

# IRON ORE AND MANGANESE

We are one of the top five iron ore producers in the world, with a large high quality resource base in South Africa and Brazil.

Iron ore is a key component in steel, the most widely used of all metals. Global steel consumption is forecast to grow in excess of 5% pa over the next three years.

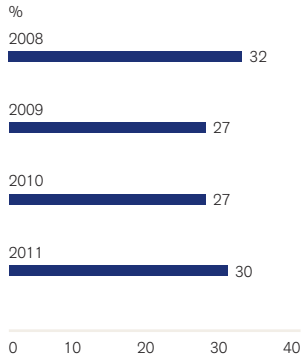
**Image**

Construction of a pump station at the mine site of Minas-Rio iron ore project in Minas Gerais state, Brazil.

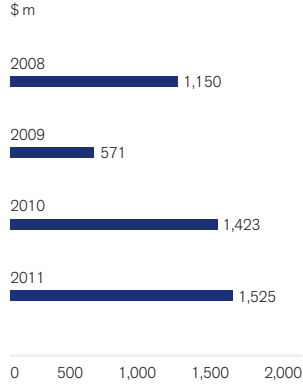


# FINANCIAL HIGHLIGHTS

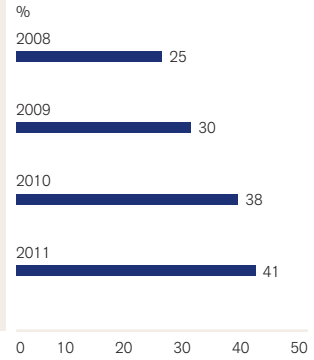
**Share of Group net operating assets**



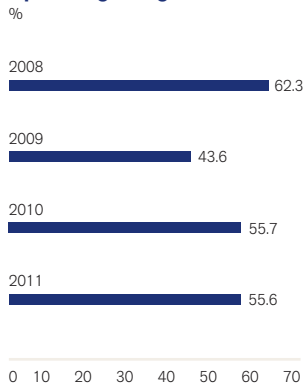
**Underlying earnings**



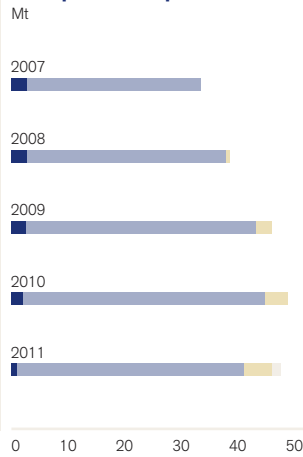
**Share of Group operating profit**



**Operating margin**



**Group iron ore production**



Thabazimbi  
 Sishen  
 Amapa  
 Kolomela

# FINANCIAL DATA

\$ million	2011	2010	2009	2008
<b>Total turnover</b>	<b>8,124</b>	<b>6,612</b>	<b>3,419</b>	<b>4,099</b>
Of which:				
Kumba Iron Ore	6,717	5,310	2,816	2,573
Iron Ore Brazil	481	319	-	-
Samancor	926	983	603	1,526
<b>EBITDA</b>	<b>4,733</b>	<b>3,856</b>	<b>1,593</b>	<b>2,625</b>
Of which:				
Kumba Iron Ore	4,546	3,514	1,562	1,632
Iron Ore Brazil	(11)	(73)	(135)	(5)
Samancor	198	415	166	998
<b>Depreciation and amortisation</b>	<b>213</b>	<b>175</b>	<b>104</b>	<b>71</b>
<b>Operating profit before special items and remeasurements</b>	<b>4,520</b>	<b>3,681</b>	<b>1,489</b>	<b>2,554</b>
Of which:				
Kumba Iron Ore	4,397	3,396	1,487	1,583
Iron Ore Brazil	(42)	(97)	(141)	(9)
Samancor	165	382	143	980
Operating special items and remeasurements	(79)	356	(1,139)	(620)
<b>Operating profit after special items and remeasurements</b>	<b>4,441</b>	<b>4,037</b>	<b>350</b>	<b>1,934</b>
<b>Net interest, tax and non-controlling interests</b>	<b>(2,995)</b>	<b>(2,258)</b>	<b>(918)</b>	<b>(1,404)</b>
<b>Underlying earnings</b>	<b>1,525</b>	<b>1,423</b>	<b>571</b>	<b>1,150</b>
Of which:				
Kumba Iron Ore	1,462	1,210	490	523
Iron Ore Brazil	(81)	(77)	(119)	(31)
Samancor	144	290	200	658
<b>Net operating assets</b>	<b>13,069</b>	<b>11,701</b>	<b>10,370</b>	<b>10,457</b>
<b>Capital expenditure</b>	<b>1,732</b>	<b>1,195</b>	<b>1,140</b>	<b>783</b>



01 Minas-Rio's pump station No. 2 under construction.

# BUSINESS OVERVIEW

## OPERATING PROFIT

(2010: \$3,681m)

**\$4,520 m**

## SHARE OF GROUP OPERATING PROFIT

(2010: 38%)

**41%**

## EBITDA

(2010: \$3,856 m)

**\$4,733 m**

## Financial highlights

\$ million (unless otherwise stated)	2011	2010
Operating profit	<b>4,520</b>	3,681
Kumba Iron Ore	<b>4,397</b>	3,396
Iron Ore Brazil	<b>(42)</b>	(97)
Samancor	<b>165</b>	382
EBITDA	<b>4,733</b>	3,856
Net operating assets	<b>13,069</b>	11,701
Capital expenditure	<b>1,732</b>	1,195
Share of Group operating profit	<b>41%</b>	38%
Share of Group net operating assets	<b>30%</b>	27%

## BUSINESS OVERVIEW

Our Iron Ore portfolio principally comprises a 65.2% shareholding in Kumba Iron Ore Limited (Kumba), a leading supplier of seaborne iron ore, and Iron Ore Brazil's 100% interest in Anglo Ferrous Minas-Rio Mineração S.A., a 49% shareholding in LLX Minas-Rio, which owns the port of Açú (currently under construction) from which iron ore from the Minas-Rio project will be exported (together, the Minas-Rio project), and a 70% interest in the Amapá iron ore system.

