

# BRAZIL

**ANGLOGOLD ASHANTI MINERAÇÃO**  
**MINERAÇÃO SERRA GRANDE**



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**About this report:**

AngloGold Ashanti is committed to reporting to a broad range of stakeholders. In addition to its operational and financial performance the company also reports on its economic, social and environmental performance – the so-called triple bottom line.

This country profile forms part of a broader group Report to Society, which is available on the company's website, or from the contacts detailed below.

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**Message from Roberto Carvalho Silva**

In reviewing 2005, a very favourable account can be given of our South American operations.

The Cuiabá Mine Expansion Project was approved by the AngloGold Ashanti Board of Directors in January 2005. This project, which will deepen the mine from level 11 to 21, will increase yearly production from 830,000 to 1.3 million tonnes. It will improve the quality of our operations as it is planned to achieve state-of-the-art mining. The preliminary licence has been granted by the Brazilian environmental authorities and the main challenge we now face is to integrate the implementation of the project with routine mining operations.

Turning to safety and occupational health, there are some notable achievements to report. The metallurgical plant at Serra Grande, in Goiás, has now reached five years without a lost-time injury. Mina Nova, part of the Serra Grande complex, has been in operation now for seven years without any lost-time injury. No accidents occurred during the year at Lamego, an incline still in the development stage for sampling and research. Lamego is situated in Minas Gerais.

The Cuiabá-Queiroz complex, the hydro-electric system at Rio de Peixe and the Serra Grande group of mines, maintained their 5-Star NOSA status and ISO 14001 certification.

Production figures in Brazil were 4% over budget, and although the local currency appreciated by 17% against the US dollar, an aggressive cost management policy resulted in operating margins being maintained. This same challenge is expected in 2006.

Company achievements regarding social responsibility must also be mentioned. Implementation of the 'Good Neighbours' programme proved to be an effective initiative. In the communities of Sabará, Nova Lima, Raposos and Santa Bárbara, 12 meetings were held in 2005 for the purpose of discussing the impact of our operations on those communities. Furthermore, at these meetings, community leaders participated in productive and constructive debates on mechanisms to improve their effective action within the communities. The 'Holding Hands' volunteer programme is becoming more and more popular, and is growing strongly mainly in Nova Lima and Sabará.

In 2006 we will continue to pay close attention to environmental, social and economic matters, and to the welfare of our employees and their families.

We trust that in reading this report readers will gain a greater insight into the company's activities, which are built on the philosophy of growth and continuous improvement.

**Roberto Carvalho Silva**  
**President and CEO: South America**  
**Chief Operating Officer: International**

## Introduction

AngloGold Ashanti's operations in Brazil comprise the wholly owned AngloGold Ashanti Mineração (formerly Morro Velho) and a 50% interest in the Mineração Serra Grande mines. In 2005 these mines produced 346,000 attributable ounces of gold at a total cash cost of \$169 and \$158 per ounce respectively.



## AngloGold Ashanti Mineração

**Ownership:** Wholly owned by AngloGold Ashanti.

**Location:** AngloGold Ashanti Mineração has mining rights over 30,698 hectares in the state of Minas Gerais in south-eastern Brazil. The AngloGold Ashanti Mineração complex is located in the municipalities of Nova Lima, Sabará and Santa Bárbara, near the city of Belo Horizonte.

**Mining and processing:** With the closing of the Mina Velha underground mine in 2003 and the Engenho D'Água open pit in 2004, ore is now sourced only from the Cuiabá underground mine, (this ore is treated at the Queiroz plant) and from the Córrego do Sítio heap-leach mine. In January 2005 the board approved a major expansion at Cuiabá.

**Geology:** The area in which AngloGold Ashanti Mineração is located is known as the Iron Quadrangle and is host to historical and current gold mining operations as well as to a number of open-pit limestone and iron ore operations.

