining lease. We are required to obtain certain State Government approvals (including environmental and heritage clearances) before we commence mining operations on a particular area. We have included in our reserves areas where one or more approvals remain outstanding but where, based on the technical investigations we carry out as part of our mine planning process and our knowledge and experience of the approvals process, we expect that such approvals will be obtained as part of the normal course of business and within the time frame required by the current life of mine schedule.
- (7) Jimblebar Increase in MM ore reserve due to addition of new deposit South Jimblebar .
- (8) Samarco reserves have substantially increased as a result of (a) the inclusion of additional mineralisation in the mine plan as a result of extensive drilling programs, and (b) completing studies of product specifications that have enabled the extension of the expected economic life of the mine.

# Manganese Customer Sector Group

### Ore Reserves

The table below details the total Ore Reserves for the Manganese Customer Sector Group estimated as at 30 June 2009 in 100 per cent terms (unless otherwise stated).

		Proved	Ore Re	As at 30 serve	) June 2009 Probabl	e Ore Ro	eserve	Total	Ore Res	erve		Total	As at 30 Ore Res	June 2009 erve	8
lity 1)(2)(3)	Ore Type	Millions of dry metric tonnes	% Mn	% Yield	Millions of dry metric tonnes	% Mn	% Yield	Millions of dry metric tonnes	% Mn	% Yield	Reserve life (years)	Millions of dry metric tonnes	% Mn	% Yield	Reserve life (years)
(4)	ROM	70	46.9	50	44	46.4	48	114	46.7	49	14	117	47.8	48.0	17
		Millions of dry metric			Millions of dry metric			Millions of dry metric				Millions of dry metric			
		tonnes	% Mn	% Fe	tonnes	% Mn	% Fe	tonnes	% Mn	% Fe		tonnes	% Mn	% Fe	
5)	Lower Body-HG	2.2	47.0	11.0	6.0	47.2	11.9	8.2	47.1	11.7	49	13	47.8	10.7	20
	Lower Body-LG	2.1	42.2	12.2	8.2	41.4	14.5	10	41.6	14.0		7.0	41.1	13.2	
	NTS-Lower Body-HG	1.0	48.8	11.2	5.9	48.5	11.4	6.9	48.5	11.4					
	NTS-Lower body-LG	0.1	44.5	12.5	0.9	42.8	16.6	1.0	42.9	16.3					
	Upper Body				47	42.1	17.3	47	42.1	17.3					
		Millions of wet metric			Millions of wet metric			Millions of wet metric				Millions of wet metric			
		tonnes	% Mn	% Fe	tonnes	% Mn	% Fe	tonnes	% Mn	% Fe		tonnes	% Mn	% Fe	
an <sup>(5)</sup>	M, C and N Zones	42	37.8	4.5	9.1	36.6	4.6	51	37.6	4.5	22	46	37.6	4.4	14
	X Zone	4.2	37.5	4.8	0.3	36.4	4.4	4.5	37.4	4.8		4.4	37.2	4.8	
	NTS-M, C, N Zones	8.2	37.8	4.5	14	37.6	4.5	22	37.7	4.5					
	NTS-X Zone	1.2	37.5	4.8	1.8	37.4	4.7	3.0	37.4	4.7					

(1) Approximate drill hole spacings used to classify the reserves are:

Deposit	Proved Ore Reserves	Probable Ore Reserves
GEMCO	60m x 120m and 60m x 60m	120m x 120m
Wessels	Defined as rim ±30m wide around mined-out areas,	Underground chip sampling, limited underground
	plus ±132m spaced surface drill holes, supplemented	drill holes and ±132m spaced surface drill holes
	by some economically viable remnant blocks within	
	mined-out areas, underground drilling and sampling	
Mamatwan	80m x 80m	160m x 160m
(2) Metallurgical recoveries for the operations	are:	

DepositMetallurgical RecoveryGEMCOSee yield in the Reserve tableWessels76%Mamatwan94%

(3) ROM run of mine product, % Mn per cent manganese, % Fe per cent iron

(4) GEMCO Manganese grades are given as per washed ore samples and should be read together with their respective yields.

