

- [Downloads](#)
- [Sitemap](#)
- [Glossary](#)
- [Contact us](#)
- [Report to Society](#)
- [Annual Financial Statements](#)
 - [Home](#)
 - [Introduction](#)
Review of the year
 - [Regulatory information](#)
 - [Governance](#)
 - [Financials](#)
 - [Notice of meeting](#)

Review of operations

- [CEO's review](#)
- [CFO's report](#)
- [Five-year summaries](#)
- [Operations at a glance](#)
- [Review of operations](#)
 - [South Africa](#)
 - [Argentina](#)
 - [Australia](#)
 - [Brazil](#)
 - [Ghana](#)
 - [Guinea](#)
 - [Mali](#)
 - [Namibia](#)
 - [Tanzania](#)
 - [United States of America](#)
- [The gold and uranium markets](#)
- [Global exploration](#)
- [Mineral Resources and Ore Reserves](#)
- [Research and development](#)
- [Printer friendly](#)
- [Download this page](#) (PDF - 118KB)
- [Home](#)
- < [Review of the year](#)
- < [Review of operations](#)
- < **Brazil**

Brazil

The two AngloGold Ashanti assets in Brazil are AngloGold Ashanti Brasil Mineração and Serra Grande. In 2008, these operations together produced an attributable 407,000 ounces of gold, equivalent to 8% of group production.

ANGLOGOLD ASHANTI BRASIL MINERAÇÃO

Brasil Mineração		2008	2007	2006
Pay limit	(oz/t)	0.15	0.13	0.09
	(g/t)	5.16	3.50	3.10
Recovered grade*	(oz/t)	0.222	0.218	0.222
	(g/t)	7.62	7.48	7.60
Gold production	(000oz)	320	317	242
Total cash costs	(\$/oz)	300	233	195
Total production costs	(\$/oz)	432	344	266

Capital expenditure	(\$m)	69	117	168
Total number of employees		2,987	3,434	3,611
Employees		1,954	1,814	1,546
Contractors		1,033	1,620	2,065

*underground operation

Description

The wholly-owned AngloGold Ashanti Brasil Mineração (Brasil Mineração) complex is located in south-eastern Brazil in the state of Minas Gerais, close to the city of Belo Horizonte, in the municipalities of Nova Lima, Sabará and Santa Bárbara. Ore is sourced from the Cuiabá underground mine, and then processed at the Cuiabá and Queiroz plants, and from the Córrego do Sítio heap-leach operation.

Safety

Safety levels deteriorated during the course of the year with the LTIFR at 3.06 per million hours worked in 2008 as opposed to 2.30 in 2007. A safety programme to restore former levels of safety performance and renew awareness of the importance of working safely among employees has been put in place. There were no fatalities in 2008.

Operating review

Gold production for 2008, supported mainly by the Cuiabá mine, where the expansion project has been completed, and the Córrego do Sítio mine, was almost unchanged in line with expectations at 320,000 ounces.

From an operating perspective, the development rate at Cuiabá improved as planned with a focus on greater mine flexibility. Strategic action was taken to enhance long-term performance at Cuiabá and extend its life of mine. This included increasing the backfill rate to the mine, re-structuring the maintenance programme and reviewing maintenance contracts, as well as implementing a management strategy focusing on cost optimisation in 2009. Also introduced were new preventive controls and the monitoring of geotechnical conditions and the stability of the hanging wall in particular. All of these actions are aimed at consolidating a sustainable long-term rate of production.

Total cash costs rose by 29% to \$300/oz. Higher costs were largely a result of the appreciation of the local Brazilian currency (the real) against the US dollar and higher inflation on materials, services and maintenance costs, partially offset by the better price received for sulphuric acid by-product.

Capital expenditure for the year totalled \$69 million, significantly lower than the \$117 million spent in 2007 given the completion of the Cuiabá Expansion Project. Expenditure in 2008 was mostly on increasing ore development and the acquisition of new equipment to enhance the rate of development at the Lamego and Córrego do Sítio projects.

Growth prospects

The Córrego do Sítio Underground Sulphide Project continues and will exploit the sulphide resources of the Córrego do Sítio underground orebodies, namely Cachorro Bravo, Laranjeiras and Carvoaria Velha. The project estimates production of 90,000 ounces of gold annually from a total of 5.4Mt of ore milled. Full production is scheduled to begin in 2012.

The development of a ramp and exposure of the Cachorro Bravo and Laranjeiras orebodies continues as does the access drives to the Carvoaria Velha orebody. Exposure of the Laranjeira orebody, to increase the extent of the mineable resources, has begun. Trial mining on the Cachorro Bravo orebody is in progress and operational mining parameters for the feasibility study are being confirmed. Two mine methods are being tested: sub-level stoping and cut-and-fill mining. The metallurgical process is being confirmed and indications are that pressure oxidation via autoclaves will be the best option given the characteristics of the ore.

In December 2008, AngloGold Ashanti acquired the São Bento mine, a Brazilian gold mining operation that was wholly-owned by Eldorado Gold Corporation and held in São Bento Mineração S.A., an indirect, wholly-owned subsidiary of Eldorado. The São Bento mine is located in the vicinity of the Córrego do Sítio mine, in the municipality of Santa Bárbara in the Iron Quadrangle region of Minas Gerais State. This acquisition will double the scale and enhance the feasibility of the Córrego do Sítio Project, thus enhancing the dominant position of AngloGold Ashanti as a gold producer in Brazil's Iron Quadrangle.

