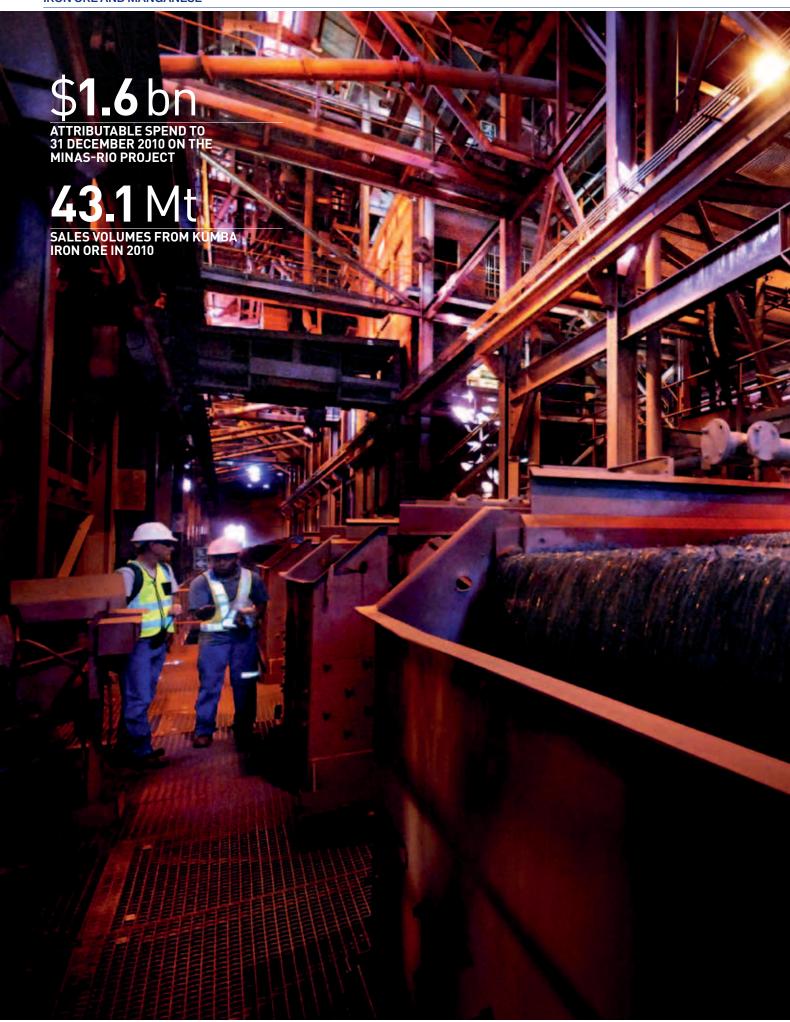
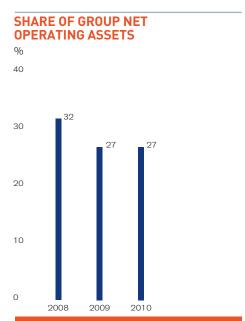
IRON ORE AND MANGANESE

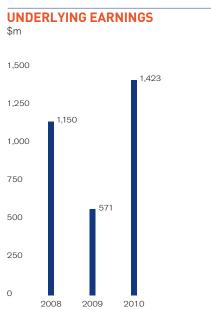


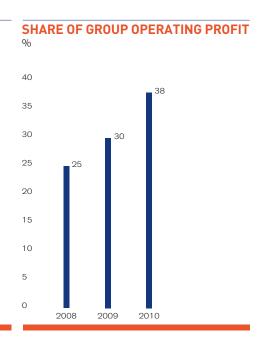


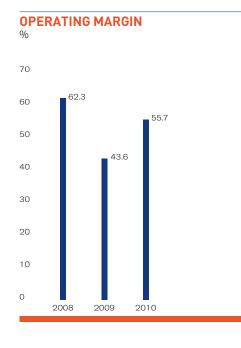
We are the world's fourth largest iron ore producer, with a large high quality resource base in South Africa and Brazil.

