

ANGLOGOLD ASHANTI LTD  
Form 6-K  
March 22, 2006

**SECURITIES AND EXCHANGE COMMISSION**  
**Washington, D.C. 20549**  
**FORM 6-K**  
**REPORT OF FOREIGN PRIVATE ISSUER**  
**PURSUANT TO RULE 13a-16 or 15d-16 OF**  
**THE SECURITIES EXCHANGE ACT OF 1934**  
**Report on Form 6-K dated**  
**MARCH 22, 2006**  
AngloGold Ashanti Limited

—  
**(Name of Registrant)**

11 Diagonal Street  
Johannesburg, 2001  
(P O Box 62117)  
Marshalltown, 2107  
South Africa

**(Address of Principal Executive Offices)**

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F:

**Form 20-F:**

Form 40-F:

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1):

Yes:

No:

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7):

Yes:

No:

Indicate by check mark whether the registrant by furnishing the information contained in this form is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934.

Yes:

No:

Enclosures: ANGLOGOLD ASHANTI 2005 REPORT TO SOCIETY

**Commission file number: 1-14846**

05  
Report  
to Society

The group's 2005 Report to Society presents a review of the company's economic, social and environmental impact and obligations for the period 1 January 2005 to 31 December 2005. It has been prepared in conjunction with the Annual Report on the company's operating and financial performance for the same period. Through the combination of the Report to Society and Annual Report, AngloGold Ashanti seeks to report on these issues to a wide range of stakeholders, who include shareholders, employees, employee representatives and the communities in which it operates, as well as regional and national governments and other interested parties.

AngloGold Ashanti believes that the report presents a fair and balanced reflection of the group's operations and performance, its objectives, values and business principles and the major issues and challenges that it faces. There have not been significant changes in the size, structure, ownership or product since the previous report, with the exception of the closure of the Ergo operation in South Africa. In addition Anglo American plc (AngloGold Ashanti's major shareholder) has advised the company and its shareholders that it intends to decrease its shareholding in the company.

Efforts have been made to report on a wide range of issues from around the world. Because of the scale of the group's operations, reporting has been done on the basis that the group's principles and policies are illustrated rather than detailed in every case, through practical examples or case studies. Because the majority of the group's operations (43% of production) and employees (64%) are based in South Africa, there is significantly more reporting on this region. Attempts have been made, however, to cover issues pertinent to individual operations through specific country and operational reports which may be found on the company's website. The report covers all operations managed by the company, including joint ventures. To address the needs of the stakeholders who will read this report, the report has been compiled in such a way as to make it accessible to a broad range of readers.

•  
The primary reporting format is through a dedicated webpage on the company's own website at [www.anglogoldashanti.com](http://www.anglogoldashanti.com). Copies of the entire report or portions of this report may be accessed, downloaded or printed from this website. This report is also available on CD-ROM or in a printed version from the persons listed on the back pages of the Report to Society and the annual report, or the website.

•  
The report may be accessed from three vantage points:

- First: the report is structured in line with the various disciplines – economic performance, ethics and governance, safety and health, environment, labour, regional health threats, and community. These are covered in terms of the company's own values and business principles.
- Second: readers may access specific information in the main report or in country reports which present country specific information on the operations and case studies; and
- Third: the Global Reporting Initiative (GRI) format has also been followed in compiling this report. A GRI matrix (to be found on page 14 and on the website) indicates the page numbers on which relevant discussions may be found.

While no generally accepted reporting guidelines exist for this type of report, the group believes that it has sought to follow good practice, GRI guidelines and various other instruments (such as the Sarbanes-Oxley Act of 2002, and the guidelines of the King Report on Corporate Governance (2002), among others). Auditors PricewaterhouseCoopers (PWC) have once again provided assurance on certain sections of the report. The sections that have been assured have been selected in conjunction with PWC and are based on those areas that are most meaningful to the company and its stakeholders. The assurance letter from PWC may be found on page 10 of this report.

For further information on this report and on the company's sustainable practice, contact Alan Fine on (Tel) +21 11 637 6383 or [afine@anglogoldashanti.com](mailto:afine@anglogoldashanti.com).

## SCOPE OF THE REPORT

### KEY FEATURES

1

AngloGold Ashanti's business is gold. Its activities range from exploring for and mining the

precious metal to processing and beneficiation. In 2005, the company operated 21 mines in 10 countries. Some of the key features pertaining to sustainable development are indicated below.

- Gold produced rose by 6% to 6.2 million ounces.

- The company employed 66,993 people, made up of 47,848 (75%) permanent employees and 16,145 (25%) contractors and JV employees. (2004: 65,400).

- Payment to employees, including salaries, wages and other benefits amounted to \$877 million, 7% up on the previous year.

- Capital expenditure for the year was \$722 million, an increase of 23% on the previous year.

- Dividends of \$169 million was paid to the shareholders during 2005.

- Total corporate social investment (CSI) expenditure amounted to some \$8,752,407. CSI is defined as the voluntary investment of funds into the broader community where the target beneficiaries are external to the company.

- AngloGold Ashanti achieved the conversion of its mineral rights into 'new order' rights in line with the South African Minerals and Petroleum Resources Development Act (MPRDA) of 2002.

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Objectives for 2006

Glossary of terms and acronyms

**G1**

Glossary of terms and acronyms

3



AngloGold Ashanti Limited, one of the world's leading gold mining companies, has 21 operations in 10 countries on four continents. Its portfolio includes long-life, relatively low-cost assets and differing orebody types in key gold-producing regions around the globe. Activities range from deep-level hard-rock mining to open-pit mining, and include exploration, both brownfields and greenfields as well as research and development.

AngloGold Ashanti was established in April 2005 following the business combination of AngloGold Limited, a South African gold mining company, and Ashanti Goldfields Company Limited, a Ghanaian gold mining company. The business combination of two of Africa's leading gold mining companies was in line with the group's strategy of achieving geographic and orebody diversity, and resulted in an increased portfolio of shallow, low-cost surface mines. Countries in which AngloGold Ashanti has operations are: South Africa, Argentina, Australia, Brazil, Ghana, Guinea, Mali, Namibia, Tanzania and the USA. The group is guided by the corporate office located in Johannesburg, South Africa, with the management of the group undertaken under the auspices of two divisions: the African operations and the international operations (that is non-African operations).

In 2005, total gold production increased by 6% to 6.2 million ounces, of which 2.7 million ounces (44%) came from deep-level hard-rock operations in South Africa and the balance of 3.5 million ounces (56%) from the shallower and surface operations.

The group conducts extensive exploration activities in areas as diverse as Alaska in North America and Colombia in South America, the Democratic Republic of Congo (DRC) in Africa and Mongolia, Russia and China in Asia.

#### Shareholder information

With its headquarters in Johannesburg, South Africa, AngloGold Ashanti has its primary listing in Johannesburg on the JSE (ANG). It is also listed on the following securities exchanges: New York (AU), London (AGG), Australia (AGG) and Ghana (AGA) as well as Euronext Paris (VA) and Euronext Brussels (ANG).

#### CORPORATE PROFILE

CORPORATE PROFILE

5

## Finding the orebody

AngloGold Ashanti's global exploration programme generates targets and undertakes exploration, on its own or in conjunction with joint venture partners.

### THE BUSINESS OF GOLD

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**1**

## Finding the orebody

### **Creating access to the orebody**

There are two types of mining which take place to access the orebody:

- underground – a vertical or decline shaft (designed to transport people and/or materials) is first sunk deep into the ground, after which horizontal development takes place at various levels of the main shaft or decline. This allows for further on-reef development of specific mining areas where the orebody has been identified; and

- open-pit – where the top layers of topsoil or rock are removed in a process called 'stripping' to uncover the reef.

**2**

## Removing the ore by mining or breaking the orebody

- In underground mining, holes are drilled into the orebody, filled with explosives and then blasted. The blasted 'stopes' or 'faces' are then cleaned and the ore released is now ready to be transported out of the mine.

- In open-pit mining, drilling and blasting may also be necessary to release the gold-bearing rock; excavators then load the material onto the ore transport system.

**3**

## THE BUSINESS OF GOLD

7

Transporting the broken material from the mining face to the plants for treatment

- 

Underground ore is transported by means of vertical and/or horizontal transport systems. Once on surface, conveyor belts usually transport the ore to the treatment plants.

- 

Open-pit mines transport ore to the treatment plants in vehicles capable of hauling huge, heavy loads.

4

### Processing

- 

Ore is transported via conveyor belts to the treatment plants where it is broken and crushed in milling circuits.

- 

Further processing takes place via the refractory treatment where the ore is leached in an alkaline cyanide leach solution followed generally by adsorption of the gold cyanide complex onto activated carbon-in-pulp (CIP).

- 

An alternative is the heap-leach process where the run-of-mine ore is crushed and placed on the leach pad. Low strength alkaline cyanide solution is used to dissolve the gold and transferred to the carbon-in-solution columns where the gold cyanide complex is adsorbed onto activated carbon.

- 

Gold adsorbed onto activated carbon is recovered by a process of re-dissolving the gold from the activated carbon, followed by precipitation in electro-winning cells and subsequent smelting of that precipitate into bars that are shipped to the gold refineries.

5

### Refining

The gold dust is then smelted into gold bars, which are transported to a refinery for further refining, to as close to pure gold as possible – called good delivery status. This gives the assurance that the bar contains the quantity and purity of gold as stamped on the bar.

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MESSAGE FROM THE CEO

Dear stakeholders

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AngloGold Ashanti's Report to Society 2005 is the company's fourth such report, and the third which seeks to report, methodically, against both the company's own values and business principles, and against the guidelines of the Global Reporting Initiative, which remains the most broadly used standard of corporate triple bottom line reporting. Again, key sections have been assured by PricewaterhouseCoopers.

As always, we hope you find this document to be a useful and objectively presented assessment of AngloGold Ashanti's operations. We welcome your feedback. For the second time, we are also publishing operation- or country-specific reports, to ensure a more focused examination is available to stakeholders local to specific operations.

As will become apparent as you explore this document, it has been an eventful year for this company. I would like to draw your attention to three areas.

First, and perhaps most gratifyingly, 2005 saw the biggest qualitative improvement in dealing with one of the company's two biggest public health challenges, HIV/AIDS, since the introduction of anti-retroviral therapy in 2002. Internationally, the biggest obstacle has been developing individual awareness of the disease due to the factors of stigma and denial, even as the quality of available treatment has improved. In South Africa, where some 66% of the company's workforce is employed and where the prevalence of HIV is greatest, more than 10,000 employees underwent voluntary counselling and testing during 2005, a 150% increase on the previous year. This was due to intensive awareness work carried out by the management of our HIV/AIDS programme, working in close co-operation with mine management, and with the assistance of a significantly increased number of peer counsellors. It is critical that these efforts continue and intensify.

Second, the company's safety performance, as measured by fatality rates, showed a marked improvement for the second consecutive year, most notably at our deep level South African mines, suggesting that the technical and human advancements are bearing fruit. The aspiration to step-change improvement we began talking about some years ago has, arguably, been achieved. However, whatever the improvement in fatality rates, 25 people died in accidents in our service. We cannot rest until death and serious injury in our operations has been eliminated. And accidents that occurred in the early months of 2006, too, warn us that we cannot afford to become complacent.

The third issue to which I would like to draw your attention that has occupied our time and minds is the matter of operating in what are called areas of weak governance. You will be aware of public controversy that occurred regarding our activities in the Democratic Republic of the Congo during the course of the year. That matter, and AngloGold Ashanti's response to it, is dealt with in a comprehensive case study to be found on page EG10 of this report, so I won't repeat it at length here.

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MESSAGE FROM THE CEO

For companies like AngloGold Ashanti, which seek to uphold socially responsible values, under what conditions in such societies is the continued pursuit of business activities justified, and when is it not? One basis of our existence is a commitment that our host countries and communities should be better off for our having been there.

We have a clear policy that, if we are unable to conduct our activities with integrity, we would withdraw. That inevitably involves a degree of subjective risk calculation. That means that, with even the best of intentions, businesses of integrity can err, leaving them open to reputational damage.

One of the key issues facing corporations seeking to act in the best interests of all of their shareholders in a world rightly concerned simultaneously with human rights and the development imperative is finding a balance between wealth creation at any cost and preservation and conservation at any price. This is a debate which must be conducted in the public domain, and which, amongst its many objectives, should seek to establish the public norms on which to base business and corporate social responsibility decisions. Some of the important questions which must be addressed are: who decides at what point it becomes legitimate for business to operate in a relatively unstable society; and what determines whether a business activity in such an environment enhances prospects for economic growth, stability and democracy, or strengthens the hand of those opposed to democratic reform?

We at AngloGold Ashanti will continue to examine these questions as we must, both internally and through a variety of representative industry bodies. We will also continue to engage community and civil society institutions and non-governmental organisations and in public debate and would happily do so with anyone else wishing to engage us.

**Bobby Godsell**

6 March 2006

REPORT OF THE INDEPENDENT NON-FINANCIAL ASSURERS

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To the Board of Directors and Management of AngloGold Ashanti Limited

Introduction

We have been asked to perform reasonable assurance procedures for selected performance indicators published in AngloGold Ashanti's Report to Society for the year ended 31 December 2005. The preparation and content of the Report to Society and the determination of selected performance indicators for our review are the responsibility of the management of AngloGold Ashanti Limited. Our responsibility is to indicate whether the selected performance indicators, market with the symbol , fairly reflect AngloGold Ashanti's performance in all material respects.