The geology of the Iron Quadrangle is composed of Proterozoic and Archaean volcano-sedimentary sequences and Pre-Cambrian granitic gneissic complexes. The host to the gold mineralisation is the meta-volcano-sedimentary Nova Lima Group (NLG) that occurs at the base of the Rio das Velhas Super Group (RDVS). The upper sequence of the RDVS is the meta-sedimentary Maquiné Group.

Cuiabá mine, located in the municipality of Sabará, has gold mineralisation associated with sulphides and quartz veins in Banded Iron Formation (BIF) and volcanic sequences. At this mine, structural control and fluids flow ascension are the most important factors for gold mineralisation with a common association between large-scale shear zones and their related structures. Where BIF is mineralised the ore appears strongly stratiform due to the selective sulphidation of the iron-rich layers. Steeply plunging shear zones tend to control the ore shoots which commonly plunge parallel to intersections between the shears and other structures.

The controlling mineralisation structures are the apparent intersection of thrust faults with tight isoclinal folds in a ductile environment. The host rocks at AngloGold Ashanti Mineração are BIF, Lapa Seca and mafic volcanics (principally basaltic). Mineralisation is due to the interaction of low salinity carbon dioxide, rich fluids with the high-iron BIF, basalts and carbonaceous graphitic schists. Sulphide mineralisation consists of pyrite and pyrrhotite with subordinate arsenopyrite and chalcopyrite; the latter tends to occur as a late-stage fracture fill and is not associated with gold mineralisation. Wallrock alteration is typically carbonate, potassic and silicic.

**Performance:** Gold production rose by 4% to 250,000 ounces although the yield decreased by 11% to 6.76g/t. Total cash costs increased by 27% to \$169 per ounce largely as a result of an appreciation in the Brazilian real, inflation and the high cost of the clean-up of old production facilities at Morro Velho. These were partially offset by higher production and acid by-product credit. Gross profit adjusted for the effect of unrealised new-hedge derivatives increased by 7% to \$48 million as prices received improved. Capital expenditure rose significantly – from \$32 million in 2004 to \$71 million in 2005 – as work began on the Cuiabá Expansion Project.

**Government remittances:** \$23 million (BRL51 million) was paid in corporate taxes in Brazil by AngloGold Ashanti in 2005.

**Growth prospects:** In January 2005 the board approved a project to increase annual production at the Cuiabá mine from 830,000 tonnes to 1.3 million tonnes, at an estimated capital cost of \$121 million. In July 2005 additional capital of \$5.5 million was approved for the upgrade of the power supply and main substation to 230kV. This will result in a substantial reduction in energy costs.

The Cuiabá Expansion Project will involve the deepening of the mine from 11 to 21 level and there will be an increase in production from 190,000 to an average of 250,000 ounces a year from the beginning of 2007. The project is currently in progress and on schedule. Construction and commissioning are scheduled for 2006, and production ramp-up for the beginning of 2007.

The Lamego conceptual study was completed in December 2004. A pre-feasibility study began in 2005 and will continue into 2006. The access ramp to the Carruagem orebody reached its target in December 2005 and development of this orebody and trial mining are scheduled for 2006. Drilling will continue in 2006.

At Córrego do Sítio, metallurgical testwork on samples of ore from the Cachorro Bravo orebody continued in 2005. Additional testwork is scheduled for 2006 with samples from other orebodies. Drilling will continue in 2006 in the Carvoaria Velha and Laranjeiras orebodies.

As part of the pre-feasibility study, the development of the drift connecting the Cachorro Bravo and Carvoaria Velha orebodies will continue in 2006. There will be trial mining of the Cachorro Bravo orebody to provide data for mine design and planning. The intention is to open the Laranjeiras orebody to increase ore resources.

**Outlook:** In 2006 production is expected to decrease to between 234,000 and 244,000 ounces, at an estimated total cash cost of between \$164 and \$170 per ounce. Capital expenditure will rise to between \$98 and \$103 million, with some \$70 million being spent on the Cuiabá Expansion Project, \$16 million to stay in business and \$15 million on other projects including Lamego (\$4 million) and Córrego do Sítio (\$8 million).

\* Throughout this report \$ refers to US\$.