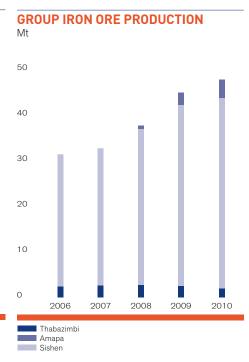
# **FINANCIAL HIGHLIGHTS**











# **FINANCIAL DATA**

\$m	2010	2009	2008
Total turnover	6,612	3,419	4,099
Of which:			
Kumba Iron Ore	5,310	2,816	2,573
Samancor	983	603	1,526
Iron Ore Brazil	319	-	-
EBITDA	3,856	1,593	2,625
Of which:			
Kumba Iron Ore	3,514	1,562	1,632
Iron Ore Brazil	(73)	(135)	(5)
Samancor	415	166	998
Depreciation and amortisation	175	104	71
Operating profit before special items and remeasurements	3,681	1,489	2,554
Of which:	0,00.	.,	_,00.
Kumba Iron Ore	3,396	1,487	1,583
Iron Ore Brazil	(97)	(141)	(9)
Samancor	382	143	980
Operating special items and remeasurements	356	(1,139)	(620)
Operating profit after special items and remeasurements	4,037	350	1,934
Net interest, tax and minority interests	(2,258)	(918)	(1,404)
Underlying earnings	1,423	571	1,150
Onderlying earnings	1,423	311	1,130
Of which:			
Kumba Iron Ore	1,210	490	523
Iron Ore Brazil	(77)	(119)	(31)
Manganese	290	200	658
a.gaoo	250	200	000
Net operating assets	11,701	10,370	10,457
Capital expenditure	1,195	1,140	783



# **BUSINESS OVERVIEW**

MINAS-RIO'S RESOURCE ESTIMATE

**5.3** billion tonnes<sup>(1)</sup>

**2010 GROUP IRON ORE OUTPUT** 

**47.4** Mt

MINAS-RIO PHASE 1 PLANNED IRON ORE PRODUCTION

**26.5** Mtpa

FINANCIAL HIGHLIGHTS	2010	2009
\$ million (unless otherwise stated)		
Operating profit	3,681	1,489
Kumba Iron Ore	3,396	1,487
Iron Ore Brazil	(97)	(141)
Samancor	382	143
EBITDA	3,856	1,593
Net operating assets	11,701	10,370
Capital expenditure	1,195	1,140
Share of Group operating profit	38%	30%
Share of Group net operating assets	27%	27%

#### **BUSINESS OVERVIEW**

Our Iron Ore portfolio principally comprises a 65.25% 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, a 49% shareholding in LLX Minas-Rio, which owns the port of Açu (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 and is the only haematite iron ore producer that beneficiates 100% of its product. Export ore is transported via the Sishen-Saldanha Iron Ore Export Channel (IOEC) 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 is also geographically well positioned to supply European steel markets in the light of an expected decline in lump ore supplies from other sources.

Kumba operates two mines – Sishen Mine in the Northern Cape, which produced 41.3 million tonnes (Mt) of iron ore in 2010, and Thabazimbi Mine in Limpopo, with an output of 2.1 Mt. Its third mine, Kolomela (previously Sishen South), that will produce 9 Mtpa, is under development in the Northern Cape. In 2010, Kumba exported more than 80% of its total iron ore sales volumes of 43.2 Mt, with 61% of these exports destined for China and the remainder to 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 slurry pipeline more than 500 kilometres to the port of Açu 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 4.0 Mt in 2010 and is expected to produce 4.5 Mt in 2011.

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.

ng Other ial information

#### **SOUTH AFRICA**

Kumba operates two mines – Sishen in the Northern Cape, which produced 41.3 Mt of iron ore in 2010, and Thabazimbi Mine in Limpopo, with an output of 2.1 Mt. Its third mine, Kolomela, that will produce 9 Mtpa, is under development in the Northern Cape.

Samancor, which is the world's largest integrated producer by sales of manganese ore and alloys, is headquartered in South Africa.



- 63% Kumba Iron Ore –
   Sishen, Kolomela and Thabazimbi
- 2 40% Samancor

#### Key

- Open cut
- Port
- Other

#### **SOUTH AMERICA**

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 500 km to the Port of Açu in the state of Rio de Janeiro.

Amapá, located in Amapá state in Northern Brazil, is in the process of ramping up its pellet feed and sinter feed production and produced 4.0 Mt in 2010. Amapá production could increase to 6.5 Mtpa with further capital investment.



- 100% Minas-Rio (Brazil)
- 9 70% Amapá (Brazil)
- 3 49% LLX Minas-Rio (Brazil)

# AUSTRALIA

The Australian 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



# **INDUSTRY OVERVIEW**



# **INDUSTRY OVERVIEW**

Steel is the most widely used of all metals. In 2010, global crude steel production returned to above pre-2008 levels, at 1.4 billion tonnes, an increase of 17% on 2009. China, the world's principal steelmaker, showed year on year growth in crude steel production, despite its government initiated cooling down, power restrictions and destocking through the supply chain. Chinese crude steel production for 2010 was 626 Mt, an increase of 52 Mt or 9% year on year.