Methodology

This engagement was conducted in accordance with the International Standards for Assurance Engagements 3000, 'Assurance Engagements other than audits or reviews of historical financial information' (ISAE 3000). We planned and carried out our work in order to obtain reasonable assurance on the reliability of the selected performance indicators. We applied suitable criteria as relevant to the selected performance indicators reported, where the criteria are embodied in AngloGold Ashanti's internal corporate policies, procedures and controls and are available from AngloGold Ashanti on request.

Where quantitative selected performance indicators were derived from AngloGold Ashanti's 2005 consolidated financial statements, audited by Ernst & Young, we did not audit the figures.

Considerations and limitations

Non-financial data are subject to more inherent limitations than financial data, given both their nature and the methods used for determining, calculating or estimating such data. We have not undertaken work to confirm that all relevant issues are included, nor have we carried out any work on data reported for prior reporting periods, nor in respect of future projections and targets.

Conclusion

Based on our work performed, the selected performance indicators marked with the symbol in the Report to Society, fairly reflect AngloGold Ashanti's performance in all material respects.

**PricewaterhouseCoopers Inc.**

Johannesburg

27 February 2006

FEEDBACK FORM

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**Dear stakeholder**

We would be very grateful for any feedback that you might have on AngloGold Ashanti's Report to Society 2005. This feedback form may

also be accessed on the company's website at [www.anglogoldashanti.com](http://www.anglogoldashanti.com). Please return to

[afine@anglogoldashanti.com](mailto:afine@anglogoldashanti.com) or fax it to

**+27 11 637 6399.**

**Your details (optional)**

Name:

Organisation:

Tel:

Fax:

E-mail address:

Postal address:

**1. What is your interest in/association with AngloGold Ashanti?**

Employee

Analyst

Shareholder/investor

Journalist

Government

Non-governmental or community-based organisation

Supplier or business partner

Student

Other – please specify:

**2. Would you like to be added to our database as an organisational stakeholder?**

Yes

No

**3. Indicate your main areas of interest:**

Financial performance/annual report

Safety and health

Environment

Economic performance

Regional health threats

Labour

Ethics and governance

Community

Other – please specify:

**4. How did you access the report?**

**on the internet**

Yes

No

**in the printed version**

Yes

No

**on CD**

Yes

No

**5. How did you find the report?**

Too detailed

Not enough detail



Other comments:

**6. Did you use the Global Reporting Initiative (GRI) index?**

Yes

No

**7. Do you think that it is important that the report is independently assured?**

Yes

No

**8. Do you have any other comments on the report?**

Thank you for your feedback.

Feedback form: AngloGold Ashanti Report to Society 2005

## STAKEHOLDER ENGAGEMENT

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AngloGold Ashanti recognises that, as the company conducts its business, so it has an impact, or has the potential to have an impact on a wide range of stakeholders.

The company has broadly identified the following principal stakeholders:

- employees
- unions
- employees' families and dependents
- communities surrounding operations or from which the company draws its labour
- shareholders
- business partners
- peer companies
- suppliers
- local, regional and national governments
- customers
- non-governmental and community-based organisations
- academic institutions
- regulatory authorities
- professional organisations.

A detailed list including many of the stakeholders with whom the various operations engage may be found on the website under the various sections. Included in this is the frequency and type of interaction engaged in.

This is the third year that the company has published a Report to Society. The Report to Society 2004 was widely disseminated to stakeholders in its printed form, as well as through the website. In addition, 2004 was the first year that the company published country operational reports. Following the publication of last year's report, feedback was sought from stakeholders in a variety of ways:

- a feedback form was provided in the printed report and on the website. Very little feedback was received in this way.
- an independent commentator was asked to evaluate the report

and feedback was obtained.

- subject champions (those responsible for the various components of the report) at a corporate level were asked to disseminate the report as widely as possible to their stakeholders. Useful, but little feedback was received in this way.

- feedback was provided by independent assurers PricewaterhouseCoopers in a management report to the company.

- each operation and region was asked to provide specific feedback on the report, following interaction with local stakeholders. This was returned formally (through a questionnaire) and informally. The feedback received from this process revealed the following:

- users of the report were often interested in a particular section of the report only, and not in the report in its entirety. Specific comments were given and have been addressed.

- greater alignment was needed between internal and external reporting processes. To address this for example, the South Africa region's quarterly sustainable development report and the group sustainable development report now report against the same key indicators.

- some users, particularly in South America for example, could not make use of the report owing to language barriers.

Although the country reports were translated into Spanish in Argentina and Portuguese in Brazil, there was insufficient level of detail in them. To remedy this the country reports will be more comprehensive in 2005.

- The Minerals Council of Australia indicated that the GRI indicators for the Australia region needed to be separated out from the group statistics to ensure that the report is compliant in Australia. Consideration is being given to this.

Overall, the level of engagement with the company by external audiences on the report and its contents was disappointing. In discussions with peers and others, it appears, however that this experience is not unique.

In 2006 the company plans to distribute the report as widely as in 2005. More attention will be given to obtaining direct and formal feedback from stakeholders.

## MISSION AND VALUES

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AngloGold Ashanti's mission, values and business principles were developed in consultation with employees and are reviewed as part of an ongoing process to ensure that they more accurately reflect the group's purpose and the way in which it does business.

AngloGold Ashanti's mission:

Our business is gold. We consistently strive to create value for everyone with a stake in our company, by finding and mining gold and by developing the market for our product.

Our values

- AngloGold Ashanti consistently strives to generate competitive shareholder returns. We do this by replacing profitable gold reserves and by continuously improving the performance of our key resources – our people, our assets and our product. We conduct ourselves with honesty and integrity.

- We provide our employees with opportunities to develop their skills while sharing risks and rewards in workplaces that promote innovation, teamwork and freedom with accountability. We embrace cultural diversity.

- Every manager and employee takes responsibility for health and safety; and together strive to create workplaces that are free of occupational injury and illness.

- We strive to form partnerships with host communities, sharing their environments, traditions and values. We want communities to be better off for AngloGold Ashanti having been there. We are committed to working in an environmentally responsible way.

Our business principles

We live our values through our business principles. These principles are applicable across AngloGold Ashanti and in all the countries in which we do business.

They inform the way in which we go about achieving our mission, balancing key economic, social, environmental and ethical values. These business principles which will evolve over time as we interact with our stakeholders, both internal and external, are:

- ethics and governance (page EG1: Ethics and governance section)

- as an employer – safety and health (page SH1: Occupational safety and health section)

- as an employer – our labour practice (page L1: Labour practice section)

- the environment (page EN1: Environment section)

- in the community (page C1: Community section)

GRI MATRIX

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Fully reported

Partially reported

Not applicable

Detailed data not collected or not yet available in this reporting format

See AngloGold Ashanti Annual report or visit our website on [www.anglogoldashanti.com](http://www.anglogoldashanti.com)

Not reported

Reporting Status Key

Reporting in accordance with GRI

AngloGold Ashanti is an organisational stakeholder of the Global Reporting Initiative (GRI) and is committed to reporting

in line with the GRI 2002 Sustainability Guidelines and in line with the principles outlined by GRI. (These principles are

available on the company's website.)

GRI principles

Transparency

Accuracy

Inclusiveness

Neutrality

Auditability

Comparability

Completeness

Clarity

Relevance

Timeliness

Sustainability context

In addition, the company has taken cognisance of the GRI Mining and Metals sector supplement pilot version in compiling this report. The company intends seeking a review of the Report to Society 2005's compliance with GRI reporting guidelines.

GRI content report

**GRI CONTENT**

**LOCATION REPORTING**

**NUMBER**

**STATUS**

1. Vision and strategy

**1.1**

Statement of the organisation's vision

Page 8: Message from the CEO

and strategy regarding its contribution

Page 13: Mission and values

to sustainable development.

Page 12: Stakeholder  
engagement

Page E1: Economic performance

**1.2**

Statement from the CEO describing key

Page 8: Message from the CEO

elements of the report.

Page 13: Mission and values

Page 12: Stakeholder engagement

2. Profile

**2.1**

Name and business of reporting organisation;      Pages 4 – 7: Corporate profile

major products and services;

Page 12: Stakeholder engagement

operational structure of the organisation;

Pages E1-E7: Economic performance

description of major divisions, operating

companies, subsidiaries and joint ventures;

countries in which the organisation's operations

are located,nature of ownership; legal form;

GRI MATRIX

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nature of markets served;  
scale of reporting organisation;  
list of stakeholders

**Report scope**

Contact persons; reporting period;  
Inside front cover:

date of most recent previous report;  
Scope of the report  
boundaries of report; significant changes  
Annual Report 2005  
in size, structure, ownership, or products  
and services; basis for reporting; explanation  
of the nature and effect of any re-statements  
of information; decision not to apply GRI  
principles or protocols in the preparation  
of the report; criteria/definitions used in any  
accounting for economic, environmental and  
social costs and benefits; significant changes  
from previous years in the measurement methods;  
policies and internal practices to enhance  
and provide assurance; policy and current  
practice with regard to providing independent  
assurance; means by which report users can  
obtain additional information.

**Structure and governance**

**3.1**

Governance structure of the organisation,  
Pages EG3 – 4: Ethics and

including major committees under the  
governance  
board of directors that are  
Annual Report:  
responsible for setting strategy and  
Corporate governance  
for oversight of the organisation.

**3.2**

Percentage of the board of directors  
Page EG3:

that are independent,  
Ethics and governance  
non-executive directors.  
Annual report:  
Corporate governance

**3.3**

Process for determining the expertise  
Annual Report:

board members need to guide the Corporate governance strategic direction of the company, including the issues related to environmental and social risks and opportunities.

**GRI CONTENT**

**LOCATION REPORTING**

**NUMBER**

**STATUS**

2. Profile (continued)

Fully reported

Partially reported

Not applicable

Detailed data not collected or not yet available in this reporting format

See AngloGold Ashanti Annual report or visit our website on [www.anglogoldashanti.com](http://www.anglogoldashanti.com)

Not reported

Reporting Status Key



GRI MATRIX

16

Fully reported

Partially reported

Not applicable

Detailed data not collected or not yet available in this reporting format

See AngloGold Ashanti Annual report or visit our website on [www.anglogoldashanti.com](http://www.anglogoldashanti.com)

Not reported

Reporting Status Key

**GRI CONTENT**

**LOCATION**

**REPORTING**

**NUMBER**

**STATUS**

3. Governance structure and management systems

**3.4**

Board level processes for overseeing

Page EG7: Ethics and governance

the organisation's identification and

Annual Report:

management of economic, environmental,

Corporate governance

and social risk opportunities.

Annual Report:

Risk management

**3.5**

Linkage between executive compensation

Annual Report:

and achievement of the organisation's

Corporate governance

financial and non-financial goals.

**3.6**

Organisational structure and key

Page 10: Report of the

individuals responsible for oversight,

independent non-financial

implementation, and audit of economic,

assurers

environmental, social and related policies.

Page EG3: Ethics and governance

**3.7**

Mission and values statements, internally

Page 13: Mission and values

developed codes of conduct or

Page EG1: Ethics and governance

principles relevant to economic,

Page SH1: Safety and health

environmental and social performance

Page RH2: Regional health threats

and status of implementation.

Page L2: Labour practice

Page EN1: Environment

Page C1: Community

**3.8**

Mechanisms for shareholders to provide

Annual Report:

recommendations or direction to

Corporate governance

board of directors.

**Stakeholder engagement**

**3.9**

Basis for identification and selection

Page 12: Stakeholder

of major stakeholders

engagement

**3.10**

Approaches to stakeholder consultation

Page 12: Stakeholder

reported in terms of frequency of

engagement

consultation by type and by

Website

stakeholder group

**3.11**

Type of information generated by

Page 12: Stakeholder

stakeholder consultations.

engagement

**3.12**

Use of information resulting from stakeholder

Page 12: Stakeholder

engagement

engagement

\* *Additional indicators in italics*

GRI MATRIX

17

**Overarching policies and management systems**

**3.13**

Explanation of whether and how the  
Pages EG1– EG9:

precautionary approach or principle is

Ethics and governance  
addressed by the organisation.

Annual Report

Risk Management

**3.14**

Externally developed, voluntary economic,  
Page EG3 – 9: Ethics and governance

environmental and social charters, sets of  
Page EG12: Ethics and governance  
principles, or other initiatives to which the  
Page EN11: Environment  
organisation subscribes or which it endorses.

Page EN12 – 13: Environment

Page C2: Community

**3.15**

Principal memberships in industry and  
Page EG3 – 9: Ethics and governance

business associations, and or national/  
Page EN11 – EN13: Environment  
international advocacy organisations.

Page C2: Community

Page EG12: Ethics and governance

**3.16**

Policies and systems for managing upstream

and downstream impacts.

**3.17**

Reporting organisation's approach to managing  
Report to society 2005

indirect economic, environmental and social  
impacts resulting from its activities.

**3.18**

Major decisions during the reporting  
Inside front cover:

period regarding the location of,

Scope of the Report

and/or changes in operation.

**3.19**

Programmes and procedures pertaining

Report to Society 2005

to economic, environmental and social performance.

**3.20**

Status of certification pertaining to Page EN2 and EN6: Environment

economic, environmental and social management systems.