### AngloGold Ashanti Mineração

|                           |            | 2005  | 2004  |
|---------------------------|------------|-------|-------|
| Gold production           | 000/oz     | 250   | 240   |
| Total cash costs          | BRL/oz     | 423   | 402   |
| Total cash costs          | \$/oz      | 169   | 133   |
| Total production costs    | BRL/oz     | 576   | 543   |
| Total production costs    | \$/oz      | 226   | 191   |
| Capital expenditure       | \$ million | 71    | 32    |
| Total number of employees |            | 2,597 | 2,243 |
| Employees                 |            | 1,363 | 1,222 |
| Contractors               |            | 1,234 | 1,021 |



## Mineração Serra Grande

**Ownership:** The Serra Grande Joint Venture (50% attributable to AngloGold Ashanti) is co-owned with Kinross Gold Corporation. In terms of the joint venture 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.

**Location:** Serra Grande controls, or has an interest in, approximately 21,068 hectares in and around the Crixás mining district in the north-western areas of the Goiás State in central Brazil. Serra Grande is located 5 kilometres from the city of Crixás.

**Mining and processing:** The operation comprises two underground mines, Mina III and Mina Nova. The processing circuit, with grinding, leaching, filtration, precipitation and smelting facilities, has a capacity of about 800,000 tonnes of ore a year.

**Geology:** The deposits occur in the Rio Vermelho and Ribeirão das Antas formations of the Archaean Pilar de Goiás Group which together account for a large proportion of the Crixás Greenstone Belt in central Brazil. The stratigraphy of the belt is dominated by basics and ultra-basics in the lower sequences with volcano-sedimentary units forming the upper successions.

The gold deposits are hosted in a sequence of schists, volcanics and carbonates occurring in a typical greenstone belt structural setting. The host rocks are of the Pilar de Goiás Group of the Upper Archaean. Gold mineralisation is associated with massive sulphides and vein quartz material associated with graphitic and sericitic schists and dolomites. The ore shoots plunge to the north-west with dips of between 6° and 35°. The stratigraphy is overturned and thrusts towards the east.

The greenstone belt lithologies are surrounded by Archaean tonalitic gneiss and granodiorite. The metamorphosed sediments are primarily composed of quartz, chlorite, sericite, graphitic and garnetiferous schists. The carbonates have been metamorphosed to ferroan dolomite marble with development of siderite and ankerite veining in the surrounding wallrock, usually associated with quartz veining. The basalts are relatively unaltered but do show pronounced stretching with elongation of pillow structures evident. The ultra-basics form the western edge of the belt and the basic volcanics and sediments form the core of the unit. The northern edge of the belt is in contact with a series of laminated quartzites and quartz sericite schists of the Lower Proterozoic Araxa Group and a narrow band of graphitic schists and intermediate to ultra-basic volcanics. This latter group is known as the Allocthon Mina Dos Ingleses (AMDI) and is host to a series of garimpos workings north of the city of Crixás where the talc schists are mined.

The general stratigraphy of this unit is similar to that seen in the main greenstone belt although on a smaller scale. However, the mineralisation in the northern area exhibits a higher level of base metal mineralisation with sphalerite and galena present.

**Performance:** Volumes mined and processed at Serra Grande remained steady while the yield increased by 2% to 7.93g/t given the higher grade of the quartz veins. As a result, attributable gold production rose by 2% to 96,000 ounces. Total cash costs rose by 18% to \$158 per ounce, largely as a result of the appreciation in the Brazilian real, partially offset by higher primary development capitalisation.

Consequently, attributable gross profit adjusted for the effect of unrealised non-hedge derivatives rose by 22% to \$22 million. This was aided mainly by the increase in the received gold price.

Capital expenditure of \$13 million was 86% higher than that for the previous year and was spent mainly on primary development and mine equipment acquisition.

**Growth:** Plant capacity is planned to increase from 750,00 to 800,000 tonnes a year to compensate for lower grades. An exploration programme is also planned to improve resources and reserves from deeper areas of the Mina III and lower levels of Mina Nova and Structure IV. Additionally, a study will be carried out to prove the viability of mining an open-pit at Mina III.