A strong recovery in iron ore demand and an apparent collapse in Chinese domestic iron ore supply were the main reasons for the strong growth in 2009 in seaborne imports. In 2010 however, Chinese domestic iron ore supply accounted for 285 Mt of apparent iron ore consumption, a 34% increase year on year. With iron ore consumption by China only increasing 9% year on year to 888 Mt, this resulted in a decrease of 2% in seaborne imports to 603 Mt compared with 2009.

Crude steel production in China is expected to grow by 5% to 10% during 2011. Domestic iron ore production in China is unlikely to grow significantly beyond the 2010 level of 285 Mt, mainly due to diminishing qualities and

increasing mining costs. The additional demand for iron ore in China during 2011 is expected to be sourced from seaborne supply, with the demand levels in the rest of the world remaining at 2010 levels.

Both manganese ore and alloy prices firmed owing to improving market conditions in the year, boosted by restocking steelmakers. In 2011, the prices of both manganese ore and alloy will be heavily influenced by steel production trends and the stocking and destocking cycles, while, in the case of manganese alloys, prices will largely be determined by supply responses resulting from latent capacity in the industry.

#### Markets

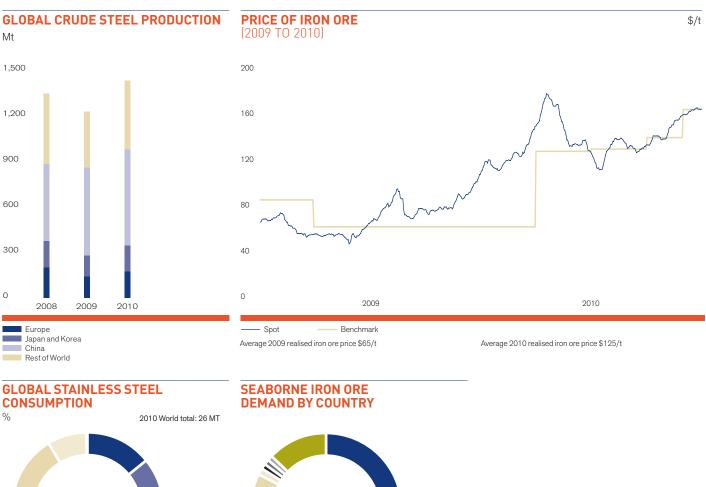
World crude steel production continued to increase during 2010 and returned to above pre-2008 levels at 1.4 billion tonnes. China's continued robust economic growth contributed to growth in crude steel production, despite power restrictions and destocking through the supply chain. Crude steel production in China increased by 9% to 626 Mt and continued to exceed demand. The European, Japanese and South Korean markets saw a 24% increase in crude steel output, bringing total production to 341 Mt, only slightly below levels achieved in 2008.

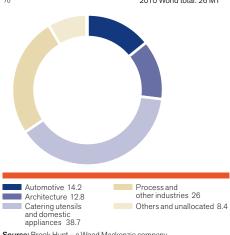
Despite the continued strength in iron ore demand in China, a surge in Chinese domestic iron ore supply during 2010 resulted in a decrease of 2% to 603 Mt in seaborne imports. Global seaborne iron ore demand increased by 5% to 979 Mt, driven by a 19% increase in demand from the steel industry in the rest of the world.

Index prices rose strongly during the year, with the 62% Fe Platts index averaging approximately \$147/t (CFR), up from \$80/t in 2009.

The manganese ore and alloy market reflected the increase in world crude steel production and demand, resulting in significantly increased prices for alloy and ore during the year. Production increased to meet demand, with furnaces reaching full capacity for the first time since 2008.

# **MARKET INFORMATION**





Source: Brook Hunt - a Wood Mackenzie company



# STRATEGY AND GROWTH

#### STRATEGY AND GROWTH

A core strategy is to grow our position in iron ore and to supply premium, high quality iron ore products against a background of declining quality global iron ore supplies. Anglo American has a unique iron ore resource profile, with large, 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's business strategy is to be a leading value adding iron ore supplier to the global steel industry. The business is focused on optimising the value of current operations by successfully executing its asset optimisation initiatives and the optimisation of its product portfolio. Kumba seeks to capture further value across the value chain through its niche product strategy and the professionalising of its ocean freight management. Minas-Rio will capture a significant part of the high growth pellet feed market with its premium product featuring high iron content and low impurities.

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 27-30 months after commencement of civil works for the beneficiation plant and tailings dam construction. Further expansion potential is supported by the 2010 resource estimate of 5.3 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, have continued to be evaluated during the year.

Kolomela is expected to produce 9 Mtpa of iron ore, with initial production scheduled for the end of the first half of 2012 and ramping up to full capacity in 2013. Further growth projects in the Northern Cape and Limpopo regions of South Africa could potentially increase Kumba's production output to 70 Mtpa.