4. GRI content index

**4.1**

GRI content index table.

Pages 14 – 27

Fully reported

Partially reported

Not applicable

Detailed data not collected or not yet available in this reporting format

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Not reported

Reporting Status Key

**GRI CONTENT**

**LOCATION**

**REPORTING**

**NUMBER**

**STATUS**

3. Governance structure and management systems (continued)

GRI MATRIX

18

Fully reported

Partially reported

Not applicable

Detailed data not collected or not yet available in this reporting format

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Not reported

Reporting Status Key

**Customers**

**EC1.**

Net sales.

Page E3: Economic performance

**EC2.**

Geographic breakdown of markets.

Page E7: Economic performance

**Suppliers**

**EC3.**

Cost of all goods, materials,

Page E3: Economic performance

and services purchased.

**EC4.**

Percentage of contracts that were

paid in accordance with agreed terms, excluding agreed penalty arrangements.

**Employees**

**EC5**

Total payroll and benefits (including

Page E5: Economic performance

wages, pension, other benefits, and redundancy payments) broken down by country or region.

**Provides of capital**

**EC6.**

Distributions to providers of capital

Page E4: Economic performance

broken down by interest on debt and

Annual report 2005  
borrowings and dividends on all  
classes of shares, with any arrears of  
preferred dividends to be disclosed .

**EC7.**

Increase/decrease in retained earnings

Page E4: Economic

at the end of period.

performance

**Public sector**

**EC8.**

Total sum of all taxes paid broken

Page E5: Economic

down by country

performance

**EC9.**

Subsidies received broken down

by country or region .

**EC10.**

Donations to community, civil society

Page C8: Community

and other groups broken down in terms

of cash and in-kind donations per

type of group.

**GRI CONTENT**

**LOCATION**

**REPORTING**

**NUMBER**

**STATUS**

Economic performance indicators

*\* Additional indicators in italics*

GRI MATRIX

19

**EC11.**

*Breakdown of supplier by organisation*

*and country.*

**EC12.**

*Total spent on non-core business infrastructure.*

**EC13.**

*The organisation's indirect economic impacts.*

*Report to Society*

Environmental performance indicators

Note: a detailed analysis of the environmental indicators per country may be found on the website.

**Materials**

**EN1.**

Total materials use other than water, by type.

Page EN17: Environment

**EN2.**

Percentage of materials used that are

waste (processed or unprocessed) from sources external to the reporting organisation.

**Energy**

**EN3.**

Direct energy use segmented by

Page EN23: Environment

primary source.

**EN4.**

Indirect energy use

**Water**

**EN5.**

Total water use.

Page EN22: Environment

**Biodiversity**

**EN6.**

Location and size of land owned, leased or managed in biodiversity-rich habitats.

Page EN23: Environment

**EN7.**

Description of the major impacts on biodiversity with activities and/or products and services

in terrestrial, fresh water and marine environments. Page EN23: Environment

**Emissions, effluents and waste**

**EN8**

Greenhouse gas emission.

Page EN24: Environment

Fully reported

Partially reported

Not applicable

Detailed data not collected or not yet  
available in this reporting format

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our website on [www.anglogoldashanti.com](http://www.anglogoldashanti.com)

Not reported

Reporting Status Key

**GRI CONTENT**

**LOCATION REPORTING**

**NUMBER**

**STATUS**

Economic performance indicators (**continued**)

*\* Additional indicators in italics*



GRI MATRIX

20

Fully reported

Partially reported

Not applicable

Detailed data not collected or not yet available in this reporting format

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Not reported

Reporting Status Key

**EN9**

Use and emissions of ozone-depleting substances.

**EN10**

Nox, Sox and other significant air emissions

–

by type.

**EN11**

Total amount of waste by type and destination. –

**EN12**

Significant discharges to water by type.

**EN13**

Significant spills of chemicals, oils and fuels

EN8 – 10: Environment

in terms of total number and total volume.

**Products and services**

**EN14**

Significant environmental impacts of

Page EN4: Environment

principal products and services.

**EN15**

Percentage of weight of products sold that is

Page EN4: Environment

reclaimable at the end of the products' useful life and percentage that is actually reclaimed.

**Compliance**

**EN16**

Incidents of and fines for non-compliance  
Page EN5: Environment

with all applicable international declarations/  
conventions/treaties and national, sub-national,  
regional, local regulations associated with  
environmental issues.

**Energy**

**EN17**

*Initiatives to use renewable energy*  
Page EN22: Environment

*sources and to increase energy efficiency.*

**EN18**

*Energy consumption footprint of*

*major products.*

**EN19**

*Other indirect (upstream/downstream) energy*

*use and implications, such as organisational  
travel, product lifecycle management, and use  
of energy-intensive materials.*

**GRI CONTENT**

**LOCATION**

**REPORTING**

**NUMBER**

**STATUS**

**Environmental performance indicators (continued)**

*\* Additional indicators in italics*

GRI MATRIX

21

**Water**

**EN20**

*Water sources and related ecosystems/*

*Page EN21: Environment*

*habitats significantly affected by use of water.*

**EN21**

*Annual withdrawals of ground and surface*

*water as a percent of annual renewable quantity of water available from the sources.*

**EN22**

*Total recycling and re-use of water.*

**Biodiversity**

**EN23**

*Total amount of land owned, leased*

*or managed for production activities or extractive use.*

**EN24**

*Amount of impermeable surface as a*

*percentage associated of land purchased or leased.*

**EN25**

*Impacts of activities and operations on*

*Page EN23: Environment*

*protected and sensitive areas.*

**EN26**

*Changes to natural habitats resulting from*

*activities and operations and percentage of habitat protected or restored.*

**EN27**

*Objectives, programmes, and targets for*

*protecting and restoring native ecosystems and species in degraded areas.*

**EN28**

*Number of IUCN Red List species with*

*habitats in areas affected by operations.*

**EN29**

*Business units currently operating or*

*Page EN22: Environment*

*planning operations or around protected*

*or sensitive areas.*

Fully reported

Partially reported

Not applicable

Detailed data not collected or not yet  
available in this reporting format

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our website on [www.anglogoldashanti.com](http://www.anglogoldashanti.com)

Not reported

Reporting Status Key

**GRI CONTENT**

**LOCATION REPORTING**

**NUMBER**

**STATUS**

**Environmental performance indicators (continued)**

*\* Additional indicators in italics*

GRI MATRIX

22

Fully reported

Partially reported

Not applicable

Detailed data not collected or not yet available in this reporting format

See AngloGold Ashanti Annual report or visit our website on [www.anglogoldashanti.com](http://www.anglogoldashanti.com)

Not reported

Reporting Status Key

**Emissions, effluents and waste**

**EN30**

*Other relevant indirect greenhouse*

*Page EN24: Environment*

*gas emissions.*

**EN31**

*All production, transport, import or export*

*of any waste deemed hazardous under the terms of the Basel Convention*

*Annex 1, 11, 111, and VIII.*

**EN32**

*Water sources and related ecosystems/*

*habitats significantly affected by discharges of water and runoff.*

**Suppliers**

**EN33**

*Performance of suppliers relative to*

*environmental components of programmes and procedures described in response to governance structure and management systems section.*

**Transport**

**EN34**

*Significant environmental impacts of*

*transportation used for logistical purposes.*

**Overall**

**EN35**

*Total environmental expenditure by type.*

Labour practice and decent work

**Employment**

**LA1**

Breakdown of workforce, where possible,

Page L6: Labour practice

by region/country, status, employment type,

and by employment contract.

**GRI CONTENT**

**LOCATION**

**REPORTING**

**NUMBER**

**STATUS**

**Environmental performance indicators (continued)**

*\* Additional indicators in italics*

GRI MATRIX

23

**LA2**

Net employment creation and average  
Page L7: Labour practice

turnover segmented by region/country.

**Labour/management relations**

**LA3**

Percentage of employees represented by  
Page L7: Labour practice

independent trade union organizations  
or other bona fide employee representatives  
broken down geographically or percentage  
of employees covered by collective bargaining  
agreements broken down by country/region.

**LA4**

Policy and procedures involving  
Page L7: Labour practice

information, consultation, and negotiation  
with employees over changes in the  
reporting organisation's operations.

**Health and safety**

**LA5.**

Practices on recording and notification  
Pages SH2 to SH9:

of occupational disease, and how they  
Occupational safety and health  
relate to the ILO Code of Practice on  
Recording and Notification of  
Occupational Accidents and Diseases.

**LA6**

Description of formal joint health and  
Page SH18:

safety committees comprising  
Occupational safety and health  
management and worker representatives  
and proportion of workforce covered  
by any such committees.

**LA7**

Standard injury, lost day and absentee  
Pages SH2 to SH9:

rates and number of work-related fatalities.

Occupational safety and health

**LA8**

Description of policies or programmes

Pages RH1 to RH13:  
(for the workplace and beyond)  
Regional health threats  
on HIV/AIDS.

**GRI CONTENT**

**LOCATION REPORTING**

**NUMBER**

**STATUS**

Labour practice and decent work (continued)

Fully reported

Partially reported

Not applicable

Detailed data not collected or not yet  
available in this reporting format

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our website on [www.anglogoldashanti.com](http://www.anglogoldashanti.com)

Not reported

Reporting Status Key

\* *Additional indicators in italics*



24

Fully reported

Partially reported

Not applicable

Detailed data not collected or not yet available in this reporting format

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Not reported

Reporting Status Key

**Training and education**

**LA9**

Average hours of training per year per

employee by category of employee

**Diversity and opportunity**

**LA10**

Description of equal opportunity policies

Page L9: Labour practice

or programmes, as well as monitoring systems to ensure compliance and results of monitoring

**LA11**

Composition of senior management and

Pages L3 to L6:

corporate governance bodies (including Labour practice

the board of directors), including male/female ratio and other indicators of diversity as culturally appropriate.

**Employment**

**LA12**

*Employee benefits beyond those*

*legally mandated.*

**Labour/management relations**

**LA13**

*Provision for formal worker representation*

*Page L7: Labour practice*

*in decision-making or management, including corporate governance.*

**Health and safety**

**LA14**

*Evidence of substantial compliance with  
Pages SH1 to SH9:*

*the ILO guidelines for Occupational Health  
Occupational safety and health  
Management Systems.*

**LA15**

*Description of formal agreements with  
Page SH18: Occupational*

*unions or other bona fide employee trade  
safety and health  
representatives covering health and safety  
at work and proportion of the workforce.  
covered by any such agreements.*

**GRI CONTENT**

**LOCATION**

**REPORTING**

**NUMBER**

**STATUS**

Labour practice and decent work (continued)

*\* Additional indicators in italics*

25

Fully reported

Partially reported

Not applicable

Detailed data not collected or not yet available in this reporting format

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Not reported

Reporting Status Key

**Training and education**

**LA16**

*Description of programmes to support the Pages L11 to L16:*

*continued employability of employees*

*Labour practice*

*and to manage career endings.*

**LA17**

*Specific policies and programmes for*

*Page L16: Labour practice*

*skills management or for life-long learning*

Social performance indicators

**Customer health and safety**

**PR1.**

Description of policy preserving customer

health and safety during use of products and services, and extent to which this policy is visibly stated and applied, as well as a description of procedures/programmes to address this issue, including monitoring systems and results of monitoring.

**Products and service**

**PR2.**

Description of policy, procedures/

management systems, and compliance

mechanisms related to product

information and labelling

**Respect for privacy**

**PR3**

Description of policy, procedures/management

systems, and compliance mechanisms for consumer privacy.

**PR4**

*Number and type of instances of non-*

*compliance with regulations concerning customer health and safety, including the penalties and fines assessed for these breaches.*

**PR5**

*Number of complaints upheld by*

*regulatory or similar official bodies to oversee or regulate the health and safety of product services.*

**GRI CONTENT**

**LOCATION REPORTING**

**NUMBER**

**STATUS**

Labour practice and decent work (continued)

*\* Additional indicators in italics*

26

Fully reported

Partially reported

Not applicable

Detailed data not collected or not yet available in this reporting format

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Not reported

Reporting Status Key

**PR6**

*Voluntary code compliance, product labels*

*or awards with respect to social and/or environmental responsibility.*

**PR7**

*Number and type of instances of*

*non-compliance with regulations concerning product information and labelling including any penalties or fines assessed for these breaches.*

**PR8.**

*Description of policy, procedures/*

*management systems, and compliance mechanisms related to customer satisfaction, including results of surveys measuring customer satisfaction.*

**Advertising**

**PR9**

*Description of policies, procedures/*

*management systems, and compliance mechanisms for adherence to standards and voluntary codes related to advertising.*

**PR10**

*Number and types of breaches of*

*advertising and marketing regulations.*

**PXX-XX**

**Respect for privacy**

**PR11**

*Number of substantiated complaints regarding*

*breaches of consumer privacy.*

Social performance indicators: Society

**Community**

**SO1.**

Description of policies to manage impacts

Pages C1 to C32: Community

on communities in areas affected by activities,

as well as description of procedures/

programmes to address this issue, including

monitoring systems and results of monitoring

PXX-XX

**Bribery and corruption**

**SO2.**

Description of the policy, procedures/

Pages EG8 to EG9:

management systems, and compliance

Ethics and governance

mechanisms for organisations and

employees addressing bribery and corruption.