**Outlook:** Production at Serra Grande is expected to decline to between 186,000 and 194,000 ounces (between 93,000 and 97,000 ounces of attributable production) in 2006 at a total cash cost of between \$179 and \$187 per ounce. Capital expenditure of \$12 million (\$6 million attributable) is planned.

### Mineração Serra Grande

|                            |            | 2005 | 2004 |
|----------------------------|------------|------|------|
| Gold production – 100%     | 000oz      | 192  | 187  |
| Gold production – 50%      | 000oz      | 96   | 94   |
| Total cash costs           | BRL/oz     | 386  | 389  |
| Total cash costs           | \$/oz      | 158  | 134  |
| Total production costs     | BRL/oz     | 507  | 476  |
| Total production costs     | \$/oz      | 205  | 178  |
| Capital expenditure – 100% | \$ million | 13   | 7    |
| Capital expenditure – 50%  | \$ million | 6.5  | 4    |
| Total number of employees  |            | 775  | 710  |
| Employees                  |            | 566  | 514  |
| Contractors                |            | 209  | 196  |

## Mineral resources and ore reserves

Mineral Resources and Ore Reserves are reported in accordance with the minimum standard described by the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code, 2004 edition), and also conform to the standards set out in the South African Code for the Reporting of Mineral Resources and Mineral Reserves (the Samrec Code). Mineral resources include the ore reserve component.

AngloGold Ashanti had Mineral Resources of 175.8 million ounces and Ore Reserves of 63.3 million ounces as at 31 December 2005. Of these, the Brazilian operations accounted for Mineral Resources of 12.2 million ounces and Ore Reserves of 2.9 million ounces.



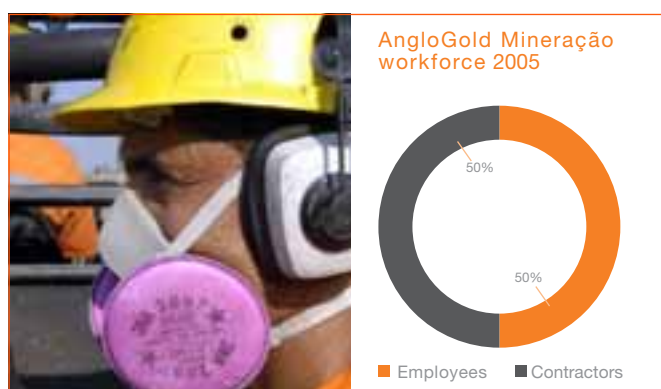
| Mine   | Category     | Tonnes million | Metric      | Imperial              |              | Contained gold million oz |             |
|--|--------------|----------------|-------------|-----------------------|--------------|---------------------------|-------------|
|  |              |                | Grade g/t   | Contained gold tonnes | Tons million |                           | Grade oz/t  |
| <b>Mineral resources – attributable</b> (as at 31 December 2005) |              |                |             |                       |              |                           |             |
| AngloGold Ashanti Mineração                                      | Measured     | 7.3            | 6.69        | 49.1                  | 8.1          | 0.195                     | 1.6         |
|  | Indicated    | 14.8           | 7.74        | 114.7                 | 16.3         | 0.226                     | 3.7         |
|  | Inferred     | 26.9           | 7.09        | 190.8                 | 29.7         | 0.207                     | 6.1         |
|  | <b>Total</b> | <b>49.0</b>    | <b>7.23</b> | <b>354.6</b>          | <b>54.1</b>  | <b>0.211</b>              | <b>11.4</b> |
| Mineração Serra Grande (50%)                                     | Measured     | 0.9            | 5.82        | 5.0                   | 0.9          | 0.170                     | 0.2         |
|  | Indicated    | 1.4            | 7.37        | 10.3                  | 1.5          | 0.215                     | 0.3         |
|  | Inferred     | 1.6            | 6.11        | 9.8                   | 1.8          | 0.178                     | 0.3         |
|  | <b>Total</b> | <b>3.9</b>     | <b>6.50</b> | <b>25.2</b>           | <b>4.3</b>   | <b>0.190</b>              | <b>0.8</b>  |
| <b>Ore reserves – attributable</b> (as at 31 December 2005)      |              |                |             |                       |              |                           |             |
| AngloGold Ashanti Mineração                                      | Proved       | 2.1            | 6.4         | 13.2                  | 2.3          | 0.187                     | 0.4         |
|  | Probable     | 8.6            | 7.5         | 64.4                  | 9.5          | 0.219                     | 2.1         |
|  | <b>Total</b> | <b>10.7</b>    | <b>7.28</b> | <b>77.6</b>           | <b>11.8</b>  | <b>0.212</b>              | <b>2.5</b>  |
| Mineração Serra Grande (50%)                                     | Proved       | 0.6            | 4.72        | 3.0                   | 0.7          | 0.138                     | 0.1         |
|  | Probable     | 1.2            | 7.14        | 8.8                   | 1.4          | 0.208                     | 0.3         |
|  | <b>Total</b> | <b>1.9</b>     | <b>6.32</b> | <b>11.8</b>           | <b>2.1</b>   | <b>0.184</b>              | <b>0.4</b>  |