(5) Wessels and Mamatwan The reserve is stated as of 1 July 2009, when an agreement between Samancor Manganese and BEE consortium Ntsimbintle Mining Pty Ltd became effective. Under the agreement, Ntsimbintle contributed prospecting rights to Hotazel Mines in return for a 9% equity stake. The Wessels and Mamatwan reserve now includes reserves within the Ntsimbintle prospecting rights area, while our share has been reduced to 54.6%. The additional reserves are designated as NTS in the table. Subsequent additional BEE transactions have reduced our interest in Wessels and Mamatwan to 44.4% as at 31 July 2009 but have not changed the stated reserve.

# Metallurgical Coal Customer Sector Group

# Metallurgical Coal Reserves

The table below details the total Coal Reserves for the Metallurgical Coal Customer Sector Group estimated as at 30 June 2009 in 100 per cent terms (unless otherwise stated).

			Α	s at 30 June 200	9							As at	30 June	2008	
			Proved Coal Reserve	Probable Coal Reserve	Total Coal Reserve <sup>(3)</sup>	Total 1 R	Marketa eserves (	ble Coal 2)(3)	I		Total I R	Marketa eserves <sup>(</sup>	ble Coal 2)(3)		
lity Deposit <sup>(1)</sup> and Coal, at operating CQCA JV	Mining Method <sup>(2)</sup>	Coal Type <sup>(2)</sup>	Millions of metric tonnes	Millions of metric tonnes	Millions of metric tonnes	Millions of metric tonnes	% Ash	% VM	% S	Reserve life (years)	Millions of metric tonnes	% Ash	% VM	% S	Reserve life (years)
a Riverside	~ ~														
adow	OC UC	Met	353	184	537	391	8.9	23.0	0.50	32	372	9.1	23.2	0.52	32
1000	UG	Met	48	79	127	110 577	6.6	23.6	0.50	66	525	6.6	23.6	0.50	50
wiis	00	Mat	392	160	1,022	215	9.5	20.9	0.60	28	252	9.2	19.4	0.60	21
Dark (5)	00	Met	133	100	352	150	0.2	10.1	0.05	30 24	125	9.0	10.4	0.00	21
ter <sup>(6)</sup>	OC	Met/Th	115	402	516	460	9.8	24.8	0.40	34	254	8.8	25.8	0.70	20
JV															
Crinum <sup>(7)</sup>	OC	Met	10	4	14	10	7.5	33.2	0.60	7					6
	UG	Met		30	30	24	7.5	33.1	0.60						
	OC	Met/Th									4.2	7.5	33.1	0.60	
	UG	Met/Th									30	7.5	33.0	0.60	
tsui															
alker Ck <sup>(8)</sup>	OC	Met/Th	63	66	129	101	8.4	11.1	0.21	25	31	8.4	12.7	0.39	8
/inchester <sup>(9)</sup>	OC	Met/Th	37	34	71	51	8.6	23.7	0.40	17	53	8.5	23.8	0.36	17
a Coal, g mines															
))	UG	Met/Th	8	43	50	44	8.9	23.5	0.36	14	32	8.9	23.4	0.40	10
ff	UG	Met/Th	1	15	16	13	8.9	21.5	0.37	5	13	8.9	21.5	0.40	5
ium	UG	Met/Th	2	44	46	33	9.7	23.6	0.59	13	33	9.5	23.6	0.60	13

(1) Approximate drill hole spacings used to classify the reserves are:

<b>Deposit</b> Goonyella Riverside Broadmeadow	<b>Proved Ore Reserves</b> Maximum 500m spacing of geophysically logged, analysed, coreholes with >=95% recovery or <+10% expected error at 95% confidence on a one-year mining block	<b>Probable Ore Reserves</b> 500m to 1,000m spacing of geophysically logged, analysed, coreholes with > 95% recovery or +10% to +20% expected error at 95% confidence on a one-year mining block
Peak Downs	Variable and dependent on seam and domain: range from 500m to 1,050m spacing of geophysically logged, analysed, coreholes with >=95% recovery	Variable and dependent on seam and domain: range from 500m to 2,100m spacing of geophysically logged, analysed, coreholes with >=95% recovery
Saraji	Variable and dependent on seam and domain: 500m to 1,040m spacing of geophysically logged, analysed, coreholes with >=95% recovery	Variable and dependent on seam and domain: 900m to 2,100m spacing of geophysically logged, analysed, coreholes with >=95% recovery
Norwich Park	Variable and dependent on seam and domain: range from 650m to 1,350m spacing of geophysically logged, analysed, coreholes with >=95% recovery	Variable and dependent on seam and domain: range from 1,350m to 2,650m spacing of geophysically logged, analysed, coreholes with >=95% recovery
Blackwater	Maximum 500m spacing of geophysically logged, analysed, coreholes with >=95% recovery	500m to 1,000m spacing of geophysically logged, analysed, coreholes with >=95% recovery
Gregory Crinum	Maximum 850m spacing of geophysically logged, analysed, coreholes with >=95% recovery, 3D seismic coverage for UG coal	850m to 1,700m spacing of geophysically logged, analysed, coreholes with >=95% recovery
South Walker Ck	Variable and dependent on seam and domain: from 500m to 900m spacing of geophysically logged, analysed, coreholes with >=95% recovery	Variable and dependent on seam and domain: from 1,000m to 1,750m spacing of geophysically logged, analysed, coreholes with >=95% recovery
Poitrel-Winchester	Variable spacing by seam and domain: from 300m to 950m of geophysically logged, analysed, coreholes with >=95% recovery	Variable spacing by seam and domain: from 550m to 1,850m of geophysically logged, analysed, coreholes with >=95% recovery
Appin, West Cliff, Dendrobium	Maximum of 700m between data points	Maximum of 1,000m between data points

(2) OC open-cut, UG underground, Met metallurgical coal, Th thermal coal, % VM per cent volatile matter, % S per cent sulphur.

- (3) Total Coal Reserve (tonnes) is the sum of Proved and Probable Coal Reserve estimates, which includes allowances for diluting materials, and for losses that occur when the coal is mined, and are at the moisture content when mined. Marketable Coal Reserve (tonnes) is the tonnage of coal available, at specified moisture and air-dried quality, for sale after the beneficiation of the Total Coal Reserve. Note that where the coal is not beneficiated, the Total Coal Reserve tonnes are the Marketable Coal Reserve tonnes, with moisture adjustment where applicable.
- (4) Saraji Changes to the reserve are attributed to an updated geological model, revised exclusion zones associated with the Phillips and Spring Creeks diversions, and revised economic assumptions.
- (5) Norwich Park The increase in reserves is are mainly attributable to an updated geological model.
- (6) Blackwater The Blackwater deposit is sensitive to movements in pricing and cost assumptions. The increase in reserves is mainly attributable to revised economic assumptions. The marketable thermal coal component of the overall Marketable Coal Reserve is estimated to be 90Mt at 6,900 kilo-calories per kg (Kcal/kg) calorific value.

- (7) Gregory Crinum The 2008 reserve estimation was based on the previous product specifications where both 6.5% ash coking and 13% ash thermal products were produced. Changes to the Gregory Low Ash (GGLA) product specification has resulted in the adoption of a single 7.5% ash coking product. It is anticipated that Gregory Crinum will continue to produce a single 7.5% ash coking product.
- (8) South Walker Ck The reserve changes are due to revised economic assumptions and tenement increases. The marketable reserve includes an estimated 90Mt of Pulverised Coal Injection (PCI) product and 11Mt thermal coal product with an average calorific value of 7,500 Kcal/kg.
- (9) Poitrel-Winchester The marketable PCI coal component of the overall Marketable Coal Reserve is estimated to be 12mt at 7,560 Kcal/kg calorific value.
- (10) Appin The increase in reserves is a result of the reclassification of part of the coal area due to the exploration program carried out throughout the year.

### **Energy Coal Customer Sector Group**

#### **Energy Coal Reserves**

The tables below detail the total Coal Reserves for the Energy Coal Customer Sector Group estimated as at 30 June 2009 in 100 per cent terms (unless otherwise stated).