PXX-XX

**GRI CONTENT**

**LOCATION**

**REPORTING**

**NUMBER**

**STATUS**

Social performance indicators (continued)

*\* Additional indicators in italics*

27

Fully reported

Partially reported

Not applicable

Detailed data not collected or not yet available in this reporting format

See AngloGold Ashanti Annual report or visit our website on [www.anglogoldashanti.com](http://www.anglogoldashanti.com)

Not reported

Reporting Status Key

**Political contributions**

**SO3**

Description of policy, procedures/  
Page EG4: Ethics and governance

management systems, and compliance mechanisms for managing political lobbying and contributions

**Community**

**SO4**

*Awards received relevant to social, ethical, Page C18: Community*

*and environmental performance*

*Page EN25: Environment*

*P*

**Political contributions**

**SO5**

*Amount of money paid to political parties and Page EG4: Ethics and governance*

*institutions whose prime function is to fund political parties or their candidates*

**Competition and pricing**

**SO6**

*Court decisions regarding cases pertaining*

*to anti-trust and monopoly regulations*

**SO7**

*Description of policy, procedures/*

*management systems, and compliance mechanisms for preventing anti-competitive behaviour*

**GRI CONTENT**

**LOCATION REPORTING**

**NUMBER**

**STATUS**

Social performance indicators: Society (continued)

\* *Additional indicators in italics*



1. Introduction

E1

2. Key indicators

E2

3. Review 2005

E3

4. Case studies

E7

4.1 Doing business in new places

– AngloGold Ashanti on operating in Russia

E8

4.2 AngloGold Ashanti granted new order mining rights

E10

4.3 Uranium mined as a by-product contributes

to the bottom line

E12

ECONOMIC

PERFORMANCE

contents

Economic

Performance

Our business is gold. We consistently strive to create value for everyone with a stake in our company, by finding and mining gold and by developing the market for our product.

OUR VALUES:

AngloGold Ashanti's business is gold. Its activities range from exploring for and mining the precious metal to processing and beneficiation.

The company is headquartered in Johannesburg, South Africa. It has a global presence with 21 operations located in 10 countries on four continents. In 2005, AngloGold Ashanti employed on average 63,993 people (employees and contractors) at its operations, the majority of whom (66%) were employed at the more labour-intensive South African operations. In many of the regions and countries in which it operates, AngloGold Ashanti's business is an important part of local, regional and national economies – as an employer, a developer of mineral resources, a taxpayer and a corporate citizen.

AngloGold Ashanti is acutely aware of the role that it has, can and should play in the communities and countries in which it operates. The company is committed to a set of values that were developed in consultation with employees. These values are reviewed on an ongoing basis to ensure that they accurately reflect the nature and impact of the business and its economic, social and moral obligations to society. To ensure the practical manifestation of these principles in ordinary business practice, AngloGold Ashanti has further developed a set of business principles covering the major elements of its impact on society.

These business principles relate to:

- responsible and ethical citizenship;
- safety and health;
- labour practices;
- the environment; and
- the community.

This report presents the company's annual review of how it has performed against these business principles – whether it has met its objectives and how it plans on meeting its targets in the future.

The Economic Performance section of this report is based on information drawn from the group's Annual Report which is published concurrently with this document. The information in the financial statements has been audited by external auditors, Ernst and Young. Once again the report has been produced in accordance with the Global Reporting Initiative (GRI) guidelines, and a GRI Index can be found on page 14 of this report.

## ECONOMIC PERFORMANCE

### 1. Introduction

E1

The following are key indicators of AngloGold Ashanti's economic performance.

- 
- Gold production in 2005 up by 6% to 6.2 Moz (2004: 5.8 Moz).
- 
- Total cash costs rose 6% to \$281/oz mainly due to inflation and strong operating currencies.
- 
- Payments to employees, including salaries, wages and other benefits amounted to \$877 million, 7% up on the previous year (2004: \$823 million).
- 
- Deferred taxation amounted to a credit of \$118 million (2004: credit of \$107 million).
- 
- Adjusted headline earnings decreased by 26% to \$200 million (2004: \$271 million).
- 
- Dividends of \$169 million were paid to shareholders during 2005 (2004: \$198 million).
- 
- Capital expenditure rose by 23% to \$722 million (2004: \$585 million).
- – Approval was given during the year for the Cuiabá expansion project at AngloGold Ashanti Mineração in Brazil and the Geita owner mining project in Tanzania.
- 
- As at 31 December 2005, Ore Reserves were 63 Moz and Mineral Resources, 176 Moz.

#### ECONOMIC PERFORMANCE

##### 2. Key indicators

E2

ECONOMIC PERFORMANCE

3. Review 2005

E3

A comprehensive review of the operational activities of the company during 2005 may be found in the Annual Report 2005 and in the quarterly reports produced during the year. These documents are available at [www.anglogoldashanti.com](http://www.anglogoldashanti.com).

The business of gold

AngloGold Ashanti's business is gold. The profitability of the company is determined by the amount of gold produced, the price at which this is sold and the costs incurred through the purchase of the goods and services necessary to produce that gold.

In 2005, the company produced 6.2 Moz of gold (2004: 5.8 Moz) from operations in 10 countries. By far the largest gold producing country within the company is South Africa with gold production of 2.7 Moz (2004: 2.9 Moz), or 43% of total group production, although this percentage continues to decline.

The average gold price received for the year increased by 11% to \$439/oz (2004: \$394/oz).

Total gold income in 2005 was \$2,629 million (2004: \$2,309 million).

Total cost of sales in 2005 amounted to \$2,311 million (2004: \$1,924 million), with average total cash costs rising 6% to \$281/oz (2004: \$264/oz).

Adjusted headline earnings decreased by 26% to \$200 million (2004: \$271 million).

While the company's business is gold, a number of the South African mines recover and process uranium as a by-product of gold mining. This uranium is processed and marketed by the Nuclear Fuels Corporation of South Africa (Nufcor), a wholly owned subsidiary of AngloGold Ashanti. *(See case study on page E12: Uranium mined as a by-product contributes to the bottom line.)*

**Attributable gold production**

**by country (000oz)**

**05**

**04**

Argentina

**211**

211

Australia

**455**

410

Brazil

**346**

334

Ghana

**680**

485

Guinea

**246**

83

Mali

**528**

475

Namibia

**81**

66

South Africa

**2,676**

2,857

Tanzania

**613**

570

USA

**330**

329

Zimbabwe\*

—

9

**Total**

**6,166**        **5,829**

*\* The Freda-Rebecca mine in Zimbabwe was sold during 2004.*

0

500

1,000

1,500

2,000

2,500

3,000

Gold income (\$m)

2005 Distribution of wealth (%)	
Employees for remuneration	
Providers of capital	
Other	
State for taxes	
Re-invested in the group	
	12
	46
	12
	26
	4
Dollar million	
Notes*	
%	
2005	
%	
2004	
Value added	
Gold income	
	2,629
	2,309
Less: Purchases of goods and services in order to operate mines and produce refined metal, including market development costs net of other income	
	(1,089)
	(873)
Value-added by operations	
	80
	1,540
	86
	1,436
Fair value (loss) gain on interest rate swaps and option component of convertible bond	
	(2)
	(33)
	2
	29
Exchange (loss) gain	
	–
	(5)
	–
	4
Profit on disposal of assets and subsidiaries	
	–
	5
	1
	13
Income from investments and interest received	
	1
	22

	3
	49
Government	
Deferred taxation	
	6
	118
	6
	107
Utilised in the group	
Retained income	
	15
	278
	2
	40
Total value added	
	100
	1,925
	100
	1,678
Value distributed	
Employees	
Salaries, wages and other benefits	
	46
	877
	49
	823
Government	
– Current taxation	
	4
	82
	4
	66
Providers of capital	
– Finance costs and unwinding of the decommissioning obligation	
	6
	108
	5
	87
– Dividends declared	
	5
	95
	9
	148
– Minorities	
	1
	23
	1
	19
Other	
– Impairment of tangible assets	
	3

64
–
1
– Loss from discontinued operations
2
36
1
11
– Non-hedge derivatives
7
135
8
142
Total value distributed
74
1,420
77
1,297
Re-invested in the group
– Amortisation and depreciation
26
505
23
381
100
1,925
100
1,678

\*Notes relating to the Group Value Added Statement may be found in the Annual Report 2005.

Economic contribution to sustainable development: group value added statement

for the year ending 31 December

ECONOMIC PERFORMANCE

E4

2004 Distribution of wealth (%)

Employees for remuneration

Providers of capital

Other

State for taxes

Re-invested in

the group

9

49

15

23

4



## ECONOMIC PERFORMANCE

E5

Key aspects of this value-added statement include distributions made to employees, payments to governments in the form of taxation and value distributed to the providers of capital, which are discussed below. Contributions to community projects are not captured in the value-added statement but are discussed in detail on page C8 in the Community Section of this report.

**Distributions to employees**

In 2005, AngloGold Ashanti employed 63,993 people (employees and contractors) on average per month (2004: 65,400), predominantly at its South African operations (66%). Distributions to employees (including executive directors) amounted to \$877 million (2004: \$823 million). This represents a distribution of 46% of the value created by the group in 2005.

**Employee benefits (\$m)****2005****2004**

Salaries, wages and other benefits

**752****86%**

706

85%

Health care and medical schemes, including defined post-retirement medical expenses

**61****7%**

63

8%

Contribution to pension and provident plans

**36****4%**

47

6%

Retrenchments costs

**26****3%**

7

1%

Share-based payments

**2**

-

-

-

Total included in cost of sales and other operating expenses

**877****100%**

823

100%

A more detailed discussion on AngloGold Ashanti as an employer may be found in the Labour Section of this report.

**Taxation**

Current taxation of \$82 million (2004: \$66 million) was set aside in various jurisdictions around the world. A breakdown per country is indicated in the table alongside.

0

10,000

20,000

30,000

40,000

50,000

60,000

70,000

80,000

Number of employees

(monthly average)

**Total taxation by country (\$m)****05****04**

Argentina

-

(1)

Australia

**6**

2

Brazil

**23**

16

Ghana

-

-

Guinea

-

-

Mali

**12**

4

Namibia

-

-

South Africa

**42**

43

Tanzania

-

2

USA

**(1)**

-

**Total****82****66**

**Providers of capital**

Payments of \$226 million (2004: \$254 million) were made to the various providers of capital during the year. These include, among others, payments made to banks and other financial institutions of \$108 million and distributions to shareholders in the form of dividends (\$95 million). Shareholders invest in the company for a number of reasons. In addition to the potential receipt of dividends that may be paid by the company to shareholders, shareholders may buy, hold or sell shares, depending on the past and expected performance of the company on the various stock exchanges on which it is listed, in the expectation of an appreciation in the share price. The share price performance of AngloGold Ashanti in 2005 is indicated in the graphs below.

**Sustaining operations**

An important function of AngloGold Ashanti today is preparation for the future in terms of finding new orebodies, bringing new mines into production, investing in human and infrastructural capital to sustain production, undertaking research and development, investing in the development of the market for gold and the putting aside of sufficient funding to ensure the orderly closure of operations when they reach the end of their economic lives. A key element of this process during 2005 was the granting to the company by the South African Department of Minerals and Energy (DME) of new order mining rights. AngloGold Ashanti was the first gold mining company to receive these rights for all its operations in terms of the new minerals legislation. *(See case study on page E10: AngloGold Ashanti granted new order mining rights.)*

**Exploration, reserves and resources**

In 2005, AngloGold Ashanti spent \$79 million (2004: \$81 million) on exploration in 19 countries around the world, split between brownfields exploration which is aimed at sustaining or expanding existing operations, and greenfields exploration aimed at discovering new gold deposits. The company has actively pursued its ‘new frontiers’ strategy *(See case study on page E8: Doing business in new places – AngloGold Ashanti on operating in Russia)*. A detailed discussion of the company’s exploration programme may be found in the Annual Report 2005.

**ECONOMIC PERFORMANCE**

E6

Declared dividends

per ordinary share (US cents)

0

20

40

60

80

100

120

140

160

Adjusted headline earnings

per ordinary share (US cents)

0

20

40

60

80

100

120

140

160

180

## ECONOMIC PERFORMANCE

E7

As at the end of 2005, the company's attributable Mineral Resources amounted to 176 Moz, while Ore Reserves stood at 63 Moz.

### **Capital expenditure**

The company places significant emphasis on capital expenditure to sustain existing operations and develop new ones. In 2005, AngloGold Ashanti invested \$722 million, an increase of 23% on 2004, of which 63% was stay-in-business expenditure and 37% on new projects.

### **Developing the market for gold**

Gold is used mainly for fabrication purposes, of which the gold jewellery market accounts for almost 80%. Other fabrication uses include electronics, dentistry, medals and coins. In addition, gold is held by central banks, financial institutions and private individuals as a store of value or a form of investment.

AngloGold Ashanti is involved in the marketing of gold as the demand for gold jewellery has decreased in recent years. In 2005, the company's marketing programme, both on its own and in collaboration with the World Gold Council (to which AngloGold Ashanti contributed \$9 million of its total expenditure of \$13 million), was aimed at increasing the desirability of the metal, sustaining and growing demand, and supporting the deregulation of the gold market in certain key economies.