## Labour practices

There has been a 14% increase in employees in Brazil in 2005, mainly as a result of the Cuiabá Expansion Project. Of the total of 3,489 people employed, 2,046 were permanent staff and 1,443 were contractors and joint venture employees.

Certain International Labour Organization (ILO) conventions (such as 128 dealing with child labour, and 29 dealing with forced and compulsory labour) are also governed by law in Brazil. As with all AngloGold Ashanti operations worldwide, a range of agreements and policies are in place at the mines in the country to ensure that human rights are protected and include recognition and collective bargaining agreements; disciplinary, grievance and appeal procedures; and non-discrimination agreements.



All employees in Brazil are represented by unions or collective bargaining agreements. Negotiations on salaries and fringe benefits take place on an annual basis and were held in August in 2005. Health care is provided by an external service provider to employees and their families.

### Increased employment of women

Employment equity forms a part of AngloGold Ashanti's broader human resources strategy which aims to promote an organisational culture that recognises the diversity of the societies within which the company operates, and which affords all employees the development opportunities that will enable them to achieve optimal levels of career development during their employment with the company. In Brazil, many jobs formerly occupied only by men have been filled by women.



During 2005, three women were recruited to operate heavy mining equipment; in what is a first for the country, two of them are working underground in Cuiabá mine.



## Community

A fundamental philosophy of the company is that its operations and activities should contribute towards long-term sustainable development and that communities should be better off for AngloGold Ashanti having been there. Total corporate social investment expenditure in 2005 was \$8,752,407, of this amount \$754,000 was spent in Brazil.

The main areas of involvement are education, community development, health care, socio-economic development, sports and the environment.

### Engaging with the community

A number of programmes are in place for interaction with community representatives, local development agencies, other companies, municipal authorities, district associations and others in Brazil. Apart from a call centre with a toll-free number for the registration of any complaints and requests, communities are kept informed about operational developments, particularly life-of-mine plans, through frequent meetings and bulletins.

A so-called 'good neighbourhood' programme involves regular meetings with community members to identify and deal with potential conflicts. The company participates in municipal and state environmental councils and regularly hosts visits to company properties. Any new mining projects are presented to community leaders and opinion leaders for comment and to discuss compensatory measures.

Brochures about environmental performance, particularly water and air monitoring, are distributed to community members as required.

### 'Holding Hands' Programme

Employees are encouraged to participate in the programme of volunteer work known as 'Holding Hands'. Currently several activities are in place including computer and chess classes for poor children; English and literature classes for adults; and other campaigns for the needy. Close on 100 hours in volunteer time were donated during the year.