Kumba, listed on the Johannesburg Stock Exchange, produces a leading quality lump ore. Export ore is transported via the Sishen-Saldanha Iron Ore Export Channel to Saldanha Port. The rail and port operations are owned and operated by the South African parastatal Transnet. Kumba is well positioned to supply the high growth Asia-Pacific and Middle East markets and European steel markets in light of an expected decline in lump ore supplies from other sources.

Kumba operates three mines – Sishen mine in the Northern Cape, which produced 38.9 Mt of iron ore in 2011, Thabazimbi mine in Limpopo, with an output of 0.9 Mt, and Kolomela mine, also in the Northern Cape, which was brought into production during 2011 and produced 1.5 Mt during the year. In 2011, Kumba exported more than 85% of its total iron ore sales volumes of 43.6 Mt, with 68% of these exports destined for China and the remainder for Europe, Japan, South Korea and the Middle East.

Our Minas-Rio iron ore project is located in the states of Minas Gerais and Rio de Janeiro and will include open pit mines and a beneficiation plant in Minas Gerais producing high grade pellet feed. On completion of Phase 1, ore will be transported through a 525 kilometre slurry pipeline to the port of Açú in Rio de Janeiro state. Amapá, in Amapá state in northern Brazil, continues to ramp up its pellet feed and sinter feed production, which reached 4.8 Mt in 2011, and is expected to produce 5.5 Mt in 2012.

Our Manganese interests consist of a 40% shareholding in Samancor Holdings, which owns Hotazel Manganese Mines and Metalloys, both in South Africa, and a 40% shareholding in each of the Australian-based operations Groote Eylandt Mining Company (GEMCO) and Tasmanian Electro Metallurgical Company (TEMCO), with BHP Billiton owning 60% and having management control. Samancor is the world's largest producer of seaborne manganese ore and is among the top three global producers of manganese alloy. Its operations produce a combination of ores, alloys and metal from sites in South Africa and Australia.

### South Africa

Kumba operates three mines – Sishen in the Northern Cape, which produced 38.9 Mt of iron ore in 2011, Thabazimbi mine in Limpopo, with an output of 0.9 Mt, and Kolomela mine, also in the Northern Cape, which was bought into production during 2011 and produced 1.5 Mt during the year.

Samancor Manganese, which is the world's largest producer of seaborne manganese ore and is among the top three global producers of manganese alloy, is headquartered in South Africa.



- 1 65.2% Kumba Iron Ore – Sishen mine
- 2 65.2% Kumba Iron Ore – Kolmela mine
- 3 65.2% Kumba Iron Ore – Thabazimbi mine
- 4 40% Samancor Manganese – Hotazel
- 5 40% Samancor Manganese – Metalloys

### South America

The Minas-Rio iron ore project is located in the states of Minas Gerais and Rio de Janeiro in Brazil and will include open pit mines and a beneficiation plant in Minas Gerais producing high grade pellet feed. On completion of Phase 1, ore will be transported through a slurry pipeline, over 500 km to the port of Açu in the state of Rio de Janeiro.

Amapá, located in Amapá state in northern Brazil, continues to ramp up its pellet feed and sinter feed production and produced 4.8 Mt in 2011, and is expected to produce 5.5 Mt in 2012.



- 1 100% Minas-Rio (Brazil)
- 2 70% Amapá (Brazil)
- 3 49% LLX Minas-Rio (Brazil)

### Australia

The Australian Samancor Manganese operations consist of Groote Eylandt Mining Company (GEMCO), situated off the east coast of the Northern Territory of Australia, and Tasmanian Electro Metallurgical Company (TEMCO), which is based at Bell Bay, approximately 55 km from Launceston, Tasmania.



- 1 40% GEMCO
- 2 40% TEMCO

**Key**  
● Open cut  
● Port  
● Other

# INDUSTRY OVERVIEW

## INDUSTRY OVERVIEW

Demand for iron ore globally is linked primarily to the state of the global steel industry and, more specifically, to the steel manufacturing sector in China. The country is the largest steel producer and consumer in the world and accounts for more than two-thirds of global seaborne iron ore imports.

In 2011, global steel production increased 6% to 1.5 billion tonnes (2010: 1.4 billion tonnes), of which 683 Mt were produced in China (2010: 637 Mt), an increase of 7% (2010: 11%). China's seaborne iron ore imports rose by 8% to 654 Mt (2010: 603 Mt). The balance of China's iron ore needs was met by domestic iron ore production, which was virtually unchanged at 301 Mt (on a rich ore equivalent basis).

### Markets

Global steel demand growth continued to be driven by ongoing urbanisation and industrialisation in China. China is now the biggest steel producing country, accounting for approximately 45% of the global steel market. In early 2011, steel production in China reached record levels. However, the tightening in monetary policy to manage the inflationary pressures experienced in China since October 2010, led to credit liquidity constraints and a slower GDP growth rate in the second half of the year. This, coupled with margin compression as a result of higher raw material input costs and lower steel prices, led to a reduction in steel production rates and downstream steel destocking by end-users.

Steel demand and pricing in Europe has been subdued since April 2011, following concerns around the European sovereign debt crisis. Japanese steel production and prices were initially impacted by the earthquake and tsunami during the first quarter but recovered during the third quarter. However, as macro-economic uncertainty increased, this also weighed heavily on steel prices and demand in Japan towards the end of the year. As a result, European and Japanese steel producers started to implement production slowdowns in an attempt to stabilise steel markets. Consequently, iron ore offtake in these regions has slowed and China has been the target of diverted contractual tonnages from a number of suppliers. The combination of higher seaborne ore supplies and lower crude steel production during the second

half of 2011, resulted in a sharp fall in index prices in the fourth quarter. Steel producers resumed sourcing of iron ore during November 2011, following a period of destocking, particularly in China. Index and spot iron ore pricing has now reached a support level provided by high cost Chinese domestic iron ore production.