### **Anticipating closure**

Mining operations have finite lives and as older mines reach the end of their lives, mining operations may leave an unwanted legacy for local communities, particularly from an environmental perspective. Thus, an integral part of responsible mining is the provision for closure from an environmental perspective during the lifetime of the operation. A detailed breakdown of the company's estimated environmental liabilities may be found on page EN14 in the Environment Section of this report.

#### 4. Case studies

The case studies that follow illustrate the economic performance of the company. Note that follow-ups on the case studies presented in the Report to Society 2004 may be found on the website.

Geographical analysis of gold  
income by origin (%)

43

3

8

6

11

4

9

1

10

5

South Africa

Argentina

Australia

Brazil

Ghana

Guniea

Mali

Namibia

Tanzania

USA

0

Geographical analysis of gold income

by destination (%)

32

31

1

5

17

14

South Africa

North America

Australia

Asia

Europe

United Kingdom

AngloGold Ashanti's global growth strategy has a number of components: brownfields exploration around the group's existing operations, greenfields exploration increasingly in 'new frontier' regions and countries, and project acquisitions and strategic company alliances in prospective regions. (*See Report to Society 2004 page EP9.*)

One such strategic interest is AngloGold Ashanti's 29.9% investment in Trans-Siberian Gold (TSG) plc, a UK-based resources company established in 2000, which listed on the London Stock Exchange's Alternative Investment Market (AIM) in November 2003. AngloGold Ashanti acquired its interest in TSG in July 2004, after identifying the company as an entry into Russia.

TSG holds mining and exploration licences over three existing projects: Asacha, Rodnikovoe and Veduga, as well as an exploration licence over an extensive area surrounding Veduga and the early-stage Bogunay project. The proceeds from AngloGold Ashanti's investment in TSG are being used to partially fund the development of the Asacha project, for the preparation of a feasibility study at Veduga, and for further exploration at Bogunay.

The Asacha project, located in the Kamchatka region of Eastern Russia, is currently under development at an estimated total capital cost of \$90 million, of which \$22 million has already been spent. The project has a total Measured and Indicated gold equivalent Mineral Resource of 534,493 oz and a further 131,653 oz in the Inferred category. Planned full production will be about 100,000 oz of gold per year and 220,000 oz of silver, at a cash cost of around \$200/oz. The first gold is expected at the beginning of 2008 and, based on current estimates, the life-of-mine is expected to be in the region of seven years, although additional mineralisation around the current resource, as well as the possibility of mining Rodnikovoe as a satellite of Asacha, suggests the mine life could be extended. Rodnikovoe is located some 65 km from Asacha. A total of 230 people will eventually be employed on site at Asacha, while another 25 will be based at the Petrapavlosk Kamchatski office.

Prior to the commencement of the Asacha project, environmental impact assessments, reviews and public hearings were completed, in order to obtain the requisite permits as required by Russian legislation.

The second project, Veduga, is located in the Krasnoyarsk region of Russia. The project currently has a Measured and Indicated Resource base of 1.9 Moz, with a further 871,000 oz in the Inferred Resource category. TSG completed a preliminary review of Veduga project after a pre-feasibility study indicated that construction of a metallurgical plant on site was not economically viable. Nevertheless, TSG is of the opinion that considerable value exists at Veduga and, as a result, a number of alternative exploitation avenues were examined. These include the production of flotation concentrates which could be transported to existing metallurgical plants in the Urals, Kazakhstan and/or China that have the technical capability of treating such material. In parallel with this, TSG is actively pursuing its exploration programme with a view to increasing the overall Mineral Resource and ultimately the mineable Ore Reserve at Veduga. Given that Veduga will, in all probability, be a larger operation than Asacha, a larger employee complement is anticipated.

#### 4.1 Doing business in new places

– AngloGold Ashanti on operating in Russia

ECONOMIC PERFORMANCE –

CASE STUDY GROUP

E8

ECONOMIC PERFORMANCE –  
CASE STUDY GROUP

E9

4.1 Doing business in new places

– AngloGold Ashanti on operating in Russia

*cont.*

Bogunay is an early stage exploration project also located in the Krasnoyarsk region.

TSG has 260 employees, most of whom are Russian citizens. More recently Jonathan Best, former and retired Finance Director of AngloGold Ashanti assumed the position of CEO of TSG. A senior AngloGold Ashanti mining engineer and former manager of Morila mine, Glen Kuropchuk, has been seconded to TSG as Chief Operating Officer.

The rationale behind the investment is simple, says Richard Duffy, who heads AngloGold Ashanti's Business Development programme. Russia hosts a large number of known gold deposits and has an established mining industry. The country ranks fourth in the world in terms of gold reserves (behind South Africa, the USA and Australia) and fifth in terms of gold production. Moreover, since 1999, Russia's annual growth in gold production has exceeded that of the top eight gold producing countries, giving an indication of the under-utilised potential that exists.

“Not only will our investment enable us to participate in several promising mining and exploration projects, it will also provide AngloGold Ashanti with an opportunity to develop a better understanding of the gold industry in this highly prospective region, allowing us to identify further opportunities for growth.”

As part of its arrangement with TSG, AngloGold Ashanti has a number of agreements in place that both secure its interests and support TSG's success. These include:

- Board representation (as a 29.9% shareholder, AngloGold Ashanti has two seats).
- Technical assistance and personnel: AngloGold Ashanti has agreed to provide technical assistance to TSG.
- Veduga financing: AngloGold Ashanti has the right to provide any financing for the Veduga project on the basis that the company meets or extends financing arrangements offered by third parties.
- Earn-in rights: AngloGold Ashanti has the option to exercise an earn-in right enabling it to acquire a 51% interest in any new mining or exploration projects undertaken by TSG.
- Anti-dilution rights: in the event of any further shares issued by TSG, AngloGold Ashanti has the right to maintain its interest in TSG at 29.9%.  
Should AngloGold Ashanti increase its stake to beyond 30%, it will be required to make an offer to acquire the shares of all the remaining shareholders. Any decision to increase its investment will be based on a view as to the value of TSG at the time and to AngloGold Ashanti's Russian strategy more generally.  
The company's stake in TSG does not preclude it from working with, or investing in, other companies with Russian interests. A small AngloGold Ashanti exploration office has been established in Moscow and a number of exploration projects are being pursued within Russia. The company has, for example, entered into an exploration alliance with Eurasia, another AIM listed company, to look for gold in the Chita region. Through its involvement in both TSG and exploration activities, AngloGold Ashanti has become aware of the challenges that present in a Russian mining environment, says Richard Duffy, “One needs to be fully au fait with the rules and regulations of mining and exploration licences, and to keep abreast of legislation. Equally important is the planning of mining development, where the logistical difficulties are compounded by remote localities and severe climatic conditions. Employing people with the right expertise and who understand the environment is, therefore, an essential aspect of successful mining in Russia.”



#### 4.2 AngloGold Ashanti granted new order mining rights

##### ECONOMIC PERFORMANCE – CASE STUDY SOUTH AFRICA E10

In August 2005, AngloGold Ashanti was informed that it had become the first mining company to be granted new order mining rights by the South African Department of Minerals and Energy (DME) for all its mining operations in terms of the Mineral Petroleum and Resources Development Act (MPRDA).

The company lodged its applications for these rights in July 2004, shortly after the new Act became operational in May the previous year.

In terms of the MPRDA, mineral rights vest in the state, with the state holding the right to issue prospecting, mining and other rights to applicants. A five-year transitional arrangement gives current operators the right to apply for the conversion of old order rights into so-called new order mining and prospecting rights.

The Act required the company to submit in its applications, among other things, mining works plans for the company's seven South African mining operations for the rest of their lives, including environmental management plans, social and labour plans for each of the two geographical areas covered by the mines, and details of previous and planned future black economic empowerment transactions. The two last-mentioned sets of documents are designed to satisfy the department that the company has plans to comply with the Broad-Based Socio-Economic Charter (colloquially termed the Mining Charter – *see box on page E11*), and has the capacity and intent to implement these plans.

The charter is an adjunct to the MPRDA and was published by the DME to provide more specific guidelines for socio-economic transformation of the mining industry. Further discussion on AngloGold Ashanti's compliance with the Mining Charter may be found elsewhere in this report.

A key component of AngloGold Ashanti's submission was that, in addition to recognition of sales of assets made by the company to the black-owned Armgold between 1998 and 2002, the company committed itself to the development of an Employee Share Ownership Plan (ESOP) with a value equivalent to approximately 6% of its South African assets. As of January 2006, the company commenced consultations with representative trade unions at its South African operations on the development of the ESOP.

AngloGold Ashanti considers the new mineral rights regime in South Africa to be a proper and appropriate method of dealing with the country's mineral resources and political legacy. The company believes the new mineral rights regime is likely to play a significant part in enhancing socio-economic stability and progress by encouraging equitable participation in the economy and thereby improving the lives of those citizens previously disadvantaged by apartheid. A failure on the part of government to have implemented such measures would have endangered prospects for political and economic stability.

The company was one of a small number that submitted its applications at the earliest opportunity, knowing that by doing so it would be playing the role of something of a 'guinea pig' for the industry given the unprecedented nature of the process of introduction of the new mining rights regime. However, it was happy to do so, both to continue playing a leading part in the country's economic progress and to eliminate uncertainty for shareholders and other stakeholders at the earliest opportunity.

ECONOMIC PERFORMANCE –  
CASE STUDY SOUTH AFRICA

E11

Commenting at the time of the August announcement, AngloGold Ashanti CEO Bobby Godsell said, “I am delighted that the spirit and the letter of the Mining Charter has been fulfilled through this conversion of mining rights. The decision brings certainty to our shareholders and it offers our employees and the communities in which we operate new opportunities for sharing in the wealth creation of our company. I also believe that the empowerment process initiated by the government represents a vital and legitimate investment in the future of our country.”

4.2 AngloGold Ashanti granted new order mining rights

*cont.*

Objectives of the Mining Charter

The Department of Minerals and Energy published the Broad-Based Socio-Economic Empowerment Charter for the South African Mining Industry (the Charter) in 2002. The objectives of the charter are to:

- promote equitable access to the nation's mineral resources for all the people of South Africa;
- substantially and meaningfully expand opportunities for historically disadvantaged South Africans (HDSAs) (that is, any person, category of persons or community, disadvantaged by unfair discrimination before the Constitution of the Republic of South Africa, 1993 came into effect) including women, to enter the mining and minerals industry and to benefit from the exploitation of the nation's mineral resources;
- utilise the existing skills base for the empowerment of HDSAs;
- expand the skills base of HDSAs in order to serve the community;
- promote employment and advance the social and economic welfare of mining communities and the major labour-sending areas; and
- promote beneficiation of South Africa's mineral commodities.

4.3 Uranium mined as a by-product contributes to the bottom line

ECONOMIC PERFORMANCE –  
CASE STUDY SOUTH AFRICA  
E12

AngloGold Ashanti, by virtue of its South African operations and wholly owned subsidiary, Nuclear Fuels Corporation of South Africa (Nufcor), is arguably the world's longest continuous producer and marketer of uranium. AngloGold Ashanti produces uranium oxide concentrates (U

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O  
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) in the form of a powder, as a by-product of its gold mining operations, thus giving Nufcor access to extensive reserves of uranium. South African production peaked in the early 1980s at 6,500 metric tonnes (t) per annum. Currently, AngloGold Ashanti produces around 800 to 900 t of U

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O  
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annually, with the potential to increase this by 300 t in the future, given capex and metallurgical plant constraints.

Uranium makes a small but valuable contribution to AngloGold Ashanti's bottom line. In 2005, sales of uranium concentrate contributed around 0.5% to the AngloGold Ashanti group's net profit.

Uranium is produced as a by-product by three of AngloGold Ashanti's mines, all located in the Vaal River area, namely, the Great Noligwa, Moab Khotsong and Kopanang mines. It is extracted from gold-bearing ore as a by-product only, and grades are consequently much lower than those of dedicated uranium mines in other uranium-producing countries. The average grade globally is around 1.5%, and the two largest uranium mines in the world have grades of around 25%. (Uranium grades are a function of geology and mineralisation.) Typically, the grade of uranium mined in South Africa is 0.05%, that is, 500 g of uranium per 1,000 kg of rock.

If unprocessed, this uranium is disposed of in the residue of the gold-bearing ore onto the tailings dams, along with other waste from the mining and processing operations. Monitoring of tailings for radioactivity is not necessary as the uranium is in a diluted form, and below environmentally acceptable levels of radiation.

Mining and processing of uranium is often viewed in a negative light as the public frequently associates risks with this high-profile product. There are primarily two risks associated with uranium:

- Toxicity: uranium is a heavy metal and toxic to humans, and

- Radioactivity: at the level of grade in South African mines, the risks are low from a health and safety perspective.

Higher (that is, more concentrated) grades of uranium could be found in certain areas of mining or processing operations in South Africa irrespective of whether these operations actually extract uranium, and these higher grades increase the risk to employees. To monitor and manage these risks, AngloGold Ashanti has appointed Radiation Protection Officers at each of its South African operations whose function it is to measure levels of radioactivity in all working places at regular intervals, and to monitor absolute levels of radioactivity in the workplace. In addition, personnel are monitored individually, on a regular basis, to determine radiation doses received, as well as annually to monitor overall health. The National Nuclear Regulator also has open access to AngloGold Ashanti mining and processing plant operations to conduct audits.

Uranium diuranate (in the form of a slurry) is transported for further processing in special-purpose road tankers, fitted with tracking devices and under escort. The drivers have been specially trained on how to manage unforeseen events, such as accidents or hijackings, and no material has ever been lost or stolen.