### Use of recycled material in sustainable development initiatives

Handicraft and broom manufacturing co-operatives implemented in the small town of Raposos, in the state of Minas Gerais, have opened up new economic possibilities for a region with a long history of total economic dependence on gold mining. The initiative is the result of a partnership between a group of retired people and entrepreneurs in the community, the local authorities of Raposos and AngloGold Ashanti, and it uses resources made available through fiscal incentives.

The co-operatives produce a number of handicraft items such as embroidery, woodwork and ceramics. Local craftsmen also supply material for the handles and bases of broomsticks while plastic soft drink bottles are recycled to make the bristles. The brooms, 450 of which were produced in 2005, are sold in neighbouring towns close to company mining operations.

"We expected the broom factory to be principally staffed by former company employees who are now retired," says Marivan

Santos, an AngloGold Ashanti social worker, “but a number of wives of these former employees have also joined, making a very special contribution to the project.”

There are 40 artisans in all. Their work shows off local culture and generates products for sale thus developing the local economy. “We want to harness the synergies between the skills and talents of the community and the desire to co-operate in the formation of profitable enterprise, to the mutual benefit of the citizen and the community in a sustainable way,” explains development manager Marcelo Lopes.

AngloGold Ashanti has made one of its unused company buildings available to the project. The building is currently being renovated.

## Resettlement

During the last three years families living around tailings dams or those within risk areas in three communities around AngloGold Ashanti Mineração, have been resettled.

Negotiations with residents adhere to the following procedure:

- indemnity following three separate real estate evaluations;
- financing of plots of land at reasonable prices and help in purchasing building materials so that the residents can build new houses; and
- donation of plots at locations agreed with the residents, with the company undertaking the building of the house.

Up to now, only one of the 63 families has not been settled.

## Awards

- Serra Grande was voted as Best Mining Company by the daily business newspaper, *Valour 1000*.
- AngloGold Ashanti Mineração won first place in the Innovation and second place in the General Classification categories in a national survey run by the magazine *ISTO É*.
- AngloGold Ashanti Mineração placed in the Entrepreneur Leaders’ Forum awarded by the financial newspaper *Gazeta Mercantil*.
- The state governor of Minas Gerais presented the prestigious Baron Eschwege Medal of Merit to Roberto Carvalho Silva, AngloGold Ashanti Chief Operating Officer: International.



## Occupational safety and health

AngloGold Ashanti Mineração regrettably reported one fatality during 2005, reflecting a fatal injury frequency rate (FIFR) of 0.18 per million man-hours for the year, compared with a zero rate for 2004. The mine’s lost-time injury frequency rate (LTIFR) per million man-hours increased from 1.56 in 2004 to 2.95 in 2005. Serra Grande’s LTIFR also increased from 1.21 in 2004 to 2.39 in 2005.

With regard to occupational health diseases at both AngloGold Ashanti Mineração and Serra Grande, no new cases of silicosis have been reported, suggesting that the disease has largely been eradicated. However the company provides ongoing medical and other support services to ex-employees who contracted silicosis while in service.

Medical surveillance programmes are in place at AngloGold Ashanti Mineração and Serra Grande where health examinations are conducted on admission to employment, on transfers, on returning to work following more than 30 days’ sick leave, and on termination of employment. All employees are required to undergo an annual health examination. First-aid facilities are available at AngloGold Ashanti Mineração and Serra Grande, while more serious cases are transferred to local hospitals. AngloGold Ashanti Mineração employs a team comprising three doctors, ten nurses, one radiologist and an audio therapist, who work on shifts at all units (Cuiabá and Córrego do Sítio mines, Queiroz plant, and the Lamego project). Serra Grande employs a full-time doctor and nurse, while X-rays are taken at the local hospital.

## Managing safety and health

Each operational unit has its own health and safety departments. The health and safety departments report to the operating manager who, in turn, reports to the general operating manager for the region. Safety and health information from all the operations is centralised at the South American regional office.

The annual hazard identification and risk assessments (HIRAs), which identify a residual risk profile and proposed control measures, have resulted in a significant reduction in the number of lost-time injuries in recent years. These risk profiles are also used during periodic inspections and for induction training. Project-specific risk assessments are also conducted, as in the case of the Cuiabá Expansion Project (see accompanying story).