During 2008, development at the Lamego Project which explores the orebodies on the Lamego property close to the Cuiabá mine, totalled 4,063 metres. Lamego is expected to produce approximately 345,000 ounces of gold over nine years from 2.14Mt of milled ore. Production is scheduled to start in mid-2009. Given the same elliptical structure and the project's proximity to Cuiabá, ore mined here will be treated at the Cuiabá plant – this was factored into the recently completed expansion project at Cuiabá.

The Raposos Project explores the re-opening of the Raposos mine that was mothballed in 1998 when the gold price was less than \$300/oz. The existing underground and surface infrastructure at Raposos Mine was reviewed and new technical recommendations made on adapting the existing facilities to the new requirements. The project is based on the ore resources defined in the mine evaluation block between mine levels 34 and 44, totalling 2Mt at 7g/t Au with 530,000 ounces of gold content. The ore mined here will be processed using idle capacity at the Queiroz plant. A feasibility study is being prepared for submission to the board for approval during 2009. Production is expected to begin in 2011 with development activities progressing from 2009 and 2010.

Outlook

Production at Brasil Mineração in 2009 is likely to be at levels similar to those of 2008, around 320,000 ounces, with production from the Lamego project offsetting lower production at Cuiabá and Córrego do Sítio. In line with this, total cash costs are expected to range from \$280/oz to \$330/oz while planned capital expenditure of approximately \$94 million will be spent predominantly on mine development and projects.

Gold production (000oz)**Brasil Mineração***

*Attributable

Contribution to attributable group production in 2008 (%)**Capital expenditure****Total cash costs (\$/oz)****Brasil Mineração****SERRA GRANDE**

Serra Grande				2008	2007	2006
Pay limit	(oz/t)			0.16	0.14	0.09
	(g/t)			5.61	3.90	3.24
Recovered grade*	(oz/t)			0.221	0.210	0.219
	(g/t)			7.58	7.21	7.51
Gold production	(000oz)	–	100%	174	182	194
		–	50%	87	91	97
Total cash costs	(\$/oz)			294	263	198
Total production costs	(\$/oz)			394	351	265
Capital expenditure	(\$m)	–	100%	41	24	17
		–	50%	20	12	8
Total number of employees				1,108	918	817
Employees				725	654	609
Contractors				383	264	208

* underground operation

Description

Serra Grande is located in central Brazil, in the state of Goiás, five kilometres from the city of Crixás. AngloGold Ashanti and the Kinross Gold Corporation are joint partners in this operation. In terms of the shareholders' agreement, AngloGold Ashanti manages the operation and has the right to access a maximum of 50% of the earnings accrued and dividends paid by Serra Grande.

Serra Grande comprises two underground mines, Mina III and Mina Nova, an open pit at Mina III, and a new mine named Palmeiras where the main ramp development began in May 2008. Production here will begin in 2009, during development. Annual capacity of the processing circuit, which has grinding, leaching, filtration, precipitation and smelting facilities, is being expanded from about 818,000 tonnes annually to 1.150Mt annually. This expansion is expected to be completed by mid-2009.

Safety

There was an improvement in safety regarding lost-time injuries during the course of the year with an LTIFR of 1.72 per million hours worked compared with 2.47 in 2007. Unfortunately, there was one fatality in the first quarter of the year (2007: one), a result of an incident involving a truck, which gives a FIFR of 0.43 per million hours worked (2007: 0.49).

Operating review

Attributable production of 87,000 ounces in 2008 represents a decrease of 5% from the previous year. This was chiefly due to the lower tonnage of ore treated at the underground operation. Palmeiras Mine has a resource of 207,000 ounces and is expected to start operating in 2009 with average annual production of 16,000 ounces from 2010.

Total cash costs increased by 12% to \$294/oz, again largely due to reduced production, the appreciation of the Brazilian real and inflation, which affected the cost of power, labour, fuel and maintenance services.

Capital expenditure amounted to \$41 million, of which \$20 million was attributable. This was expended mostly on the plant expansion project, mine development, the main ramp at the Palmeiras mine and resource definition.

Growth prospects

An aggressive brownfields exploration campaign at Serra Grande aims to increase reserves and resources in and around Mina III and Mina Nova. In 2008, there was an increase in resources and reserves at Serra Grande with the discovery last year of the Pequizão orebody that is located between Mina Nova and Mina III. In 2008, exploration activities focused on evaluating the Pequizão strike and down-plunge extension as well as on investigating the continuity of Palmeiras, Orebody V and Mina Nova.

Outlook

In 2009, attributable gold production at Serra Grande is projected to be around 80,000 ounces, a decrease of about 8% given the lower grades to be mined, partially offset by higher tonnages as a result of the expansion. Total cash costs are expected to range from \$340/oz to \$360/oz and capital expenditure of \$56 million (of which \$28 million is to AngloGold Ashanti) is to be spent predominantly on mine development, the mine fleet, the completion of the plant expansion project, raising the walls of the tailings dam and other operational improvements.

Gold production (000oz)

Serra Grande

Contribution to attributable group production in 2008 (%)

Capital expenditure

Total cash costs (\$/oz)

Serra Grande

Next > [Ghana](#)Brazil