The final product is shipped to Nufcor's major customers, all of whom are ultimately nuclear electricity generating utilities around the world, including in the United States, Europe and the Far East, who convert

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to slightly enriched nuclear fuel products to power the uranium in nuclear fission reactors that generate heat to drive gas-generator turbines which in turn generate electricity. Most of Nufcor's nuclear power generator clients are either part or full parastatals.

AngloGold Ashanti is mindful of its moral obligation to ensure that the uranium does not fall into the 'wrong' hands. The company is and always has been subject to International Atomic Energy Agency (IAEA) Safeguard Compliance in all sales contracts and in every shipment made of U

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. In addition, on 15 July

1991, South Africa became a signatory to the Non-Proliferation Treaty and signed a Comprehensive

ECONOMIC PERFORMANCE –  
CASE STUDY SOUTH AFRICA

E13

4.3 Uranium mined as a by-product contributes to  
the bottom line

*cont.*

Safeguards Agreement with the IAEA on 16 September 1991. AngloGold Ashanti, therefore, is bound to the Statute of IAEA and all supply contracts include South African nuclear safeguard clauses which help promote a transparent and responsible chain of custody of uranium.

About uranium

Uranium is a naturally occurring radioactive element and is the 48th most abundant element on earth. It is found in natural rock crystal and is many, many times more abundant than silver, which can also be found as a by-product of gold mining.

Uranium has one vital characteristic. This is its ability to split its atoms through fission into two lighter fragments when bombarded with neutrons, thus releasing large amounts of energy. This characteristic provides the role of uranium in the generation of nuclear power.

Of the two different types of uranium isotopes contained in uranium metal, one, U235, can sustain a chain reaction during the fission process. Given the huge and growing global demand for energy and the shortage of non-renewable sources of energy, alternative sources of energy are constantly being sought. Nuclear power has an important role to play as 1 kg (2.2 lb) of uranium can generate the same volume of electricity as 38 t of coal or 150 barrels of oil.

Global demand for uranium is estimated at 77,000 t annually and this is expected to be maintained at these levels for the next 15 years or so. By contrast, annual production of new-mined uranium amounts to only some 3,000 t (in 2004), and this very material shortfall in production of uranium is expected to continue for some time into the future.

The price of uranium has increased sharply in recent months and is currently around \$33/lb.

This compares with \$7/lb towards the end of 2000.

South African reserves of uranium account for approximately 10% of global reserves. The largest reserves are to be found in Canada, Australia and the USA, which together with Kazakhstan also have the best future prospects for uranium mining.

Nufcor - history and ownership

The Nuclear Fuels Corporation of South Africa (Pty) Limited (Nufcor), was established in 1967 to process and market uranium concentrate produced by South African gold mining companies to nuclear power generators around the globe. Nufcor can trace its origins to 1951 in a company called Calcined Products (Pty) Limited founded for the express purpose of processing uranium-rich slurries which are a by-product on South African gold mines. Shareholding in Nufcor over the years has vested in the mining companies that set up and used the facility, in relation to their proportional usage from year to year.

In 1998, on the establishment of the then AngloGold Limited, Nufcor became a fully owned subsidiary, as AngloGold was the last uranium-producing shareholder still utilising the facilities of Nufcor. A year later, Nufcor International Limited (NIL) was established in London to undertake trading in nuclear fuel cycle products and services.

NIL, which is incorporated as a company in the UK, is jointly owned by AngloGold Ashanti Limited (which contributes its uranium production and market expertise) and FirstRand Limited (contributing its expertise in banking and financial services). As a nuclear fuel trading and finance company, NIL markets, trades, finances and manages the risk related to nuclear fuel and associated processes. NIL has positioned itself to provide a range of physical and financial products to both producers and consumers of uranium, and is now the primary marketing agent for all uranium produced in South Africa, including that from non-AngloGold Ashanti operations.

1. Introduction

EG1

2. Business principle

EG1

3. Key indicators

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5.1 Human rights, the DRC and AngloGold Ashanti

EG10

6. Objectives for 2006

EG13

ETHICS AND  
GOVERNANCE

contents

We live our values through our  
business principles. These  
principles are applicable across  
AngloGold Ashanti and in all the  
countries in which we do business.

Ethics and

Governance

OUR VALUES:

AngloGold Ashanti's ethics and governance standards are guided by relevant laws and regulations and the group's related business principle, AngloGold Ashanti – a responsible and ethical corporate citizen (below).

A detailed discussion on corporate governance and risk management may be found in the Annual Report 2005.

## 2. Business principle

AngloGold Ashanti – a responsible and ethical corporate citizen

- We will **comply with all laws**, regulations, standards and international conventions which apply to our businesses and to our relationships with our stakeholders.

Specifically, AngloGold Ashanti supports the Universal Declaration of Human Rights, the Fundamental Rights Conventions of the International Labour Organization (ILO) and those principles and values referred to in the United Nations Global Compact

- Should laws and regulations be non-existent or inadequate, we will maintain the highest reasonable regional standard for that location

- We will fully, accurately and in a timely and verifiable manner, consistently **disclose material information** about the company and its performance. This will be done in readily understandable language to appropriate regulators, our stakeholders and the public

- We will **not** offer, pay or accept **bribes**, nor will we condone anti-competitive market practices and we will not tolerate any such activity by our employees

- We **prohibit** our employees from **trading shares** when they have unpublished, material information concerning the company or its operations

- We require our employees to comply with all money handling requirements under applicable law, and we further **prohibit** them from conducting any illegal money transfers or any form of **'money laundering'** in the conduct of the company's business

- We will require our employees to perform their duties conscientiously, honestly and in ways which **avoid conflicts** between their personal financial or commercial **interests** and their responsibilities to the company

- We will take all reasonable steps to **identify and monitor** significant **risks** to the company and its stakeholders. We will endeavour to safeguard our assets and to detect and prevent fraud. We will do this in a manner consistent with the international human rights agreements and conventions to which we subscribe

- We will promote the application of our **principles** by **those with whom we do business**. Their willingness to accept these principles will be an important factor in our decision to enter into and remain in such relationships

- We are committed to seeking out mutually beneficial, ethical **long-term relations** with **those with whom we do business**

- We encourage employees to take **personal responsibility** for ensuring that our **conduct** complies with our principles. No employee will suffer for raising with management violations of these principles or any other legal or ethical concern. Although employees are encouraged to discuss concerns with their direct managers, they must, in any event, inform

the group internal audit manager of these concerns. Mechanisms are in place to anonymously report breaches of this statement of principles

- The company will take the **necessary steps** to **ensure** that all employees and other stakeholders are **informed of these principles**

- If an employee acts in **contravention** of these principles, the company will take the appropriate disciplinary action concerning such contravention. This action may, in cases of severe breaches, include termination of employment. In addition, certain contraventions may also result in the commencement of civil proceedings against the employee and the referral of the matter to the appropriate enforcement bodies if criminal proceedings appear warranted

## ETHICS AND GOVERNANCE

### 1. Introduction

EG1



- AngloGold Ashanti adheres to all laws and regulations within the countries in which it operates and conducts its business consistently with its values and business principles. Any significant transgressions are reported in the Report to Society and the company has no knowledge of any further areas of non-compliance. The company conducts its business in accordance with the recommendations outlined in the King Report on Corporate Governance in South Africa 2002 (King 2), except in a few areas where the company has chosen otherwise and has fully disclosed such areas in the Annual Report 2005, and is fully compliant with the requirements of the US Sarbanes-Oxley Act.

- The company has reported on an incident in the Democratic Republic of Congo (DRC) when company employees were forced to yield to a militia group's act of extortion. A thorough review of the incident and the situation has been conducted. (*See case study on page EG10: Human rights, the DRC and AngloGold Ashanti.*)

- AngloGold Ashanti has maintained a system of consistent disclosure about its financial and operating affairs, reporting on a regular basis to the financial community and other stakeholders. All information that is in the public domain is available on the company's website: [www.anglogoldashanti.com](http://www.anglogoldashanti.com).

- Directors and key employees (that is, employees who have access to price-sensitive information) may not trade in company shares during closed periods and are required to follow a formal process before trading in the company's shares.

- A policy dealing with the management of conflicting interests was approved by the company's executive, along with a set of guidelines to aid employees to understand what conflicts may exist as well as how to avoid and declare them if they occur. This has been communicated to all employees.

- A comprehensive review of risks associated with the company and its activities was undertaken, and internal controls were reviewed to ensure that they adequately addressed these risks.

- A Code of Ethics for Employees, a Code of Ethics for Senior Financial Officers and a Whistle-blowing Policy are in place.

## ETHICS AND GOVERNANCE

### 3. Key indicators

EG2

In the Report to Society 2004, certain objectives were set for 2005. The table below sets these out, along with progress made during 2005.

## **Ethics and Governance**

### **Objectives for 2005**

#### **Performance in 2005**

Finalise roll-out of conflicts of interest policy  
Conflicts of interest policy and guidelines adopted and communicated to relevant employees. All relevant personnel required by management to complete declarations have done so.

Complete Sarbanes-Oxley 404 internal control  
Initial design and implementation project for requirements including the design, implementation, internal control processes are complete. Testing testing and maintenance phases

process being reviewed so as to enable any remediation required to take place in early 2006.

Implementation of the maintenance process is in final stages, and will be in place in 2006.

Develop a document retention strategy for  
Policy adopted by the Executive Committee  
AngloGold Ashanti

regarding the general principles for retention of the company's documents consistent with business and legal interests. Each region required to adopt a schedule of laws dealing with document retention, which is underway.

Board level oversight of corporate governance and ethics

AngloGold Ashanti is committed to upholding the highest levels of corporate governance. Corporate governance is addressed at the highest level by the Audit and Corporate Governance Committee of the board, which is chaired by non-executive, independent director, Colin Brayshaw.

The company's ethical performance is guided by AngloGold Ashanti's values, and practised in line with the company's business principles.

The company is led by a Board of Directors, comprising 17 members. Of these:

- there are six independent directors;
- there are six non-independent, non-executive directors; and
- five executive directors.

Both the chairman and the deputy chairman are independent. The board's Audit and Corporate Governance Committee is fully independent and the Remuneration and Nominations Committees are majority independent.

## **ETHICS AND GOVERNANCE**

### **4. Review 2005**

EG3

Structure of the board (%)

31

38

31

Independent directors

Non-independent non-executive directors

Executive directors

There are nine board committees that meet on a regular basis. These are the:

- Audit and Corporate Governance Committee;
- Employment Equity and Development Committee;
- Executive Committee;
- Investment Committee;
- Market Development Committee;
- Nominations Committee;
- Political Donations Committee;
- Remuneration Committee; and the
- Safety, Health and Sustainable Development Committee.

A detailed discussion of the functioning of the Board and its committees may be found in the Annual Report 2005.

#### Compliance with regulations and guidelines

AngloGold Ashanti complies with the regulations imposed by all the exchanges on which it is listed, including the King Report on Corporate Governance 2002 (King 2) (South Africa), except in a few areas where the company has chosen otherwise and has fully disclosed such areas in the Annual Report 2005, and is fully compliant with the requirements of the Sarbanes-Oxley Act (USA).

AngloGold Ashanti supports the Universal Declaration of Human Rights and the Fundamental Rights Conventions of the International Labour Organization (ILO). It became a signatory to the United Nations Global Compact following the business combination with Ashanti. Ashanti had been a member since August 2001. AngloGold Ashanti is an active supporter of the Global Compact, and in preparing the Report to Society 2005, has taken these principles into account.

The company is a founding member of the International Council of Mining and Minerals (ICMM) and actively participates in international debate as part of this organisation. The company is also a member of the Council for Responsible Jewellery Practices, established to promote responsible social, ethical, human rights and environmental practice throughout the gold and diamond jewellery chain.

The company became an organisational stakeholder of the Global Reporting Initiative (GRI) in 2004. The GRI is a multi-stakeholder process and independent institution whose mission is to develop and disseminate globally applicable Sustainability Reporting Guidelines. These guidelines are for voluntary use by organisations in their reporting on the economic, environmental, and social dimensions of their activities, products, and services.

#### ETHICS AND GOVERNANCE

##### EG4

#### Political donations

The Political Donations Committee, comprising three independent non-executive directors and chaired by the deputy chairman of the board, determines the funding of political

parties in South Africa in accordance with a formal policy guiding the principles for funding which was adopted by the board on 29 April 2003. The group's strategy on political funding is currently under review.

The GRI involves the active participation of representatives from business, accountancy, investment, environmental, human rights, research and labour organisations from around the world. Established in 1997, GRI became independent in 2002, and is an official collaborating centre of the United Nations Environment Programme (UNEP) and works in co-operation with the UN Global Compact. In terms of this membership, AngloGold Ashanti is committed to:

- the active promotion of GRI's principles and its broader stakeholder constituency;
- participation in the GRI process; and
- in so far as is practicable, preparing sustainability reports informed by the GRI guidelines and principles and which are available to the public.

#### ETHICS AND GOVERNANCE

##### EG5

AngloGold Ashanti subscribes to ICMM principles

AngloGold Ashanti is a founding member of the International Council on Mining and Metals (ICMM) and subscribes to the ICMM principles of sustainability.