The manganese strategy is to focus on upstream resources businesses, despite their low-cost alloy smelters having been significant contributors to profit in recent years. In addition, alloy smelters add value to the overall manganese business as they enable Samancor to access markets with an optimal mix of ore and alloy, to optimise production to best suit



market conditions and provide ongoing information on the performance of their ores in the smelting process.

#### **Projects**

The development of the 9 Mtpa Kolomela Mine is well advanced and overall project progress reached 81% as at 31 December 2010. The project remains on budget and on schedule to deliver initial production at the end of the first half of 2012, ramping up to full capacity in 2013. As at 31 December 2010, 22.6 Mt of waste material had been moved, 18.6 Mt of it during 2010. Capital expenditure of \$679 million (excluding capitalised costs for pre-strip waste removal) has been incurred to 31 December 2010, with \$307 million incurred during 2010.

Significant progress has been made at the Minas-Rio project in Brazil, expected to produce 26.5 Mtpa in its first phase. The award of the second part of the mine, beneficiation plant and tailings dam installation licence (LI part 2) in December 2010, being the final primary installation licence, supported the start of the civil works for the beneficiation plant, which commenced in March 2011. This licence followed the award of the mining permit in August 2010. As previously stated, it should take between 27 and 30 months from commencement of these works to construct and commission the mine and plant, complete the project and deliver the first ore on ship; however, there are still a number of other licences and permits to be obtained during this period.

Anglo American also reached agreement on a fixed 25-year iron ore port tariff with its port partner, LLX SA, in relation to the LLX Minas-Rio (LLX MR) iron ore port facility at Açu. The iron ore volumes associated with the first phase of the project will be subject to a net port tariff of approximately \$5.15 per

tonne (in 2013 terms) after taking into account Anglo American's shareholding in LLX MR (\$7.10 per tonne gross). As part of the agreement to secure the long term tariff arrangements, Anglo American has agreed to fund a greater share of the development cost of the first phase of the port. This agreement is expected to result in additional capital expenditure attributable to Anglo American of approximately \$525 million in relation to the port.

Project development at the plant has been focused on progressing earthworks in preparation for the commencement of civil works. The pipeline element of the project is well progressed, with pipe laying, welding and burying beginning in June and ended the year ahead of schedule, including the completion of two underground river crossings (one of which is the longest of its type in Brazil). The civil works for the filtration plant are under way and, at the port, offshore works have continued with the commencement of the construction of the iron ore pier and breakwater, following completion of the 2.9 km main trestle.

Studies for the expansion of the Minas-Rio project continued during 2010 and the latest resource statement provides a total resource volume (Measured, Indicated and Inferred) of 5.3 billion tonnes, supporting the expansion of the project. In addition, the port agreement noted above also covers a long term tariff arrangement for all Anglo American's iron ore volumes beyond the first phase of the Minas-Rio project. The level of the expansion tariff will be dependent upon the capital cost to expand the port to accommodate those additional volumes and that capital cost will be determined in due course.

**Overall capex: TBD** 

# PROJECT PIPELINE -**KEY PROJECTS**

# **KOLOMELA (PREVIOUSLY SISHEN SOUTH)**

Country South Africa

Ownership\* 48.3%

**Production volume** 

9 Mtpa iron ore

**Full project capex** \$1.062m

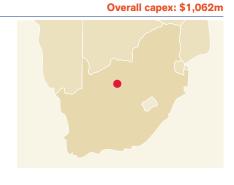
**Full production** 

Q1 2013

The Kolomela project, which involves the development of an opencast mine some 80 kilometres south of Sishen mine, in the Northern Cape of South Africa, was approved in July 2008. Development is well advanced and overall project progress reached 81% as at 31 December 2010. The project remains on budget and on schedule to deliver initial

production at the end of the first half of 2012, ramping up to full capacity

of 9 Mtpa in 2013.



## **MINAS-RIO PHASE 1**

### 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 operations will be 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 500 km to the Port of Açu in the state of Rio de Janeiro. Civil works for the beneficiation plant commenced in March 2011, and it should take 27-30 months from commencement of these works to construct and commission the mine and plant, complete the project and deliver first ore on ship; however, there are still a number of other licenses and permits to be obtained during this period.



## **SISHEN EXPANSION PROJECT PHASE 1B (UNAPPROVED)**

#### Country

South Africa

# Ownership\*

48.3%

#### **Production volume**

0.8 Mtpa iron ore

#### **Full project capex**

**TBD** 

2012

**Full production** 

The aim of the Sishen Expansion Project Phase 1B (SEP1B) is to beneficiate the -1+0.2mm fraction of the Jig plant ROM feed currently being discarded. The project aims to produce 0.75 Mtpa additional fines product, and has the potential to increase the Jig plant yield by about 3%.