		Proved Coal	As at 30 Probable Coal	) June 2009 Total Coal									As at 3	30 Jı	ine 2008	3
		Reserve	Reserve	Reserve <sup>(3)</sup>	Та	otal Mar	ketable Coa	Reserve	es (3)(4)		Та	tal Mar	ketable C	oal l	Reserve	s (3)(4)
Mining Iethod <sup>(2)</sup>	Coal Type <sup>(2)</sup>	Millions of metric tonnes	Millions of metric tonnes	Millions of metric tonnes	Millions of metric tonnes	% Ash	% VM %	Kcal/ 5 kg CV	% Total moisture <sup>(5)</sup>	Reserve life (years)	Millions of metric tonnes	% Ash	% VM 4	% S	Kcal/ kg CV	% Total moisture <sup>(5)</sup>
															Ĵ	
UG	Th	61	7.0	68	68	19.1	0.7	0 5,600	9.9	11	74	19.0	(	0.70	5,600	9.9
OC	Th	162	9.2	172	172	23.1	0.9	0 4,700	13.0	22	190	22.0	(	0.88	4,800	13.0
OC	Met	17		17	13	18.0	30.5 1.5	7 6,300	8.0	22	3.9	18.0	30.5	1.73	6,200	8.0
OC	Th	87	15	102	102	36.3	20.1 1.0	3 4,400	8.0		66	36.1	20.3 (	0.98	4,400	8.0
UG	Th	139		139	139	35.5	21.0 0.8	0 4,600	8.0		170	33.9	20.9 (	0.90	4,500	8.0
OC OC	Th Th	459 83	126 11	585 94	431 75	21.3 20.1	23.4 0.6 24.0 0.5	1 6,000 9 6,000	7.1	22 12	422	21.5	23.8 ( 22.9 (	0.70 0.59	6,100 5,800	7.2
UC	III										80	19.5	20.5	0.74	0,000	8.0
OC	Th	579	447	1,026	753	15.1	29.6 0.6	0 6,300	8.5	51	168	17.2	30.8 (	0.70	6,500	8.4
OC	Th	503	241	744	720	7.8	33 0.6	0 6,200	12.0	23	819				6,200	12.0

(1) Approximate drill hole spacings used to classify the reserves are:

Deposit	<b>Proved Ore Reserves</b>	<b>Probable Ore Reserves</b>
San Juan	0m - 500m	500m - 1000m
Navajo		500m - 1000m (250m to 500m radius from
	<500m (250m radius from drillhole)	drillhole)
Khutala	>8 boreholes per 100ha	4-8 boreholes per 100ha
Douglas-Middelburg	>8 boreholes per 100ha	4-8 boreholes per 100ha
Klipspruit	>8 boreholes per 100ha	4-8 boreholes per 100ha
Mt Arthur Coal	<500m	500m - 1000m
Cerrejon Coal Company	>6 boreholes per 100ha	2-6 boreholes per 100ha

(2) OC open-cut, UG underground, Th thermal coal, Met metallurgical coal.

(3) Total Coal Reserve (tonnes) is the sum of Proved and Probable Coal Reserve estimates, which includes allowances for diluting materials, and for losses that occur when the coal is mined, and are at the moisture content when mined. Marketable Coal Reserve (tonnes) is the tonnage of coal available, at

specified moisture and air-dried quality, for sale after the beneficiation of the Total Coal Reserves. Note that where the coal is not beneficiated, the Total Coal Reserve tonnes are the Marketable Coal Reserve tonnes, with moisture adjustment where applicable.

- (4) % VM per cent volatile matter, % S per cent sulphur, Kcal/kg CV kilo-calories per kilogram calorific value.
- (5) Coal moisture content is on an as received basis.

- (6) Douglas-Middelburg Douglas is now reported with Middelburg.
- (7) Optimum The deposit was sold effective 1 July 2008 and is no longer reported.
- (8) Mt Arthur Coal Additional mine planning has significantly increased the open cut mining limits and the reserve. Our reserve is within existing mining leases. We have included reserves beyond the current mine lease term and approval where, based on our knowledge and experience of the approvals process and our technical investigations as part of the planning process, we expect that extension to the lease period and approvals will be obtained in the normal course of business and in a time frame that is commensurate with the current life of mine schedule. Should the lease extension not be granted at the termination of the current term then our total Marketable Coal Reserve will be reduced to 187mt.
- (9) Cerrejon Coal Company The reduction in the Marketable Coal Reserve is due to production depletion, redesign of the pit and introduction of a beneficiation factor which is now applicable to the total reserve.