#### **ICMM sustainable development framework – ICMM principles**

As members of the ICMM, or as companies that have otherwise agreed to adopt the same performance obligations as ICMM members, we seek continual improvement in our performance and contribution to sustainable development so as to enhance shareholder value. In striving to achieve this, we will:

- implement and maintain ethical business practices and sound systems of corporate governance;
  - integrate sustainable development considerations within the corporate decision-making process;
  - uphold fundamental human rights and respect cultures, customs and values in dealings with employees and others who are affected by our activities;
  - implement risk-management strategies based on valid data and sound science;
  - seek continued improvement of our health and safety performance;
  - seek continued improvement of our environmental performance;
  - contribute to the conservation of biodiversity and integrated approaches to land use planning;
  - facilitate and encourage responsible product design, use, re-use, recycling and disposal of our products;
  - contribute to the social, economic and institutional development of the communities in which we operate; and
  - implement effective and transparent engagement, communication and independently verified reporting arrangements with our stakeholders.
- ICMM corporate membership includes a commitment to measure corporate performance against these principles. In this report, AngloGold Ashanti also reports its

performance in terms of these principles.

## ETHICS AND GOVERNANCE

EG6

### The United Nations Global Compact

Through the power of collective action, the Global Compact seeks to advance responsible corporate citizenship so that business can be part of the solution to the challenges of globalisation. In this way, the private sector – in partnership with other social sectors – can help realise the UN Secretary-General's vision: a more sustainable and inclusive global economy. The Global Compact is a voluntary corporate citizenship initiative with two objectives:

- to make implementation of the principles a routine feature of business activities around the world; and

- to catalyse actions in support of UN goals.

The Global Compact is not a regulatory instrument – it does not police, enforce or measure the behaviour or actions of companies. Rather, it relies on public accountability, transparency and the enlightened self-interest of companies, labour and civil society to initiate and share substantive action in pursuing the principles upon which the Global Compact is based. Members of AngloGold Ashanti's board of directors have participated at Global Compact events and presentations.

### **10 principles of the UN Global Compact**

The Global Compact's 10 principles in the areas of human rights, labour, the environment and anti-corruption enjoy universal consensus and are derived from:

- the Universal Declaration of Human Rights;

- the International Labour Organization's Declaration on Fundamental Principles and Rights at Work;

- the Rio Declaration on Environment and Development; and

- the United Nations Convention Against Corruption.

The Global Compact asks companies to embrace, support and enact, within their sphere of influence, a set of core values in the areas of human rights, labour standards, the environment and anti-corruption.

### **Human rights**

*Principle 1:* Businesses should support and respect the protection of internationally proclaimed human rights; and

*Principle 2:* make sure that they are not complicit in human rights abuses.



## Risk management

The board has ultimate responsibility for the total risk management process within AngloGold Ashanti and reviews and approves the risk strategy and policies that are formulated by the executive directors and senior management. Management is accountable to the board and has established a group-wide system of internal control to manage significant group risk. The risk management policies are communicated to all relevant employees.

A full review of the risk, control and disclosure processes is undertaken annually to ensure that all additional requirements are incorporated into the system in the future. The systems are in place and the focus is on ensuring that the requirements of the King Code and the Sarbanes-Oxley Act are complied with timeously. In conducting its annual review of the effectiveness of risk management, the board considers the key findings from the ongoing monitoring and reporting process, management assertions and independent assurance

## ETHICS AND GOVERNANCE

EG7

### **Labour standards**

*Principle 3:* Businesses should uphold the right to freedom of association and the effective recognition of the right to collective bargaining;

*Principle 4:* the elimination of all forms of forced and compulsory labour;

*Principle 5:* the effective abolition of child labour; and

*Principle 6:* the elimination of discrimination in respect of employment and occupation.

### **Environment**

*Principle 7:* Businesses should support a precautionary approach to environmental challenges;

*Principle 8:* undertake initiatives to promote greater environmental responsibility; and

*Principle 9:*

encourage the development and diffusion of environmentally friendly technologies.

### **Anti-corruption**

*Principle 10:* Businesses should work against all forms of corruption, including extortion and bribery.

Information drawn from the United Nations Global Compact website –

[www.unglobalcompact.org](http://www.unglobalcompact.org)

reports. The board also takes account of material changes and trends in the risk profile, and considers whether the control system, including reporting, adequately supports the board in achieving its risk management objectives. The board furthermore receives assurance from the Audit and Corporate Governance Committee, which derives its information, in part, from regular internal and external audit reports on risk and internal control throughout the group. A full discussion on risk management and internal controls and the risks identified by the company may be found in the Annual Report 2005.

#### Disclosure and share trading

AngloGold Ashanti subscribes to a policy of full, accurate and consistent communication in respect of both its financial and operating affairs. To this end the company has adopted a Disclosure Policy, the object of which is to ensure compliance with the rules of the various exchanges on which it is listed and provide timely, accurate and reliable information fairly to all stakeholders including investors (and potential investors), regulators and analysts.

Results presentations are conducted four times a year and are made available to all shareholders via the website. All other information that is released into the public domain by the company is made available on the company's website at [www.anglogoldashanti.com](http://www.anglogoldashanti.com).

AngloGold Ashanti does not permit directors and key employees (that is, employees having access to price-sensitive information) to trade in company shares during closed periods.

Directors and key employees are required to follow a formal process before trading in the company's shares. Closed periods are in effect prior to the publication of the quarterly, half-yearly and year-end results. Where appropriate, a closed period is also effective during periods where major transactions are being negotiated and a public announcement is imminent.

Both the Insider Trading (Market Abuse) and Disclosure Policies are available on the company website.

#### Codes of ethics and whistle-blowing policy

In order to comply with the company's obligations in terms of the Sarbanes-Oxley Act and the King Code, and in the interests of good governance, the company has adopted a Code of Ethics for Employees, a Code of Ethics for Senior Financial Officers, and a Whistle-blowing Policy (*See Report to Society 2004 page EG13*) that encourage employees and other stakeholders to report confidentially and anonymously acts of an unethical or illegal nature affecting the company's interests. Both codes and the policy are available on the company website.

All reports made in terms of the whistle-blowing policy are fielded by a third party, Tip-Offs Anonymous, which ensures all reports are treated confidentially or anonymously, depending on the preference of the caller. The information is relayed to management for investigation.

#### ETHICS AND GOVERNANCE

EG8

All reports and the progress of the investigations are conveyed to the Audit and Corporate Governance Committee by the group internal audit manager.

#### 5. Case studies

A case study that discusses an important issue for the company in 2005 is presented on pages EG10 to EG12. Note that follow-ups on the case studies presented in the Report to Society 2004 may be found on the website.

#### ETHICS AND GOVERNANCE

EG9

Whistle-blowing

#### **Summary of cases reported by category – 2005**

##### **CATEGORY**

##### **Total**

Bribery and corruption

3

Collusion

1

Enquiry/clarification

4

Fraud

20

Grievance

2

Irregularities

11

Misappropriation

4

Misconduct

23

Unfair labour practice

4

##### **Grand total**

**72**

All cases reported are duly investigated and reported, disciplinary action taken where necessary and reports made to the relevant authorities for further investigation or action where applicable.

The process is placed under further scrutiny with a report being given to the Audit and Corporate Governance Committee and the Executive Committee on a quarterly basis, including the status of all cases reported and any action taken.

Policy and guidelines on conflicts of interest

AngloGold Ashanti has adopted a Conflict of Interest Policy which serves to highlight the duties of the employee with regards to conflict of interest. As defined by the document, a conflict of interest occurs when an employee has an interest, either directly or indirectly, in an entity external to the company which may conduct, or does conduct business with the company. The policy aims to promote transparency in the

work environment and applies to temporary, part-time and full-time employees.

The policy is based upon the premise that the relationship between employer and employee is one of mutual trust and understanding, while at the same time providing for potential, perceived and actual conflicts of interest. If a conflict of interest arises, the employee is obliged to complete a Declaration of Conflict of Interest, failing which, disciplinary action may be initiated.

The policy also highlights guidelines for reporting suspected conflicts of interest by another employee or external stakeholder.

ETHICS AND GOVERNANCE –  
CASE STUDY GROUP

5.1 Human rights, the DRC and AngloGold Ashanti  
EG10

By definition AngloGold Ashanti's 'new frontiers' exploration strategy means that the group recognises the inevitability of searching for gold in areas that are largely unexplored, and where the element of risk in doing business is heightened – frequently owing to the vicissitudes of politics in these emerging economies. (*See Report to Society 2004 page EP9.*)

AngloGold Ashanti's strategy has in recent years taken it to countries such as Alaska, China, Colombia, Mongolia, the Philippines, and, in Africa, among others, to the Democratic Republic of Congo (DRC) – Africa's third largest country which is host to a wide range of minerals including copper, cobalt, diamonds and gold. The DRC has a history of political instability, with violent undertones in recent years. Despite the signing of the Pretoria Accord in 2003, which was to signal an official end to hostilities between factions in that country, conflict persists in eastern DRC, where the company's exploration activities are based and where so-called rebel parties are particularly active.

Through its subsidiary AngloGold Ashanti Kilo – a joint venture between AngloGold Ashanti (86.22%) and the State Mining Agency, Offices des Mines d'or de Kilo Moto (OKIMO) (13.78%) – AngloGold Ashanti holds properties in the Ituri region in the north-east of the DRC, a concession (Concession 40) area of approximately 10,000 km

2

. The concession covers the Kilo belt, one of nine gold-bearing greenstone belts in the region. The Mongbwalu area, where AngloGold Ashanti is focusing its exploration programme, is believed to have yielded some 1.3 Moz of gold to date.

Although the gold concession was granted in 1996 to the then Ashanti Goldfields, civil conflict hampered efforts to commence mining exploration activities. In November 2003, and with a peace agreement in place, the company deployed two Congolese professional exploration employees to Mongbwalu in anticipation of re-opening the exploration camp. In December 2004, as a result of discussions held with DRC government officials and other interested parties, an exploration team was deployed at Mongbwalu and drilling started in January 2005 (by then under the auspices of AngloGold Ashanti following the business combination between the two companies).

In June 2005 Human Rights Watch (HRW), a United States-based non-governmental organisation (NGO), published a report in which it alleged that the company had made payments to and fostered an inappropriate relationship with a rebel group operating in the area, the Front National Integriationniste (FNI), in order to maintain access to the goldfields.

For a period in 2004 the company had paid a total of \$1,100 in landing taxes at the Mongbwalu airstrip, believing the money was going to the transitional government of the DRC. When United Nations officials suggested that these payments could contravene UN Resolution 1493 regarding conflict in the DRC, the company immediately stopped these payments.

In addition, in January 2005 the FNI demanded financial assistance from AngloGold Ashanti to send an FNI delegation for talks in Kinshasa. The company officials involved initially steadfastly refused to yield to this act of extortion, but were later forced to take a different view of the situation in the interests of their personal safety, and handed to the militia \$8,000 sourced from petty cash, local business people and their own resources. The amount demanded by the militia was \$15,000.

In the wake of the company's own internal investigations and the allegations of improper conduct, AngloGold Ashanti sent a high level team to the DRC to investigate the feasibility of retaining a presence in the region without compromising the company's values and integrity. Following meetings with key stakeholders – local, regional and national government representatives, OKIMO, the UN peacekeeping force MONUC and representatives of the Catholic Church – AngloGold Ashanti concluded that it was able to conduct its business with integrity in the area and would review its activities regularly.

ETHICS AND GOVERNANCE –  
CASE STUDY GROUP

5.1 Human rights, the DRC and AngloGold Ashanti *cont.*

EG11

Should circumstances deteriorate so as to put the safety of employees at risk or compromise the company's values, it will withdraw immediately. Such a situation arose in October 2005 when a resurgence of rebel activity, following the deployment of government troops in the area, prompted the company to withdraw all professional staff, other than security staff, from the camp as a precautionary measure. The exploration team returned and resumed exploration activities after three weeks once the government troops had restored, and indeed improved, stability to the area.

To further ensure operational integrity and compliance with the company's values in its operations in the DRC, AngloGold Ashanti has put in place a number of procedural requirements. These include the disclosure to the government of the DRC of all payments made to the state and its agencies, and all other payments for goods and services received being subject to internal and external audit controls. AngloGold Ashanti management in the DRC is involved in the EITI (Extractive Industries Transparency Initiative) process and the company is committed to the success of the programme (*see box on EG12*).

Other goods and services provided by the company to community organisations are monitored by a community-based committee and are not directed at any militia or politically-based institutions. In this regard, a stakeholders' forum and community development committee has been established to ensure regular contact is maintained with the community and that community development priorities and issues can be brought to the attention of management timeously. A stakeholder engagement plan is also being put in place to formalise this community consultation which is expected to be in place by the end of the first quarter of 2006. The project's community development programme is currently operating on a budget of approximately \$100,000 a year, and is being increased to \$150,000 in 2006.

Policies and procedures are also in place to ensure that only authorised company personnel are permitted to make use of company assets, such as vehicles. Furthermore, all contact with third parties is logged and the company has no direct contact with militia or political groupings, other than through local government, MONUC (the United Nations Organisation Mission in the DRC) or the FARDC (the Armed Forces of the Democratic Republic of the Congo). Arrangements are in place to report any incidents to MONUC and there is regular contact with MONUC's human rights officials based in Bunia.