Emergency preparedness is an integral aspect of safety and health management and a number of emergency action plans have been developed at both operations, which are located close to a number of communities. In order to test preparedness, simulated emergency situations are conducted regularly together with community members and relevant stakeholders such as civil defence, hospitals and the military police.

Cultivating a mindset that prioritises health and safety is as important for contractors as it is for employees. As there is a high turnover of contractors at the Brazilian operations, their training and management is considered vital.

## Ventilation upgrade at Cuiabá mine

The Cuiabá Expansion Project will involve the extraction of deeper blocks of ore about 1,562 metres below surface, thus necessitating greater ventilation capacity. A major upgrade to the ventilation system is currently under way to cater for the projected increase in production from deeper levels (and hence the increased load on the air supply) and a consequent increase in diesel-powered mining equipment. The upgrade follows a study by independent mine ventilation consultants, in conjunction with AngloGold Ashanti Technical Services and the technical team at Cuiabá, to determine future demand in air quality

and quantity for ventilation and cooling purposes.

Technology in the form of a deviation control instrument – a rotary vertical drilling system (RVDS) – is being used to mitigate the risk of large deviations in the drilling of two new ventilation shafts for downcast and upcast air. The RVDS allows for corrections to be made while drilling takes place, ensuring that the drilling trajectory follows a given path. A comprehensive geotechnical risk assessment was carried out to assess the risks associated with the raise-boring of the two ventilation holes, and recommendations were implemented to minimise these risks, in terms of, for example, the diameter of the ventilation holes and the stability of the rock mass.

### Awards

#### AngloGold Ashanti Mineração

- ISO 14001 certification in May 2005 by NQA (National Quality Assurance)
- 5-Star NOSA (National Occupational Safety Association) Integrated System – February 2005 by NCA-NOSA Certification
- ISO 9001 to the laboratory in July 2004 by BVQI/UKAS Certification

#### Serra Grande

- Retained ISO 14001 certification
- Retained NOSA 5-Star status



## Environment

AngloGold Ashanti's environmental philosophy and practice are guided by the company's business principles and environmental policy. Operations are subject to the environmental laws, rules and regulations of the countries in which they are situated. Where no such laws exist or where these laws are perceived to be inadequate, the operations are guided by the company's business principles, environmental policy and the tenets of good practice.

The company's environmental policy and strategy is overseen by the board Committee on Safety, Health and Sustainable Development and driven at the corporate level. Within each region, the environmental manager provides advice to the relevant management teams. At most operations, on-site environmental professionals are responsible for implementing the mine's environmental programme and advising the general manager. Regional environmental offices and the operations themselves may engage specialists who consult to the operations.

An Environmental Steering Committee has been established at a corporate level and is made up of the regional environmental managers. The insights of this group are used to identify and debate critical environmental issues facing the company, to develop strategic recommendations and to formulate plans for practical implementation.

### AngloGold Ashanti Brazil – environmental statistics 2005

|                               |                |           |
|-------------------------------|----------------|-----------|
| Total environmental liability | \$ million     | 12.5      |
| Cyanide use                   | kg             | 1,037,000 |
| Water usage                   | m <sup>3</sup> | 3,827,904 |

\* Note that the usages given above are for the operations as a whole. These are not the attributable usages.

### ISO 14001 certification

With regard to ISO 14001, which the company has adopted as the standard for its environmental management system, Serra Grande and AngloGold Ashanti Mineração achieved certification from National Quality Assurance (United States) in March 2004.

### Environmental incident reporting

AngloGold Ashanti's reporting protocol enables the company to identify and manage the risks and impacts of environmental incidents, as well as their associated costs. In line with this protocol, a major incident report must be made within 24 hours to the

### About ISO 14001

The International Organization for Standardization (ISO) is a voluntary not-for-profit network of national standards institutes from 146 countries with a Central Secretariat in Geneva, Switzerland, that co-ordinates the system. ISO 14001 focuses specifically on environmental management systems, and was first published in 1996. It applies to those environmental

aspects over which the organisation has control and over which it can reasonably be expected to have an influence.