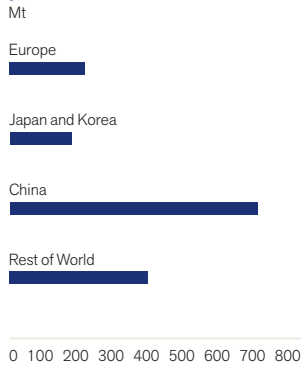
Underpinned by global steel production, prices for manganese ores have been under considerable pressure, particularly in the second half of 2011 on the back of a general oversupply in the market and a build-up of port inventories in China. Alloy conversion capacity continued to grow through the year, placing additional pressure on margins for all alloys, with some higher cost producers eventually idling capacity so as to cut losses.

01 Safety technician Daniel Cardoso Espindola (left) and security technician Wagner Luis Oliverira Assis, inspect a section of the Minas-Rio pipeline. At the end of 2011, more than 200 km of the 525 km pipeline that will carry iron ore to the port at Açú had been installed.



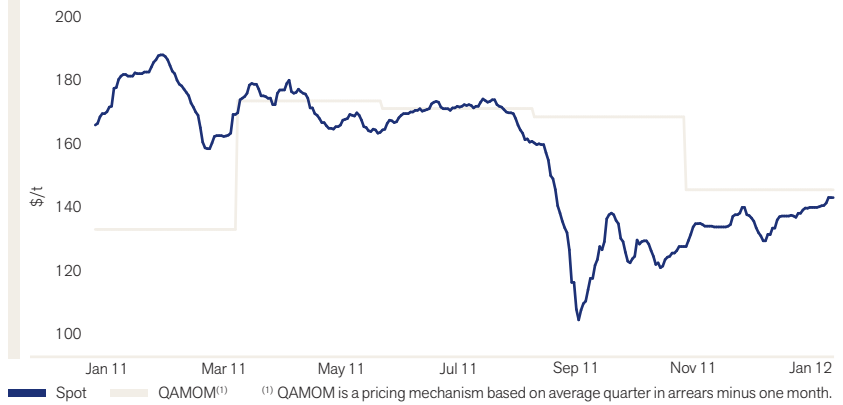
# MARKET INFORMATION

## 2011 Global crude steel production



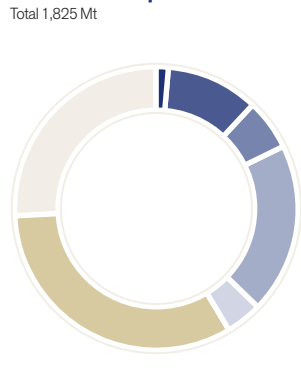
Source: AME

## Iron ore price (FOB Australia)



Source: Anglo American Commodity Research

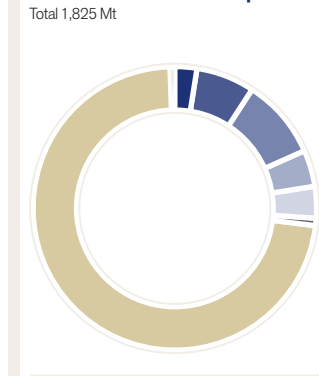
## 2011 Iron ore production<sup>(1)</sup>



Source: CRU

<sup>(1)</sup> Apparent production of iron ore pellets, sinter fines and lump.

## 2011 Iron ore consumption<sup>(1)</sup>



Source: CRU

<sup>(1)</sup> Apparent consumption of iron ore pellets, sinter fines and lump.

# STRATEGY AND GROWTH

## STRATEGY AND GROWTH

Anglo American's core strategy is to grow our position in iron ore and to supply premium iron ore products against a background of declining quality global iron ore supplies. We have a unique iron ore resource profile, with extensive, high quality resource bases in South Africa and Brazil. Significant future growth will come from Minas-Rio (including expansion potential) and expansion at Kolomela.

Kumba seeks to sustainably maximise total shareholder value by enhancing the value of its current operations through the implementation of its asset optimisation programmes, capturing value across the value chain through its commercial and logistics strategy, executing its growth projects and ensuring that it has the organisational resources and capabilities to execute its strategy.

Kumba plans to grow its business organically in order to achieve production of 80 to 90 Mtpa of iron ore by 2020, 70 Mtpa from South Africa and the remainder from other countries in Africa.

Minas-Rio will capture a significant part of the high growth pellet feed market with its premium product featuring high iron content and low contaminants. Phase 1 of the Minas-Rio project will produce 26.5 Mtpa, with first production scheduled after completion and commissioning of the project, which is anticipated in the second half of 2013. During the year, civil works commenced at the beneficiation plant, tailings dam earthworks progressed in line with the project schedule, while good progress was made in installing the 525 kilometre slurry pipeline. Further expansion potential is supported by the 2011 resource estimate of 5.8 billion tonnes (Measured, Indicated and Inferred), and further resource potential is considered to exist. While focus has been on Phase 1 construction, studies for the expansion of the project, including consideration of the optimal production profile, continue to be evaluated.

Kolomela, which was brought into commercial production during December 2011, is expected to produce at design capacity 9 Mtpa of iron ore. With initial production of 1.5 Mt during 2011, the mine is on track to produce between 4 and 5 Mt in its ramping-up phase in 2012, before producing at full design capacity in 2013.

### Projects

Excellent progress was made at Kolomela mine, which was delivered five months ahead of schedule and within budget. Kolomela is ramping up well and is on track to produce between 4 Mt and 5 Mt in 2012, before producing at full design capacity of 9 Mtpa in 2013.

Kumba's stated South African growth target of producing 70 Mtpa by 2019 is intact:

- 9 Mtpa will come from Kolomela in 2013
- 15 Mtpa to be delivered from other projects in the Northern Cape Province
- 5 Mtpa potential from projects in the Limpopo Province.

The Minas-Rio iron ore project in Brazil is expected to produce 26.5 Mtpa of iron ore in its first phase and has made good progress during the year. Minas-Rio secured a number of major licences and permits during the year; the offshore and onshore works at the port are on schedule; more than 90% of land access has been secured along the 525 km pipeline route and more than 200 km of pipe has been installed; and the civil works at the beneficiation plant are well under way. As with other complex greenfield mining projects, a number of unexpected issues, such as the discovery of caves at the beneficiation plant site which require specialised assessment, continue to cause delays to the work scheduling, in addition to outstanding land access and an evolving permitting environment. Minas-Rio is assessing various options to manage these challenges in a high inflationary Brazilian mining environment, including acceleration activities within the previously announced 15% capital increase, to target first ore on ship in the second half of 2013.