1	n	0
I	U	0

#### Operating and financial review and prospects 3

#### 3.1 Introduction

This Operating and financial review and prospects section is intended to convey management s perspective of the BHP Billiton Group and its operational and financial performance as measured and prepared in accordance with IFRS as issued by the International Accounting Standards Board ( IFRS ). We intend this disclosure to assist readers to understand and interpret the financial statements included in this Report. This section should be read in conjunction with the financial statements, together with the accompanying notes.

We are the world s largest diversified natural resources company, with a combined market capitalisation of approximately US\$144 billion as at 30 June 2009. We generated revenue of US\$50.2 billion and profit attributable to shareholders of US\$5.9 billion for FY2009.

We extract and process minerals, oil and gas from our production operations located primarily in Australia, the Americas and southern Africa. We sell our products globally with sales and marketing taking place through our principal hubs of The Hague and Singapore. The following table shows the revenue by location of our customers:

	Segmo	Segment revenue by location of customer		
	2009 US\$M	2008 US\$M	2007 US\$M	
Europe	10,806	14,349	12,485	
China	9,873	11,670	9,292	
Other Asia	9,280	10,111	8,045	
Japan	7,138	6,885	5,337	
Australia	4,621	5,841	4,334	
North America	4,020	4,771	3,205	
South America	1,652	2,640	1,966	
Southern Africa	1,374	2,003	1,748	
Rest of World	1,447	1,203	1,061	
BHP Billiton Group	50,211	59,473	47,473	

### BHP Billiton Group

We operate nine Customer Sector Groups (CSGs) aligned with the commodities which we extract and market:

Customer Sector Group	Principal activities
Petroleum	Exploration, development and production of oil and gas
Aluminium	Mining of bauxite, refining of bauxite into alumina and smelting of alumina into aluminium metal
Base Metals	Mining of copper, silver, lead, zinc, molybdenum, uranium and gold
Diamonds and Specialty Products	Mining of diamonds and titanium minerals
Stainless Steel Materials	Mining and production of nickel products
Iron Ore	Mining of iron ore
Manganese	Mining of manganese ore and production of manganese metal and alloys
Metallurgical Coal	Mining of metallurgical coal
Energy Coal The work of our nine CSGs is supported by our E	Mining of thermal (energy) coal xploration and Marketing teams and other Group-wide functions.

A detailed discussion on our CSGs is located in section 2.2 of this Report. A detailed discussion of our Marketing and Minerals Exploration functions is located in sections 2.4 and 2.5 respectively of this Report.

# 3.2 Our strategy

Our objective as a corporation is to create long-term shareholder value through the discovery, development and conversion of natural resources, and the provision of innovative customer and market-focused solutions.

To achieve this we aim to own and operate a portfolio of upstream, large, long-life, low-cost, expandable, export-orientated assets across a diversified geographic and commodity base, and pursue growth opportunities consistent with our core skills by:

discovering resources through our Exploration activities

developing and converting them in our CSGs

developing customer and market-focused solutions through our Marketing arm

adding shareholder value beyond the capacity of these groups through the activities of the Group Functions. In pursuing our objective, we are guided by our commitment to safety, simplicity and accountability.

Our overriding commitment is to safety: ensuring the safety of our people, respecting our environment and the communities in which we work. This commitment transcends everything we do and guides every aspect of our work.

Our commitment to simplicity and accountability allows us to focus on the most important drivers of value while empowering our people to operate within their authority and make a difference.

Our objective and commitments are pursued through the six strategic drivers of our strategy:

*People* the foundation of our business is our people. We require people to find resources, develop those resources, operate the businesses that produce our products, and then deliver that product to our customers. Talented and motivated people are our most precious resource.

*Licence to operate* we aim to ensure that the communities in which we operate value our citizenship. Licence to operate means win-win relationships and partnerships. This includes a central focus on health, safety, environment and the community, and making a positive difference to our host communities.