# **SISHEN B GRADE PROJECT (UNAPPROVED)**

# Country

South Africa

#### Ownership\* 48.3%

### **Production volume**

10 Mtpa iron ore

# **Full project capex**

TBD

## **Full production**

Sishen production will be increased by up to 10Mtpa 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



- (1) 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
- 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

Iron Ore and Manganese

# **PRODUCTION DATA**

	2010	2009	2008	2007	2006
Kumba Iron Ore – tonnes					
Lump	25,922,300	25,300,000	22,042,000	19,043,000	18,639,800
Fines	17,462,600	16,643,000	14,657,000	13,357,000	12,470,300
	43,384,900	41,943,000	36,699,000	32,400,000	31,110,100
Amapá <sup>(1)</sup> – tonnes					
Sinter feed	2,136,900	576,100	128,000	-	-
Pellet feed	1,892,500	2,077,100	584,000	-	_
	4,029,400	2,653,200	712,000	_	_
Total iron ore production	47,414,300	44,596,200	37,411,000	32,400,000	31,110,100
Samancor <sup>(2)</sup> – tonnes					
Manganese ore	2,952,800	1,570,000	2,704,000	2,411,000	2,248,000
Manganese alloy <sup>(3)</sup>	312,000	129,000	306,000	310,000	256,300

<sup>10</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>(2)</sup> Saleable production.
(3) Production includes Medium Carbon Ferro Manganese.



# estimates as at 31 December 2010

#### **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					Tonnes		Grade		Sa	leable p	roduct
ORE RESERVES .	Attributable %	LOM	Classification	2010	2009	2010	2009		2010		2009
Kolomela Mine (OP)(1)	48.3	28		Mt	Mt	%Fe	%Fe	Mt	%Fe	Mt	%Fe
			Proved	118.5	123.1	64.5	64.2	118	64.5	123	64.2
			Probable	84.0	91.0	64.1	63.9	84	64.1	91	63.9
			Total	202.4	214.1	64.3	64.1	202	64.3	214	64.0
Sishen Mine (OP)(2)	38.0	20				%Fe	%Fe				
			Proved	576.3	707.6	59.8	59.2	439	65.5	531	65.4
			Probable	500.6	203.9	58.7	59.2	366	65.1	154	64.9
			Total	1,077.0	911.5	59.3	59.2	805	65.3	685	65.3
Thabazimbi Mine (OP)(3)	48.3	6				%Fe	%Fe				
Area outside Vanderbijl Pit			Proved	9.0	9.5	61.1	61.7	8	62.6	8	63.4
			Probable	4.9	4.7	60.6	61.3	4	61.9	4	62.7
			Total	13.9	14.2	61.0	61.5	12	62.3	12	63.1

Kumba Iron Ore – Operations				Tonnes		Grade
MINERAL RESOURCES	Attributable %	Classification	2010	2009	2010	2009
Kolomela Mine (OP)(4)	48.3		Mt	Mt	%Fe	%Fe
		Measured	49.1	49.5	65.1	65.0
		Indicated	20.0	20.8	65.0	64.9
		Measured and Indicated	69.2	70.3	65.1	64.9
		Inferred (in LOM)	35.1	35.4	65.7	65.6
		Inferred (ex. LOM)	47.7	47.4	62.5	62.5
		Total Inferred	82.7	82.9	63.9	63.8
Sishen Mine (OP)(5)	38.0				%Fe	%Fe
		Measured	127.0	589.1	59.4	56.0
		Indicated	410.5	697.0	58.5	57.6
		Measured and Indicated	537.5	1,286.1	58.7	56.8
		Inferred (in LOM)	17.9	3.7	59.7	58.2
		Inferred (ex. LOM)	116.2	148.7	59.6	59.4
		Total Inferred	134.1	152.4	59.6	59.4
Thabazimbi Mine (OP)(6)(7)	48.3				%Fe	%Fe
Area outside Vanderbijl Pit		Measured	3.4	9.5	61.8	62.7
		Indicated	1.2	2.4	61.2	63.7
		Measured and Indicated	4.6	11.9	61.6	62.9
		Inferred (in LOM)	0.9	1.3	61.9	61.9
		Inferred (ex. LOM)	0.9	2.3	61.5	63.4
		Total Inferred	1.8	3.6	61.7	62.8
Vanderbijl Pit hematite		Measured	8.1	-	62.8	-
		Indicated	1.8	-	64.3	-
		Measured and Indicated	9.9	-	63.1	-
		Inferred (in LOM)	_	-	_	-
		Inferred (ex. LOM)	1.5	-	64.2	-
		Total Inferred	1.5	_	64.2	_

THE MINERAL RESOURCES ARE REPORTED AS ADDITIONAL TO ORE RESERVES

Mining method: OP = Open Pit. LOM = Life of Mine is based on scheduled Reserves including some Inferred Resources considered for life of mine planning.