Pre-feasibility studies for the second phase of the Minas-Rio iron ore project commenced during 2011 and, although still under way, the studies, together with the 2011 resource statement (total resource volume (Measured, Indicated and Inferred)) of 5.8 billion tonnes, support the expansion of the project.

The second expansion of the GEMCO operation in the Northern Territory of Australia (GEEP2 project) was approved in May 2011. This follows the successful completion of the GEMCO Expansion Phase 1 (GEEP1) project in January 2010.

The first phase expansion confirmed GEMCO's status as the world's largest and lowest cost producer of manganese ore. This second expansion, which is expected to be completed in late 2013, will further enhance GEMCO's competitive advantages and create additional options for growth. The \$280 million GEEP2 project (Anglo American's 40% share: \$112 million) will increase GEMCO's beneficiated product capacity from 4.2 Mtpa to 4.8 Mtpa through the introduction of a dense media circuit by-pass facility. The expansion will also address infrastructure constraints by increasing road and port capacity to 5.9 Mtpa, creating 1.1 Mtpa of latent capacity for future expansions.

# PROJECT PIPELINE – KEY PROJECTS

## Kolomela

Overall capex: \$1,062m

### Country

South Africa

### Ownership\*

48.3%

### Production volume

9 Mtpa iron ore

### Full project capex

\$1,062m

### Full production

Q1 2013

Kumba's Kolomela project in South Africa shipped its first lump iron ore from the port of Saldanha to China in December 2011, five months ahead of schedule. Kolomela is situated 80 km to the south of Kumba's world class Sishen mine and, when full production is achieved in 2013, will produce 9 Mtpa of high quality seaborne iron ore, with further potential for expansion.



## Minas-Rio phase 1

Overall capex: \$5,034m<sup>(1)</sup>

### Country

Brazil

### Ownership

100%

### Production volume

26.5 Mtpa iron ore pellet feed (wet basis)

### Full project capex

\$5,034m<sup>(1)</sup>

### First production

H2 2013

The Minas-Rio iron ore project in Brazil is expected to produce 26.5 Mtpa of iron ore in its first phase and made good progress during 2011. Minas-Rio secured a number of major licences and permits during the year; the offshore and onshore works at the port are on schedule; more than 90% of land access has been secured along the 525 km pipeline route and more than 200 km of pipeline has been installed; and the civil works at the beneficiation plant are well under way. As with other complex greenfield mining projects, a number of irregular issues, such as the discovery of caves at the beneficiation plant site which require specialist assessment, continue to cause delays to the work scheduling, in addition to outstanding land access and an evolving permitting environment. Minas-Rio is implementing various measures to manage these challenges in a high inflationary Brazilian mining environment, including acceleration activities within the previously announced 15% capital increase, to target first ore on ship in the second half of 2013.



## Sishen B grade project (unapproved)

Overall capex: TBD

### Country

South Africa

### Ownership\*

48.3%

### Production volume

6 Mtpa iron ore

### Full project capex

TBD

### Full production

2017

Sishen production will be increased by up to 6 Mtpa with the development of Sishen B Grade Project 2 (B Grade). B Grade will use the additional material available in the definition of the larger optimised pit shell, supplemented by material that became available with the refinement of the Sishen product range. The increased mining activity required to mine the larger pit will in part be utilised by beneficiating the low Fe grade portion of the material resulting in some of the waste being reclassified as ore.



<sup>(1)</sup> Capital expenditure, post acquisition of Anglo American's shareholding in Minas-Rio, includes 100% of the mine and pipeline, and an attributable share of the port, as modified by the agreement with LLXSA and LLX Minas-Rio. Capital expenditure is under review to contain the capital increase to approximately 15% of the current guidance.

\* Kumba Iron Ore owns 74% of Sishen, Thabazimbi and Kolomela. Anglo American plc through its 65% ownership in Kumba effectively owns 48.3% of Sishen.

# PRODUCTION DATA

	2011	2010	2009	2008	2007
<b>Kumba Iron Ore<sup>(1)</sup> – tonnes</b>					
Lump	25,445,100	25,922,300	25,300,000	22,042,000	19,043,000
Fines	15,822,500	17,462,600	16,643,000	14,657,000	13,357,000
	41,267,600	43,384,900	41,943,000	36,699,000	32,400,000
<b>Amapá<sup>(2)</sup> – tonnes</b>					
Sinter feed	1,401,000	2,136,900	576,100	128,000	–
Pellet feed	3,420,500	1,892,500	2,077,100	584,000	–
	4,821,500	4,029,400	2,653,200	712,000	–
<b>Total iron ore production</b>	<b>46,089,100</b>	<b>47,414,300</b>	<b>44,596,200</b>	<b>37,411,000</b>	<b>32,400,000</b>
<b>Samancor<sup>(3)</sup> – tonnes</b>					
Manganese ore	2,786,600	2,952,800	1,570,000	2,704,000	2,411,000
Manganese alloy <sup>(4)</sup>	300,500	312,000	129,000	306,000	310,000

<sup>(1)</sup> Kolomela reached commercial production on 1 December 2011. Costs associated with 984,700 tonnes of production (2010: nil) have been capitalised before commercial production was reached.

<sup>(2)</sup> Production from Amapá is included from 5 August 2008. Amapá production for full year 2008 was 1.2 Mt. At 31 December 2009 Amapá was not in commercial production and therefore to this date all revenue and related costs were capitalised. Commercial production commenced on 1 January 2010.

<sup>(3)</sup> Saleable production.

<sup>(4)</sup> Production includes Medium Carbon Ferro Manganese.



01 Looking out from Kolomela's primary crusher over the rest of the plant, with the blending beds on the left.

# IRON ORE

## Ore Reserve and Mineral Resource estimates as at 31 December 2011

### KUMBA IRON ORE

The Ore Reserve and Mineral Resource estimates were compiled in accordance with The South African Code for the Reporting of Exploration Results, Mineral Resources and Mineral Reserves, (The SAMREC Code, 2007). The figures reported represent 100% of the Ore Reserves and Mineral Resources, the percentage attributable to Anglo American plc is stated separately. Rounding of figures may cause computational discrepancies.