*World-class assets* our world-class assets provide the cash flows that are required to build new projects, to contribute to the economies of the countries in which we operate, to meet our obligations to our employees, suppliers and partners, and ultimately to pay dividends to our shareholders. We maintain high-quality assets by managing them in the most effective and efficient way.

*Financial strength and discipline* we have a solid A credit rating, which balances financial flexibility with the cost of finance. Our capital management program has three priorities:

To reinvest in our extensive pipeline of world-class projects that carry attractive rates of return regardless of the economic climate.

To ensure a solid balance sheet.

To return excess capital to shareholders.

*Project pipeline* we are focused on delivering an enhanced resource endowment to underpin future generations of growth. We have an abundance of tier one resources in stable countries that provide us with a unique set of options to deliver brownfield growth.

*Growth options* we use exploration, technology and our global footprint to look beyond our current pipeline to secure a foundation of growth for future generations. We pursue growth options in several ways covering the range from extending existing operations to new projects in emerging regions, through exploration, technology and, on occasion, merger and acquisition activity.

# 3.3 Key measures

Our management and Board use a number of financial and operational measures to assess our performance.

### **Overall financial success**

We use several financial measures to monitor the success of our overall strategy.

30 June 2009	30 June 2008	30 June 2007
5,877	15,390	13,416
12,160	24,145	19,724
18,214	24,282	20,067
18,863	17,817	15,957
12.1%	17.8%	25.0%
105.6	275.3	229.5
	30 June 2009 5,877 12,160 18,214 18,863 12.1% 105.6	30 June 2009         30 June 2008           5,877         15,390           12,160         24,145           18,214         24,282           18,863         17,817           12.1%         17.8%           105.6         275.3

(1) Underlying EBIT is profit from operations, excluding the effect of exceptional items. See section 3.6.1 for more information about this measure, including a reconciliation to profit from operations.

#### (2) See section 10 for glossary definitions.

The two key measures are profit attributable to members of the BHP Billiton Group and Underlying EBIT. Underlying EBIT is the internally defined key financial measure used by management for monitoring the performance of our operations. We explain the calculations and why we use this measure in section 3.6.1.

Our financial results demonstrate the success of our strategy in delivering a consistently strong performance throughout the cycle. Our portfolio of long-life, low-cost and diversified assets continued to yield strong margins and cash flows, despite the pressures of the current economic environment. Our low financial and operational leverage and a strong balance sheet enabled us to continue to invest in future growth.

The following are other measures that assist us to monitor our overall performance.

#### People and licence to operate

These foundational strategic drivers bring together health, safety, environment and community related measures. These measures are a subset of the HSEC Targets Scorecard, which can be found in our full Sustainability Report at *www.bhpbilliton.com*.

Our management and Board monitor a range of financial and operational performance indicators, reported on a monthly basis, to measure performance over time. We also monitor a comprehensive set of health, safety, environment and community contribution indicators.

	2009	2008	2007
People and licence to operate Health, safety, environment and community			
Total Recordable Injury Frequency (TRIF) <sup>(a)</sup>	5.6	5.9	7.4
Community investment (US\$M) <sup>(a)</sup>	197.8	141.0	103.4

(a) See section 10 for glossary definitions.

### Safety

We were deeply saddened and disappointed by the loss of seven colleagues due to work-related incidents during the year. Five of the fatalities were at our Western Australian iron ore business. In response, a number of initiatives aimed at improving safety performance have been introduced across the Group, in addition to a number of specific actions at BHP Billiton Iron Ore.

It is clear some of our sites have room to improve, however we are encouraged by the excellent performance delivered by many of our operations and the significant improvements shown by others.

We made an incremental improvement in Total Recordable Injury Frequency (which comprises fatalities, lost-time cases, restricted work cases and medical treatment cases per million hours worked) from 5.9 to 5.6 per million hours worked. This is almost half-way towards our target of a 50 per cent reduction on 2007 TRIF performance by 2012.

#### Health

We are progressing well with our health performance objectives. We had 215 new cases of occupational disease reported in FY2009, 51 fewer new cases compared with the FY2007 base year. The overall reduction in occupational disease since FY2007 is 27 per cent, which is on track to meet our target of a 30 per cent reduction in incidences in occupational disease among our employees by June 2012.