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 Zandrivierspoort 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.

- Kolomela Mine Ore Reserves: The mine plan has been updated to include revised scheduling and blending strategies
- Sishen Mine Ore Reserves: An expanded pit layout has been developed to incorporate the updated long-term price outlook for iron ore and is responsible for the largest proportion of the change (+609Mt). The gains are offset by a refinement in the resource model (-238Mt) and application of an improved LOM planning technique that includes a refinement in the treatment and estimation of modifying factors (-152Mt).
- Thabazimbi Mine Ore Reserves: The reserve cut-off was increased resulting in the slight decrease in Ore Reserves
- Kolomela Mine Mineral Resources: The reserve cut-off grade was lowered resulting in the significantly higher conversion of Mineral Resources being converted to Ore Reserves.

  Sishen Mine Mineral Resources: The expanded pit layout has resulted in a significantly higher conversion of Mineral Resources to Ore Reserves (-618Mt). A further reduction is attributable to a refinement of the resource model, which focused particular attention on remodelling the lower-grade jig plant feed materials (-120Mt).

  Thabazimbi Mine: In 2010, the Mineral Resources have been split into two separate entities; the Vanderbijl Pit hematite Mineral Resource and the area outside the Vanderbijl Pit. The hematite Mineral Resource in the Vanderbijl Pit, which has not changed since 2006, has been ring-fenced as part of an ongoing study to utilise this and other lower-grade material at this location.

  Thabazimbi Mine Mineral Resources: The reserve cut-off was increased resulting in a slight increase in Mineral Resources as less were converted to Ore Reserves.

Audits related to the generation of the Ore Reserve and Mineral Resource statements were carried out by independent consultants during 2010 at the following operations: Sishen, Thabazimbi.

#### **IRON ORE AND MANGANESE**

# **IRON ORE** continued

# estimates as at 31 December 2010

#### **IRON ORE BRAZIL**

The Minas Rio operations will be 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 Açu 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 Itabirite is being considered for Phase 1 of the project. The planned annual capacity of Phase 1 is 26.5Mtpa of iron ore pellet feed (wet tonnes), for start up during in the second half of 2013.

2010 was a turnaround year for Amapá with plant operations nearing stability. Coupled with a good safety performance and excellent cost control, Amapá achieved profitability at the end of 2010 (12 months ahead of schedule). Additional efforts are underway to achieve stability in earthmoving maintenance. The focus for Amapá has shifted from completion of commissioning and achievement of stability in operations to potential growth. Additional geochemical and engineering testwork and studies are underway that will all form part of the Mineral Resource to Ore Reserve conversion to be performed at the end of 2011.

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				Tonnes		Grade
MINERAL RESOURCES	Attributable %	Classification	2010	2009	2010	2009
Amapá (OP)(1)(2)	70.0		Mt	Mt	%Fe	%Fe
Canga		Measured	-	_	-	-
		Indicated	12.0	_	53.1	-
		Measured and Indicated	12.0	_	53.1	-
		Inferred	3.9	17.2	45.1	54.6
Colluvium		Measured	13.5	5.6	41.9	40.9
		Indicated	34.3	31.0	40.5	44.0
		Measured and Indicated	47.9	36.6	40.9	43.5
		Inferred	25.8	14.1	35.6	41.7
Friable Itabirite and Hematite		Measured	14.7	28.7	44.5	42.5
		Indicated	78.9	80.8	42.6	41.3
		Measured and Indicated	93.7	109.4	42.9	41.6
		Inferred	54.5	29.9	40.3	41.8
Iron Ore Brazil - Projects				Tonnes		Grade
MINERAL RESOURCES	Attributable %	Classification	2010	2009	2010	2009
Itapanhoacanga (OP)(3)(4)	100		Mt	Mt	%Fe	%Fe
Friable Itabirite and Hematite		Measured	25.0	25.0	42.5	42.5
		Indicated	219.2	219.2	41.6	41.6
		Measured and Indicated	244.2	244.2	41.7	41.7
		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
		Measured and Indicated	106.7	106.7	33.7	33.7
		Inferred	43.9	43.9	33.2	33.2
Serra do Sapo (OP)(3)(5)	100				%Fe	%Fe
Friable Itabirite and Hematite		Measured	502.7	498.1	37.8	38.6
		Indicated	1,070.0	872.5	37.2	37.0
		Measured and Indicated	1,572.6	1,370.5	37.4	37.6
		Inferred	275.8	192.2	39.9	33.1
Compact Itabirite		Measured	497.7	453.8	31.5	31.8
		Indicated	1,819.8	1,968.3	31.0	31.2
		Measured and Indicated	2,317.5	2,422.1	31.1	31.3
		Inferred	709.2	149.4	30.2	30.3
Serro (OP)(3)(6)	100				%Fe	%Fe
Friable Itabirite and Hematite		Measured	_	_	-	-
		Indicated	9.5	9.5	63.6	63.6
		Measured and Indicated	9.5	9.5	63.6	63.6
		Inferred	74.2	74.2	35.3	35.3
Compact Itabirite		Measured	_	_	-	-
		Indicated	_	_	_	-
		Measured and Indicated	_	_	_	_
		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.