Kumba Iron Ore – Operations		Mine Life	Classification	Tonnes		Grade		Saleable product			
ORE RESERVES	Attributable %			2011	2010	2011	2010	2011		2010	
Kolomela Mine (OP) <sup>(1)</sup>	48.2	23		Mt	Mt	%Fe	%Fe	Mt	%Fe	Mt	%Fe
Proved			109.7	118.5	64.9	64.5	110	65.0	118	64.5	
Probable			93.7	84.0	64.3	64.1	94	64.4	84	64.1	
<b>Total</b>			<b>203.4</b>	<b>202.4</b>	<b>64.6</b>	<b>64.3</b>	<b>203</b>	<b>64.7</b>	<b>202</b>	<b>64.3</b>	
Sishen Mine (OP) <sup>(2)</sup>	48.2	18			%Fe	%Fe					
Proved			525.8	576.3	58.9	59.8	393	65.0	439	65.5	
Probable			458.1	500.6	59.3	58.7	351	65.1	366	65.1	
<b>Total</b>			<b>983.9</b>	<b>1,077.0</b>	<b>59.1</b>	<b>59.3</b>	<b>744</b>	<b>65.0</b>	<b>805</b>	<b>65.3</b>	
Thabazimbi Mine (OP) <sup>(3)</sup>	48.2	4			%Fe	%Fe					
Proved			2.7	9.0	61.4	61.1	2	63.2	8	62.6	
Probable			7.7	4.9	60.4	60.6	6	63.0	4	61.9	
<b>Total</b>			<b>10.4</b>	<b>13.9</b>	<b>60.7</b>	<b>61.0</b>	<b>8</b>	<b>63.1</b>	<b>12</b>	<b>62.3</b>	

Kumba Iron Ore – Operations		Mine Life	Classification	Tonnes		Grade	
MINERAL RESOURCES	Attributable %			2011	2010	2011	2010
Kolomela Mine (OP) <sup>(4)</sup>	48.2			Mt	Mt	%Fe	%Fe
Measured			46.6	49.1	65.0	65.1	
Indicated			16.1	20.0	65.1	65.0	
<b>Measured and Indicated</b>			<b>62.7</b>	<b>69.2</b>	<b>65.0</b>	<b>65.1</b>	
Inferred (in LOMP)			45.9	35.1	64.3	65.7	
Inferred (ex. LOMP)			53.7	47.7	62.7	62.5	
<b>Total Inferred</b>			<b>99.6</b>	<b>82.7</b>	<b>63.4</b>	<b>63.9</b>	
Sishen Mine (OP) <sup>(5)</sup>	48.2				%Fe	%Fe	
Measured			111.1	127.0	61.3	59.4	
Indicated			274.8	410.5	61.6	58.5	
<b>Measured and Indicated</b>			<b>385.9</b>	<b>537.5</b>	<b>61.5</b>	<b>58.7</b>	
Inferred (in LOMP)			173.4	17.9	49.1	59.7	
Inferred (ex. LOMP)			217.2	116.2	53.8	59.6	
<b>Total Inferred</b>			<b>390.6</b>	<b>134.1</b>	<b>51.7</b>	<b>59.6</b>	
Thabazimbi Mine (OP) <sup>(6/7)</sup>	48.2				%Fe	%Fe	
Measured			1.1	3.4	61.1	61.8	
Indicated			7.2	1.2	62.0	61.2	
<b>Measured and Indicated</b>			<b>8.3</b>	<b>4.6</b>	<b>61.9</b>	<b>61.6</b>	
Inferred (in LOMP)			3.0	0.9	61.8	61.9	
Inferred (ex. LOMP)			3.9	0.9	61.8	61.5	
<b>Total Inferred</b>			<b>6.9</b>	<b>1.8</b>	<b>61.8</b>	<b>61.7</b>	

THE MINERAL RESOURCES ARE REPORTED AS ADDITIONAL TO ORE RESERVES.

Kumba Iron Ore – Projects		Mine Life	Classification	Tonnes		Grade	
MINERAL RESOURCES	Attributable %			2011	2010	2011	2010
Phoenix Project <sup>(7)</sup>	48.2			Mt	Mt	%Fe	%Fe
Inferred			11.3	–	63.0	–	

Mining method: OP = Open Pit. Mine Life = The extraction period in years for scheduled Ore Reserves comprising Proved and Probable Reserves only.

The tonnage is quoted as dry metric tonnes and abbreviated as Mt for million tonnes.

The Mineral Resources are constrained by a resource pit shell, which defines the spatial limits of eventual economic extraction.

Due to the uncertainty that may be attached to some Inferred Mineral Resources, it cannot be assumed that all or part of an Inferred Mineral Resource will necessarily be upgraded to an Indicated or Measured Resource after continued exploration.

The Zandriverspoort Project is not reported as Anglo American's shareholding is below the internal threshold for reporting. Details of this project are presented in the Kumba Iron Ore Annual Report.

<sup>(1)</sup> **Kolomela Mine – Ore Reserves:** The increase is primarily due to production which has been offset by a lowering of the cut-off grade applied during the Life of Mine Plan scheduling to equalise plant feed grade in the initial years which previously exceeded client quality specifications. A revision of the Mineral Resource classification using a quantitative scorecard approach was carried out in 2011 and impacts on the Ore Reserve classification. The calculated 2011 Mine Life excludes Inferred Resources.

<sup>(2)</sup> **Sishen Mine – Ore Reserves:** The net decrease is due to production as well as a revision of the Life of Mine schedule necessitated by a downgrade of Banded Iron Formation Mineral Resources. The impact of this reduction was offset by blending in lower quality material that in the previous Life of Mine Plan remained on run-of-mine stockpiles after the Mine Life ran out and were considered as mining losses. Inclusion of this material has been confirmed by economic studies. The calculated 2011 Mine Life excludes Inferred Resources.

<sup>(3)</sup> **Thabazimbi Mine – Ore Reserves:** The decrease is due to a revision of the geological interpretations, geological modelling and subsequent Mineral Resource estimation, the effects of which were carried through to the Ore Reserves, especially in the Kumba mining area.