ISO 14001 certification is the only ISO 14000-series standard against which it is currently possible to be certified by an external certification authority. Based on regular auditing by an appropriately accredited external body, an organisation may state that it is ISO 14001 certified.

## Biodiversity

During 2006, AngloGold Ashanti will identify specific objectives, programmes and targets for the management of biodiversity and the compilation of a Biodiversity Management Action Plan.

In Brazil, most of AngloGold Ashanti's operations are situated in biodiversity-rich areas such as the Atlantic Forest and Cerrado (Cuiabá mine, Lamego and Corrego do Sitio). The decline of the Atlantic rainforests, mainly as a result of urbanisation and agricultural development, remain a high conservation concern within Brazil and internationally. For every hectare of Atlantic Forest land cleared for mining operations, the company rehabilitates twice

the area using indigenous species. The company has been actively involved in the formal establishment and support of conservation reserves and now has approximately 1,000 hectares of land within the Natural Property Private Resource category. The Nova Lima environmental office is fully engaged with state environmental authorities and the legal environmental process. The department works closely with local universities which have been contracted to contribute to management plans and provide inventories of biodiversity in these areas.



corporate office. For purposes of reporting, a major environmental incident is defined as 'an event, action or non-conformance with a procedure that results, or has the potential to result, in an adverse impact on the surrounding environment; or any event, action or occurrence which is contrary to the AngloGold Ashanti business principles'.

AngloGold Ashanti Mineração has found that the best way to avoid major incidents is to use the monitoring system in place at the Queiroz plant at Nova Lima. Through what is virtually a real-time monitoring system, any major change in substances such as arsenic, cyanide, copper and pH in the plant's effluent can be detected and action taken before it reaches public water. A similar system is deployed at the Sulphuric Acid Unit (also at Queiroz plant) where a continuous sulphur dioxide detector monitors sulphur dioxide levels online. Results that point to critical levels (close to permit level) are readily available for management action.

### The use and management of cyanide

The use of cyanide in the recovery of gold is a core concern for the gold mining industry and is critical to its viability. AngloGold Ashanti has been actively involved in the development of the International Cyanide Management Code and was one of the first signatories announced in November 2005. The code is a voluntary industry initiative developed under the auspices of the United Nations Environment Programme (UNEP) and the International Council on Mining and Metals.

The code has two major parts: a commitment by signatories to

manage cyanide in a responsible manner; and the practices that must be followed to ensure this. AngloGold Ashanti is well on its way to compliance with the code and internal audits have been concluded at all operations in anticipation of external audits.

### Reclamational and environmental obligations

In all the jurisdictions in which AngloGold Ashanti operates, the company is required to provide financial assurance, in a form prescribed by law, to cover some or all of the costs of the anticipated closure and rehabilitation for the operation. Rehabilitation refers to the process of reclaiming or restoring mined land to that which existed prior to mining or to a predetermined, agreed use post-mining. The company devises closure plans prior to the start of operation that are updated regularly to take into account life-of-mine projections.

The Mina Velha decommissioning process in Brazil came to an end in December 2005 with the completion of the dismantling of old infrastructure and soil rehabilitation.

There was an agreement involving AngloGold Ashanti, the State Environmental Agency and the local district attorney to rehabilitate the old tailings deposit areas – Morro do Galo and Galo. These have been reclaimed with the Galo tailings deposit now integrated with its surrounding area. The next site scheduled for rehabilitation is the Resende old tailings deposit area.

Two sites in Brazil have been rehabilitated – Morro do Galo and Galo – as part of the Old Tailings Deposits Agreement. The next site scheduled to be rehabilitated is Resende.

## Awards

A 5-Star NOSA (National Occupational Safety Association) rating has been confirmed for the Queiroz plant, Cuiabá mine and the Rio de Peixe hydro-electric system.