- (1) 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 7 wt% for Canga, 10 wt% for Colluvium and 8 wt% for Friable Itabirite and Hematite ore.
- (2) Amapá: The increase in Colluvium and Friable Itabirite and Hematite is the result of the addition of the Mário Cruz Leste and Vila do Meio Leste areas. The decrease in Measured and Indicated Friable Itabirite and Hematite is mostly the result of depletion and a change in the classification methodology. Friable Itabirite and Hematite includes Friable Itabirite, Altered Friable Itabirite, Alter
- 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 wt% for Friable ore. Friable Itabirite and Hematite includes Friable Itabirite, Semi-Compact Itabirite, High Alumina Itabirite, Soft Hematite and Canga. The Compact Itabirite was previously referred to as Hard Itabirite.
- (4) Itapanhoacanga: Friable Itabirite and Hematite includes Friable Itabirite, Semi-Compact Itabirite, Soft Hematite and Hard Hematite.
  (5) Serra do Sapo: Friable Itabirite and Hematite includes Friable Itabirite, Semi-Compact Itabirite, High Alumina Itabirite, Soft Hematite and Canga. The Canga material (70.1 Mt at 55.11% Fe Inferred Resources) is included and supported by the geometallurgical tests. The properties of Mineração Trindade Ltd containing Mineral Resources which were included in the 2009 figures were acquired by Anglo Ferrous Minas-Rio Mineração S.A.
- Serro: Friable Itabirite and Hematite includes Friable Itabirite, Semi-Compact Itabirite and Hard Hematite (9.5Mt @ 63.6% Fe).

Audits related to the generation of the Mineral Resource statements were carried out by independent consultants during 2010 at the following operations and projects: Amapá.

# **MANGANESE**

# estimates as at 31 December 2010

#### **SAMANCOR MANGANESE**

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) and the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code, 2004) 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					Tonnes		Grade		Yield
ORE RESERVES	Attributable %	LOM	Classification	2010	2009	2010	2009	2010	2009
GEMCO (OP)(1)	40.0	12		Mt	Mt	%Mn	%Mn	%	%
			Proved	63.2	67.5	46.9	46.8	50.7	50.8
			Probable	42.0	43.2	46.4	46.4	47.6	47.9
			Total	105.2	110.7	46.7	46.7	49.5	49.7
Hotazel Manganese Mines(2)	29.6					%Mn	%Mn		
Mamatwan (OP)(3)		22	Proved	48.9	53.6	37.2	37.8		
			Probable	32.0	24.8	37.0	37.2		
			Total	80.9	78.4	37.1	37.6		
Wessels (UG) <sup>(4)</sup>		54	Proved	5.0	5.1	45.1	45.5		
, ,			Probable	76.4	68.4	42.9	43.0		
			Total	81.4	73.5	43.1	43.2		
Samancor Manganese – Operations MINERAL RESOURCES	Attributable %		Classification	2010	Tonnes	2010	Grade	2010	Yield
MINERAL RESOURCES	Attributable %		Classification	2010	2009	2010	2009	2010	2009
GEMCO (OP)(5)	40.0			Mt	Mt	%Mn	%Mn	%	%
			Measured	67.0	71.2	46.3	46.3	44.4	44.4
			Indicated	45.5	46.6	45.9	46.0	43.9	44.0
		Measu	red and Indicated	112.4	117.9	46.2	46.2	44.2	44.2
			Inferred	38.9	39.0	43.3	43.3	45.2	45.2
Hotazel Manganese Mines	29.6					%Mn	%Mn		
Mamatwan (OP) <sup>(6)</sup>			Measured	68.9	79.6	35.6	35.8		
( )			Indicated	54.7	45.3	34.6	34.3		
		Measu	red and Indicated	123.6	124.9	35.2	35.3		
			Inferred	4.2	3.1	34.4	33.1		
Wessels (UG) <sup>(7)</sup>			Measured	14.6	12.1	45.8	46.3		
,			Indicated	128.4	132.0	44.2	44.2		
		Measu	red and Indicated	143.0	144.1	44.4	44.4		
			Inferred	_	_	_	_		