<sup>(4)</sup> **Kolomela Mine – Mineral Resources:** The net increase is primarily the result of geological model refinements undertaken in 2011 to consider a structural re-interpretation conducted for the ore bodies scheduled in the Life of Mine Plan by an external structural geology expert. 3.6 Mt of the Inferred Mineral Resources are extrapolated Inferred Mineral Resources as opposed to the rest being interpolated Inferred Mineral Resources.

<sup>(5)</sup> **Sishen Mine – Mineral Resources:** The significant increase in Mineral Resources can primarily be attributed to a re-allocation of Banded Iron Formation lower grade iron ore (Jig beneficiation feed) Mineral Resources to an Inferred status to appropriately reflect the uncertainty in grade estimates associated with historical selective high grade sampling practices. This caused a decrease in the overall average grade above the 40% Fe cut-off.

<sup>(6)</sup> **Thabazimbi Mine – Mineral Resources:** The primary contributing factor to the increase in Mineral Resources was a significant increase in the long term forward looking iron ore price, which is converted to a revenue factor to derive an optimistic pit shell which spatially defines eventual economic extraction for the Kumba Iron Ore Group. This had the effect of converting Mineral Inventory into Mineral Resources, especially at the Kumba mining area. The increase was offset by the revised geological model which resulted in Mineral Resource write-offs, particularly at the Kumba mining area as well as Mineral Resource classification downgrading to consider the fact that Thabazimbi Mine mainly relies on percussion drilling to define Mineral Resources as compared to other Kumba operations which use a combination of percussion and core drilling, with the latter a large portion of the data used for Mineral Resource grade estimations.

<sup>(7)</sup> **Phoenix Project:** The Phoenix Project addresses possible or potential beneficiation opportunities for the Hematite ore (reported as Vanderbijl Pit Hematite in 2010 for the ring-fenced Vanderbijl mining area) in combination with other low grade material in the same area (not reported in 2010). The total Hematite Mineral Resource for this project has been reclassified as Inferred, primarily due to the low confidence associated with the historical information currently considered in the project resource definition.

#### Assumption with respect to Mineral Tenure

**Sishen Mine:** On 21 December 2011 judgment was delivered in the North Gauteng High Court regarding the status of the Mining Rights at the Sishen Mine. The High Court held that, upon the conversion of Sishen Iron Ore Company's (SIOC) Old Order Mining Right relating to the Sishen Mine properties in 2008, SIOC became the exclusive holder of a converted Mining Right for iron ore and quartzite in respect of the Sishen Mine properties. Accordingly, Kumba Iron Ore Group attributable percentage in SIOC increased to 73.9% in 2011. As a consequence, the Anglo American plc attributable percentage in Sishen Mine increases to 48.2%. On 3 February 2012 both the South African Department of Mineral Resources, as well as Imperial Crown Trading 289 (Pty) Ltd, submitted applications seeking leave to appeal against the High Court order.

# IRON ORE

## Ore Reserve and Mineral Resource estimates as at 31 December 2011

### IRON ORE BRAZIL

The Minas Rio project is located in the state of Minas Gerais, Brazil and will include open pit mines and a beneficiation plant producing high grade pellet feed which will be transported, through a slurry pipeline, over 500km to the Port of Açú in the state of Rio de Janeiro. The project will largely be based on the two main deposits of Serra do Sapo and Itapanhoacanga. Two ore types, Friable and Compact Itabirite, have been identified at Serra do Sapo and Itapanhoacanga. Only the friable material is being considered for Phase 1 of the project. The planned annual capacity of Phase 1 is 26.5 Mtpa of iron ore pellet feed (wet tonnes), for start up during in the second half of 2013.

The Mineral Resource estimates were compiled in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code, 2004) as a minimum standard. The figures reported represent 100% of the Mineral Resources. Rounding of figures may cause computational discrepancies.

#### Iron Ore Brazil – Operations

MINERAL RESOURCES	Attributable %	Classification	Tonnes		Grade	
			2011	2010	2011	2010
			Mt	Mt	%Fe	%Fe
<b>Amapá (OP)<sup>(1)(2)</sup></b>	<b>70.0</b>					
Canga		Measured	2.6	–	54.2	–
		Indicated	10.5	12.0	48.5	53.1
		<b>Measured and Indicated</b>	<b>13.1</b>	<b>12.0</b>	<b>49.6</b>	<b>53.1</b>
		Inferred	1.3	3.9	41.5	45.1
Colluvium		Measured	12.0	13.5	40.4	41.9
		Indicated	56.0	34.3	38.3	40.5
		<b>Measured and Indicated</b>	<b>68.0</b>	<b>47.9</b>	<b>38.7</b>	<b>40.9</b>
		Inferred	18.6	25.8	34.7	35.6
Friable Itabirite and Hematite		Measured	33.5	14.7	40.5	44.5
		Indicated	112.0	78.9	41.7	42.6
		<b>Measured and Indicated</b>	<b>145.5</b>	<b>93.7</b>	<b>41.4</b>	<b>42.9</b>
		Inferred	26.0	54.5	40.1	40.3