It is mandatory for BHP Billiton employees who may be potentially exposed to airborne substances or noise in excess of the BHP Billiton occupational exposure limits (OELs), to wear personal protective equipment. Compared with the FY2007 base year there was a 10 per cent reduction in the proportion of employees potentially exposed in excess of OELs in FY2009.

#### Environment

In FY2009, we experienced a six per cent decrease in our overall greenhouse gas emissions, mainly due to the closure of several operations.

We have five-year targets of a six per cent reduction in our greenhouse gas emissions intensity index and a 13 per cent reduction in our carbon-based energy intensity index, both by 30 June 2012. Our greenhouse intensity index is currently tracking at three per cent above our FY2006 base year. Our carbon-based energy intensity index is currently tracking at eight per cent above our FY2006 base year.

We own, manage or lease approximately six million hectares of land (excluding exploration and development projects). We have a five-year target of a 10 per cent improvement in our land rehabilitation index by 2012. This index is based on a ratio of land rehabilitated compared to our land footprint. In FY2009, the index decreased by three per cent due to the development of new operations in Australia and Chile.

We have a five-year target of a 10 per cent improvement in the ratio of water recycled to high quality water consumed by 30 June 2012. This is our water use index, which is currently tracking at eight per cent above our FY2007 base year.

We define a significant environmental incident as one with a severity rating of three or above based on our internal severity rating scale (tiered from one to five by increasing severity). There were no incidents meeting these criteria during FY2009.

#### Community

We continue to invest one per cent of our pre-tax profits in community programs, based on the average of the previous three years pre-tax profit publicly reported in each of those years. We established a new UK-based

charitable company (BHP Billiton Sustainable Communities), registered with the UK Charities Commission, to help us manage our one per cent spend and enhance the programs that follow from this. During FY2009, our voluntary investment totalled US\$197.8 million comprising cash, in-kind support and administrative costs and includes a US\$60 million contribution to BHP Billiton Sustainable Communities.

Despite the global financial crisis, our direct expenditure on community programs during the year was similar to our expenditure in FY2008.

#### World-class assets

The quality and diversity of our tier one assets underpin the strength of our cash flows, leaving us well positioned to invest in growth and participate in opportunistic mergers and acquisitions, while continuing to deliver competitive returns to shareholders. FY2009 was characterised by changing market conditions, resulting in production adjustments to match decreased demand.

Actual production volumes for this year and the previous two years are shown below. Further details appear in section 2.3 of this Report.

	30 June 2009	30 June 2008	30 June 2007
World-class assets			
Production			
Total petroleum products (millions of barrels of oil equivalent)	137.19	129.50	116.19
Alumina (000 tonnes)	4,396	4,554	4,460
Aluminium ( 000 tonnes)	1,233	1,298	1,340
Copper (000 tonnes)	1,207.1	1,375.5	1,250.1
Nickel ( 000 tonnes)	173.1	167.9	187.2
Iron ore ( 000 tonnes)	114,415	112,260	99,424
Metallurgical coal (000 tonnes)	36,416	35,193	38,429
Energy coal ( 000 tonnes)	68,206	80,868	87,025
Financial strength and discipline			

Financial strength is measured by attributable profit and Underlying EBIT as overall measures, along with liquidity and capital management. Our solid A credit rating and gearing and net debt are discussed in section 3.7.3 of this Report. The final dividend declared for FY2009 maintains our progressive dividend policy.

### Project pipeline and growth options

Our project pipeline focuses on high-margin commodities that are expected to create significant future value. The details of our project pipeline are located in section 3.7.2 of this Report, with a summary presented below.

	30 June 2009	30 June 2008	30 June 2007
Project pipeline and growth options (major projects)			
Number of projects approved during the year	4	7	3
Number of projects currently under development (approved in prior years)	8	6	12
Number of completed projects	7	10	1
Budgeted capital expenditure for projects (approved in the year) (US\$M)	5,850	5,175	2,355
Budgeted capital expenditure for projects under development (approved in prior			
years) (US\$M)	8,115	6,265	