THE MINERAL RESOURCES INCLUDE ORE RESERVES

Samancor Gabon – Projects				Tonnes		Grade		Yield
MINERAL RESOURCES	Attributable %	Classification	2010	2009	2010	2009	2010	2009
Franceville Project - Beniomi(8)	40.0		Mt	Mt	%Mn	%Mn	%	%
Plaquette Ore		Measured	11.0	_	36.1	_	72.0	-
·		Indicated	6.6	_	36.1	_	74.4	_
		Measured and Indicated	17.5	_	36.1	_	72.9	_
		Inferred	2.9	-	36.1	_	71.8	-
Transition Ore		Measured	4.1	_	24.3	-	73.1	_
		Indicated	2.4	_	24.5	_	75.1	_
		Measured and Indicated	6.5	_	24.4	_	73.8	_
		Inferred	5.0	_	24.2	_	68.4	_
Franceville Project – Bordeaux <sup>(8)</sup>	40.0				%Mn	%Mn		
Plaquette Ore		Measured	4.6	_	36.4	-	72.0	_
		Indicated	0.8	_	36.1	_	67.8	_
		Measured and Indicated	5.4	_	36.4	_	71.4	_
		Inferred	0.8	_	36.8	-	69.5	_
Transition Ore		Measured	2.3	_	24.7	_	74.0	_
		Indicated	0.5	_	24.1	_	70.3	_
		Measured and Indicated	2.8	_	24.6	_	73.3	_
		Inferred	1.8	_	25.1	_	67.1	-

Mining method: OP = Open Pit, UG = Underground, LOM = Life of Mine in years based on scheduled Ore Reserves

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.

- GEMCO Ore Reserves: Manganese grades are given as per washed ore samples and should be read together with their respective yields.
- Hotazel Manganese Mines: An agreement has been reached between Samancor Manganese and empowerment consortium Ntsimbintle Mining Pty Ltd. The Ntsimbintle agreement has been signed by both parties and approved by the South African Government. This transaction allows for the inclusion of part of the Prospecting Rights held by Ntsimbintle into the Mamatwan and Wessels Mining Areas in exchange for 9% equity in Hotazel Manganese Mines (Pty) Ltd, thereby adding the Ore Reserves of Mamatwan and Wessels within the Ntsimbintle Prospecting Right to the Mamatwan and Wessels Mining Rights. Section 102 applications have been lodged with the South African Department of Mineral Resources (DMR) to amend the Mamatwan and Wessels Mining Rights areas to include the Ntsimbintle Prospecting Right. Hotazel Manganese Mines (Pty) Ltd is the owner of Mamatwan and Wessels mines. The other 26% is held by: Ntsimbintle (9%), NCAB (7%), Iziko (5%) and the HMM Education Trust (5%). The addition of other empowerment consortiums during 2010 has diluted Anglo American's share in Hotazel Manganese Mines (Pty) Ltd to 29.6%.
- Mamatwan Ore Reserves: The increase is attributable to the revised wireframe used in the latest block model. The calculation of the Ore Reserves has been aligned with the updated mine plan.

  Wessels Ore Reserves: The increase is ascribed to a revised smaller support pillar factor in the West Block (18% versus a previous factor of 25%) and the new block model. The calculation of the Ore
- Reserves has been aligned with the updated mine plan.

  GEMCO Mineral Resources: No additional drilling data was added during 2010. All changes are as a result of depletion due to mining.
- Mamatwan Mineral Resources: Changes are due to the use of a new resource model now covering the entire Ntsimbintle joint vent Wessels Mineral Resources: A new resource model has been used to estimate Mineral Resources.
- Beniomi and Bordeaux: Mn grades are for +0.15mm screen size fraction and should be read together with their respective tonnage yields. These areas were prospected using drilling and pitting by CVRD (Vale) from 2003 to 2005 and subsequently by Samancor Gabon. A programme of large diameter bucket auger and Mini sonic drilling was conducted on the Beniomi and later the Bordeaux Plateaux focused on providing Pilot Plant feed. In addition, a regional exploration programme using RAB drill rigs was undertaken on surrounding plateaux. Gemecs (Pty) Ltd prepared geological models and resource estimates for Beniomi and Bordeaux, which are the only areas for which Mineral Resources have been declared. Pilot Plant testwork results have informed the opinion as to eventual economic viability of the Mineral Resources as reported. The greater project comprises of a number of wide-spread prospecting permits and prospecting authorisations. In time, the project is envisaged to include a number of shallow open pit mines located on a number of plateaux feeding a processing plant complex made up of scrubbing and DMS sections and producing both high grade lump and fine ores