#### Iron Ore Brazil – Projects

MINERAL RESOURCES	Attributable %	Classification	Tonnes		Grade	
			2011	2010	2011	2010
			Mt	Mt	%Fe	%Fe
<b>Itapanhoacanga (OP)<sup>(3)(4)</sup></b>	<b>100</b>					
Friable Itabirite and Hematite		Measured	25.0	25.0	42.5	42.5
		Indicated	219.2	219.2	41.6	41.6
		<b>Measured and Indicated</b>	<b>244.2</b>	<b>244.2</b>	<b>41.7</b>	<b>41.7</b>
		Inferred	74.7	74.7	41.7	41.7
Compact Itabirite		Measured	10.9	10.9	33.2	33.2
		Indicated	95.8	95.8	33.8	33.8
		<b>Measured and Indicated</b>	<b>106.7</b>	<b>106.7</b>	<b>33.7</b>	<b>33.7</b>
		Inferred	43.9	43.9	33.2	33.2
<b>Serra do Sapo (OP)<sup>(5)</sup></b>	<b>100</b>					
Friable Itabirite and Hematite		Measured	561.3	502.7	35.3	37.8
		Indicated	1,278.5	1,070.0	38.5	37.2
		<b>Measured and Indicated</b>	<b>1,839.8</b>	<b>1,572.6</b>	<b>37.5</b>	<b>37.4</b>
		Inferred	165.1	275.8	36.3	39.9
Compact Itabirite		Measured	565.0	497.7	31.0	31.5
		Indicated	2,253.9	1,819.8	31.1	31.0
		<b>Measured and Indicated</b>	<b>2,818.9</b>	<b>2,317.5</b>	<b>31.1</b>	<b>31.1</b>
		Inferred	477.3	709.2	31.1	30.2
<b>Serro (OP)<sup>(6)</sup></b>	<b>100</b>					
Friable Itabirite and Hematite		Measured	–	–	–	–
		Indicated	9.5	9.5	63.6	63.6
		<b>Measured and Indicated</b>	<b>9.5</b>	<b>9.5</b>	<b>63.6</b>	<b>63.6</b>
		Inferred	74.2	74.2	35.3	35.3
Compact Itabirite		Measured	–	–	–	–
		Indicated	–	–	–	–
		<b>Measured and Indicated</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>
		Inferred	308.2	308.2	31.6	31.6

Mining method: OP = Open Pit.

Due to the uncertainty that may be attached to some Inferred Mineral Resources, it cannot be assumed that all or part of an Inferred Mineral Resource will necessarily be upgraded to an Indicated or Measured Resource after continued exploration.

<sup>(1)</sup> **Amapá – Mineral Resources:** The cut-off grade used is 25% Fe. Assays are on a dry basis. Tonnages are reported on a wet basis with an average moisture content of 11.3 wt% for Canga, 10.5 wt% for Colluvium and 9.9 wt% for Friable Itabirite and Hematite ore. Mineral Resources increase due to new in-fill drilling information and the inclusion of the Dragão area. The classification methodology was also refined during 2011. Additional metallurgical studies will be completed to assess the viability of processing Hydrothermally Altered Itabirite (ZAH) and Magnetite-bearing carbonated rock (RCB).

<sup>(2)</sup> **Amapá:** Friable Itabirite and Hematite includes Friable Itabirite, Altered Friable Itabirite and Friable Hematite. The Mineral Resources comprise the Mário Cruz, Mário Cruz Leste, Martelo, Taboca, Taboca Leste, Vila do Meio, Vila do Meio Leste and Dragão areas.

<sup>(3)</sup> **Minas Rio Project – Mineral Resources:** The cut-off grade used is 25% Fe. Assays are on a dry basis. Tonnages are reported on a wet basis with an average moisture content of 4.2 wt% for Friable ore. Friable Itabirite and Hematite includes Friable Itabirite, Semi-Compact Itabirite, High Alumina Itabirite, Soft Hematite and Canga. The Minas Rio Project comprises the following sub-areas: Itapanhoacanga, Serra do Sapo and Serro.

<sup>(4)</sup> **Itapanhoacanga:** Friable Itabirite and Hematite includes Friable Itabirite, Semi-Compact Itabirite, Soft Hematite and Hard Hematite.

<sup>(5)</sup> **Serra do Sapo:** Friable Itabirite and Hematite includes Friable Itabirite, Semi-Compact Itabirite, High Alumina Itabirite, Soft Hematite and Canga. The Mineral Resources increase due to new information obtained from infill drilling in the North Domain (100x100m) and deep drill holes as well as a refinement to the geotechnical model resulting in new geotechnical domains and slope angles. The classification methodology was also refined during 2011. The Canga material (Indicated: 34.5 Mt at 60.6% Fe; Inferred: 6.8 Mt at 56.5% Fe) is included and supported by geometallurgical tests.

<sup>(6)</sup> **Serro:** Friable Itabirite and Hematite includes Friable Itabirite, Semi-Compact Itabirite and Hard Hematite (9.5 Mt @ 63.6% Fe).

Audits related to the generation of the Mineral Resource statements were carried out by independent consultants during 2011 at the following operations and projects: Amapá.

# MANGANESE

## Ore Reserve and Mineral Resource estimates as at 31 December 2011

### SAMANCOR MANGANESE

The Ore Reserve and Mineral Resource estimates were compiled in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code, 2004) and The South African Code for the Reporting of Exploration Results, Mineral Resources and Mineral Reserves (The SAMREC Code, 2007) as applicable. The figures reported represent 100% of the Ore Reserves and Mineral Resources (source: BHP Billiton). Rounding of figures may cause computational discrepancies.

#### Samancor Manganese – Operations

ORE RESERVES	Attributable %	Mine Life	Classification	Tonnes		Grade		Yield	
				2011	2010	2011	2010	2011	2010
<b>GEMCO (OP)<sup>(1)</sup></b>	40.0	12		Mt	Mt	%Mn	%Mn	%	%
			Proved	79.4	63.2	46.5	46.9	54.8	50.7
			Probable	25.9	42.0	45.6	46.4	54.2	47.6
			<b>Total</b>	<b>105.3</b>	<b>105.2</b>	<b>46.3</b>	<b>46.7</b>	<b>54.7</b>	<b>49.5</b>
<b>Hotazel Manganese Mines</b>	29.6					%Mn	%Mn		
Mamatwan (OP) <sup>(2)</sup>		21	Proved	43.9	48.9	37.3	37.2		
			Probable	30.5	32.0	37.1	37.0		
			<b>Total</b>	<b>74.4</b>	<b>80.9</b>	<b>37.2</b>	<b>37.1</b>		
Wessels (UG) <sup>(3)</sup>		48	Proved	4.1	5.0	44.0	45.1		
			Probable	67.7	76.4	43.0	42.9		
			<b>Total</b>	<b>71.8</b>	<b>81.4</b>	<b>43.1</b>	<b>43.1</b>		

#### Samancor Manganese – Operations

MINERAL RESOURCES	Attributable %	Classification	Tonnes		Grade		Yield		
			2011	2010	2011	2010	2011	2010	
<b>GEMCO (OP)<sup>(4)</sup></b>	40.0		Measured	87.0	67.0	47.1	46.3	47.4	44.4
			Indicated	28.7	45.5	46.0	45.9	47.6	43.9
			<b>Measured and Indicated</b>	<b>115.8</b>	<b>112.4</b>	<b>46.8</b>	<b>46.2</b>	<b>47.4</b>	<b>44.2</b>
			Inferred	49.4	38.9	43.9	43.3	47.8	45.2
<b>Hotazel Manganese Mines</b>	29.6					%Mn	%Mn		
Mamatwan (OP) <sup>(5)</sup>			Measured	64.8	68.9	35.7	35.6		
			Indicated	54.7	54.7	34.5	34.6		
			<b>Measured and Indicated</b>	<b>119.5</b>	<b>123.6</b>	<b>35.2</b>	<b>35.2</b>		
			Inferred	4.2	4.2	34.4	34.4		
Wessels (UG) <sup>(6)</sup>			Measured	13.8	14.6	46.0	45.9		
			Indicated	129.5	128.4	44.2	44.2		
			<b>Measured and Indicated</b>	<b>143.3</b>	<b>143.0</b>	<b>44.4</b>	<b>44.4</b>		
			Inferred	–	–	–	–		

THE MINERAL RESOURCES INCLUDE ORE RESERVES

#### Samancor Gabon – Projects

MINERAL RESOURCES	Attributable %	Classification	Tonnes		Grade		Yield		
			2011	2010	2011	2010	2011	2010	
<b>Franceville Project – Beniomi<sup>(7)</sup></b>	40.0		Measured	11.0	11.0	36.1	36.1	72.0	72.0
Plaqueette Ore			Indicated	6.6	6.6	36.1	36.1	74.4	74.4
			<b>Measured and Indicated</b>	<b>17.5</b>	<b>17.5</b>	<b>36.1</b>	<b>36.1</b>	<b>72.9</b>	<b>72.9</b>
			Inferred	2.9	2.9	36.1	36.1	71.8	71.8
Transition Ore			Measured	4.1	4.1	24.3	24.3	73.1	73.1
			Indicated	2.4	2.4	24.5	24.5	75.1	75.1
			<b>Measured and Indicated</b>	<b>6.5</b>	<b>6.5</b>	<b>24.4</b>	<b>24.4</b>	<b>73.8</b>	<b>73.8</b>
			Inferred	5.0	5.0	24.2	24.2	68.4	68.4
<b>Franceville Project – Bordeaux<sup>(7)</sup></b>	40.0					%Mn	%Mn		
Plaqueette Ore			Measured	4.6	4.6	36.4	36.4	72.0	72.0
			Indicated	0.8	0.8	36.1	36.1	67.8	67.8
			<b>Measured and Indicated</b>	<b>5.4</b>	<b>5.4</b>	<b>36.4</b>	<b>36.4</b>	<b>71.4</b>	<b>71.4</b>
			Inferred	0.8	0.8	36.8	36.8	69.5	69.5
Transition Ore			Measured	2.3	2.3	24.7	24.7	74.0	74.0
			Indicated	0.5	0.5	24.1	24.1	70.3	70.3
			<b>Measured and Indicated</b>	<b>2.8</b>	<b>2.8</b>	<b>24.6</b>	<b>24.6</b>	<b>73.3</b>	<b>73.3</b>
			Inferred	1.8	1.8	25.1	25.1	67.1	67.1

Mining method: OP = Open Pit, UG = Underground. Mine Life = The extraction period in years for scheduled Ore Reserves comprising Proved and Probable Reserves only. Due to the uncertainty that may be attached to some Inferred Mineral Resources, it cannot be assumed that all or part of an Inferred Mineral Resource will necessarily be upgraded to an Indicated or Measured Resource after continued exploration.

- <sup>(1)</sup> **GEMCO – Ore Reserves:** Production during 2011 has been balanced by the inclusion of additional G Quarry Ore Reserves. Manganese grades are given as per washed ore samples and should be read together with their respective yields.
- <sup>(2)</sup> **Mamatwan – Ore Reserves:** The decrease is primarily due to production depletion and the re-running of the resource model. A Section 102 application has been approved by the South African Department of Mineral Resources to amend the Mamatwan Mining Rights area to include the Ntsimbintle Prospecting Right.
- <sup>(3)</sup> **Wessels – Ore Reserves:** The decrease is primarily due to a revised Upper Body pillar design, redefinition of mining areas as per Life of Mine Plan and updating of geological and mining losses. A Section 102 application has been approved by the South African Department of Mineral Resources to amend the Wessels Mining Rights area to include the Ntsimbintle Prospecting Right. The Wessels and Ntsimbintle Lower Body Mineral Resources and Ore Reserves, which were previously declared separately, are therefore combined and declared as a single Ore Reserve and a single Mineral Resource respectively.
- <sup>(4)</sup> **GEMCO – Mineral Resources:** The change is primarily due to the inclusion of additional resource definition drilling data, resulting in the upgrade in confidence of a large proportion of Indicated to Measured Mineral Resources and the inclusion of Inferred Resources from the Eastern Exploration Areas into the Mineral Resource statement.
- <sup>(5)</sup> **Mamatwan – Mineral Resources:** A cut-off grade of 35% Mn is used to declare Mineral Resources within the M, C and N Zones at Mamatwan. Mineral Resources have also been declared from the X Zone, using a cut-off of 35% Mn, however, the Top Cut Resources comprising a total of 42.3 Mt are declared above a cut-off of 28% Mn.
- <sup>(6)</sup> **Wessels – Mineral Resources:** A new Mineral Resource model was developed during 2010 and this model has resulted in the increase in Mineral Resource after consideration of depletion.
- <sup>(7)</sup> **Beniomi and Bordeaux:** Mn grades are for +0.15mm screen size fraction and should be read together with their respective tonnage yields. The feasibility phase study for the establishment of a 300 ktpa mine in Franceville, Gabon, commenced in July 2010 and the study is expected to be completed in the first quarter of FY2012. The pre-feasibility phase study for phase 2 to increase the production capacity to 1.8 mtpa is expected to commence in the second quarter of FY2012. However, the Gabon Mining Concession and Mining Convention remain subject to ongoing negotiation. No Ore Reserves are yet reportable.