The security providers to the operation are a signatory to the Voluntary Principles on Security and Human Rights and AngloGold Ashanti too is in the process of becoming a signatory to the Principles ([www.voluntaryprinciples.org](http://www.voluntaryprinciples.org)).

Furthermore, in employing site-based personnel, background checks have been conducted to ensure that no person with credible allegations of human rights abuses is employed.

In general, AngloGold Ashanti believes that, provided the principles and procedures set out here are adhered to, the company's activities are more likely than not to make a positive contribution to the DRC's social, political and economic recovery.

AngloGold Ashanti's current exploration programme in a limited area around Mongbwalu has yielded positive results – historical grade and tonnage estimates of 1.2 Moz at 9.9g/t have been confirmed through drilling at Adidi. Exploration in the immediate Mongbwalu area is expected to continue through 2006 and 2007, with the objective of defining a 5 Moz mineable resource and completing a feasibility study in 2008 which, if approved, would lead to mine construction commencing in 2009. A total of \$30 million is expected to be spent on exploration through to 2008.

The remainder of the 3,000 km

2

Kilo greenstone belt on Concession 40 has estimated historical gold production of 4 Moz. Airborne geophysics will be carried out over the Kilo greenstone belt early in 2006 to guide target generation studies over this ground in 2006 and 2007, with on the ground, field evaluation of the identified targets during 2008.

ETHICS AND GOVERNANCE –  
CASE STUDY GROUP

5.1 Human rights, the DRC and AngloGold Ashanti *cont.*

EG12

Engaging with NGOs

AngloGold Ashanti is engaged in a range of initiatives and interacts with NGOs to deal with the issues faced in the DRC and other countries where human rights issues may arise. Although these initiatives and interactions remain ‘work in progress’ they reflect the efforts of resources and other companies to ensure that their commercial activities largely benefit people in mining communities and countries while minimising negative impact. These include:

**The Extractive Industries Transparency Initiative (EITI)**

The EITI ([www.eitransparency.org](http://www.eitransparency.org)) supports improved governance in resource-rich countries through the full publication and verification of company payments and government revenues from oil, gas and mining.

**Communities and Small Scale Mining Initiative (CASM)**

Communities and Small-Scale Mining (CASM) is chaired by the UK government’s Department for International Development and is housed at the World Bank in Washington DC. It was launched in March 2001 in response to international recognition of the need for an integrated approach to address the challenges facing ASM communities and for improved co-ordination between institutions funding and executing assistance. It was established with the purchase of reducing poverty by supporting integrated sustainable development of communities affected by or involved in artisanal and small-scale mining in developing countries.

**The International Council on Mining and Metals (ICMM)**

AngloGold Ashanti is an active member of this organisation. Members believe that the mining, minerals and metals industry acting collectively can best ensure continued access to land, capital and markets as well as build trust and respect by demonstrating the ability to contribute successfully to sustainable development.

ICMM members seek to offer strategic industry leadership towards achieving continuous improvements in sustainable development performance in the mining, minerals and metals industry.

**The Council for Responsible Jewellery Practices (CRJP)**

AngloGold Ashanti has recently joined the Council for Responsible Jewellery Practices which was founded in May 2005 with members from a cross-section of the diamond and gold jewellery supply chain, from mines to retail outlets. Council Members are committed to promoting responsible business practices in a transparent and accountable manner throughout the industry. Their commitment aims to maintain consumer confidence in diamond and gold jewellery products and the trust of all interested stakeholders in the industry.

ETHICS AND GOVERNANCE –  
CASE STUDY GROUP

6. Objectives for 2006

EG13

- Complete review of the first year of the Conflicts of Interest Policy roll-out.
- All regions to adopt schedules of laws dealing with document retention, as required by the Document Retention Policy.
- Adoption of Gifts and Anti-bribery policy.



1. Introduction

SH1

2. Business principle

SH1

3. Key indicators

SH2

4. Review 2005

SH4

5. Case studies

SH19

5.1 Integrated Seismic Systems International (ISSI)

SH20

5.2 Managing fatigue at Sunrise Dam

SH22

5.3 Ventilation system upgrade at Cuiabá mine in line  
with expansion

SH23

5.4 Multimillion dollar refrigeration project for Obuasi

SH24

5.5 Emergency rescue services at the South African operations

SH25

5.6 Taking TB control a step closer to employees

SH26

5.7 Pioneering TB research programme launched in  
gold mining industry

SH28

5.8 Significant improvements in safety at Kopanang

SH30

5.9 Fall of ground management in South Africa

SH32

6. Objectives for 2006

SH34

OCCUPATIONAL

SAFETY AND HEALTH

contents

Every manager and employee takes  
responsibility for health and safety;  
and together strive to create  
workplaces that are free of  
occupational injury and illness.

Occupational

safety and health

OUR VALUES:

AngloGold Ashanti's safety and health management and practices are guided by the group's business principle, AngloGold Ashanti as an employer – safety and health.

The key indicators in this section of the report have been assured by external auditors PricewaterhouseCoopers and this report has been compiled in accordance with the Global Reporting Initiative (GRI) guidelines. *(See page 14 of the introduction for the GRI index).*

## 2. Business principle

AngloGold Ashanti as an employer – safety and health

•

The company is committed to **complying** with all relevant occupational health and safety laws, regulations and standards. In the absence of such standards, leading practice will be adopted.

•

We are committed to providing a working environment that is conducive to **safety and health**.

•

The management of occupational safety and health is a prime **responsibility** of line management, from the executive level to the first line supervisory level.

•

We strive for **employee involvement** and consultation with employees or their representatives to gain commitment in the implementation of these principles.

•

The company is committed to providing all necessary **resources** to enable compliance with these principles.

•

The company will not tolerate or condone deliberate **breaches** in standards and procedures.

•

We will implement safety and health management systems based on internationally recognised **standards** and we will assess the effectiveness of these systems through periodic audits.

•

We will conduct the necessary **risk assessments** to anticipate, minimise and control occupational hazards.

•

We will promote initiatives to continuously **reduce** the safety and health **risks** associated with our business activities.

•

We will set safety and health objectives based on comprehensive strategic **plans** and will **measure** performance against these plans.

•

We will **monitor** the effects of the company's operational activities on the safety and health of our employees and others, and we will conduct regular performance reviews.

•

We will provide all necessary personal **protective equipment**.

•

We will establish and maintain a system of **medical surveillance** for our employees.

•

We will **communicate** openly on safety and health issues with employees and other stakeholders.

•

We will ensure that employees at all levels receive appropriate **training** and are competent to carry out their duties and responsibilities. We will require our **contractors** to **comply** with these principles and we will seek to influence joint venture partners to apply them as well.

OCCUPATIONAL SAFETY AND HEALTH

1. Introduction

SH1

## Safety

- 25 employees lost their lives in work-related accidents at AngloGold Ashanti in 2005 (2004: 31\*).

- The group's Fatal Injury Frequency Rate (FIFR) was 0.14 per million man hours worked, which is a 26% improvement on the 2004 rate of 0.19. This performance is also an improvement of 64% on the FIFR of 0.39 achieved in 1998.

- Of the employees who died, 17 were from the South African operations, which translates into an FIFR of 0.17 per million man hours, reflecting an improvement of 41% on the previous year's rate of 0.29. This is based on an average of 37,514 people at work in the South Africa Region (excluding employees not at work).

- A further seven employees died at Obuasi mine in Ghana during the year. The FIFR in Ghana was 0.29 per million man hours worked.

- One employee died at AngloGold Ashanti Mineração in Brazil during the year. The FIFR in Brazil was 0.11 per million man-hours in 2005 (2004: 0.00).

- The Cripple Creek and Victor (CC&V) mine in Colorado, USA has operated without a lost-time injury since November 2003.

- The group's Lost Time Injury Frequency Rate (LTIFR) in 2005 rose by 3% to 6.77 per million man hours from 6.56 the previous year, the first year-on-year increase since 1998. However, data still show a 53% improvement over the seven-year period since 1998 when the LTIFR was 14.52.

- The LTIFR for the South Africa region (the largest employer in the group) was 10.04, up by 10.2% on the previous year.

- The LTIFR in Ghana (the second largest employer in the group) was 2.89 per million man hours.

- Kopanang mine was awarded the third Dick Fisher Global Safety Award for excellence in safety in 2005. CC&V was recognised for sustained safety and health achievement, while Cerro Vanguardia was also commended for its performance.

- Savuka mine won the South African Safety Shield Competition for 2005 for the second consecutive year. This followed an excellent performance in respect of the serious injury rate which was a 5% improvement on the best rate recorded in the last four years. This mine is amongst the deepest mines in the world.

*\* In the Report to Society 2004, 32 fatalities were recorded and reported by the company. The DME has since ruled that one of these deaths was not occupation-related and therefore this figure has been restated.*

## OCCUPATIONAL SAFETY AND HEALTH

### 3. Key indicators

SH2

0.00

0.05

0.10

0.15

0.20

0.25

0.30

0.35

0.40  
0  
2  
4  
6  
8  
10  
12  
14  
16

\* *Data was not assured*

\* *Data was not assured*

Our assurance is based on a test of the reliability of the selected data marked with the symbol , by way of:

- conducting interviews and holding discussions with management, key personnel and/or stakeholders of AngloGold Ashanti Limited and assessing data trends;
- obtaining an understanding of the systems used to generate, aggregate and report the selected data;
- conducting site visits to test systems and data and inspecting premises where necessary;
- assessing the completeness and accuracy of the selected data; and
- reviewing and analysing collected information and effecting re-calculations where considered appropriate.

### Health and occupational environment

The following key indicators are reported for South Africa because the health threats presented in the occupational environment are greater in the South African operations as a consequence of deep-level mining operations (heat, dust and noise) and the incidence of HIV/AIDS and because detailed reporting on occupational disease is required in terms of the Mine Health and Safety Act. HIV/AIDS is addressed in the Regional Health Threats section of this report as is malaria, which is the primary health threat in the East and West African operations. Statistics on medical surveillance at all of the other AngloGold Ashanti operations may be found on the website.

- 57,015 occupational medical surveillance examinations (initial, periodical, transfer and exit) were performed in the South Africa region during 2005 in accordance with the requirements of the Mine Health and Safety Act.

- 175 new cases of noise-induced hearing loss (NIHL) were identified in South Africa during 2005, which is a rate of four per 1,000 employees. This is a decrease of 41% on the previous year's rate of seven per 1,000 employees.

- 316 cases of occupational lung disease (OLD) were identified in South Africa during 2005, which is a rate of seven per 1,000 employees, a 1% decrease from the figure reported in 2004. HIV, silica exposure, TB and an ageing workforce all play a role in the incidence of OLD.

- 1,043 new cases of pulmonary tuberculosis (TB) were detected and treated during the year, which is a rate of 25 per 1,000 employees, down from a rate of 35 detected the previous year. This declining rate is pleasing in view of a high prevalence of HIV and AIDS amongst a silica-exposed workforce.

- Dust (silica) control on the South African mines continued to improve, although the agreed industry target, for which 95% of all individual samples must be below the legal limit of 0.1mg/m

3  
by 2008, has not yet been achieved. In 2005 the average silica dust concentration was 0.04mg/m

3  
, with the 95th percentile at 0.13mg/m

3  
.

- Stopping wet-bulb temperatures averaged 28.3°C for the fourth quarter, while development face wet-bulb temperatures averaged 28.3°C.

- Rock drills have been muffled, thereby significantly reducing noise exposure during drilling. The aim is to reduce noise levels to below 110 dBA. Virtually all noisy fans underground have been silenced, with 48% of all fans converted to silent fans and 48% equipped with bolt-on silencers.

OCCUPATIONAL SAFETY AND HEALTH  
SH3

In the Report to Society 2004, a number of safety and health objectives were set and the company's performance against these objectives is summarised below.

## **Safety**

### **Objectives for 2005**

#### **Performance in 2005**

Long-term objective remains to eliminate

In 2005, there were 25 fatalities within AngloGold Ashanti, which is a all accidents

decrease of 19% on the previous year. Since 1998 the FIFR has declined by 64% and the LTIFR by 53%.

Reduce LTIFR by 20% year-on-year

The LTIFR rose, year-on-year by 3% to 6.77 per million man-hours.

Further adoption of leading indicators

The adoption and implementation of a risk management system at the (as opposed to lagging indicators) as a

majority of operations has enabled the identification of risks and indicators management tool

associated with operations. Management systems have been put in place to monitor and manage these. The evaluation of performance towards the Global Safety Award is based on lagging indicators (one-third) and leading indicators (two-thirds).

Further implementation of the fall of ground

The Fall of Ground Management strategy comprising mine design, mine support campaign in South Africa

standards, mindset, monitoring and research, has now been fully implemented in the South African operations. The focus in 2005 was on the behavioural aspects or mindset of the workforce. The objective for 2006 is to fully integrate all areas of the Fall of Ground Management strategy that has been developed and implemented over the past few years.

Peer-on-peer Safety Management and

During late 2004 and 2005 the South Africa Region adopted three slogans to Auditing Technique (SMAT) approach to be

support the peer-on-peer process. The slogans are 'I look after my own safety, implemented in 2005 in South Africa

('mina pasopa mina'), 'I will look out for your safety' ('mina pasopa wena') and you will look out for my safety' ('wena pasopa mina'). These are underpinned by the phrase 'safe acts save lives'. These issues were part of the major safety launches held in 2005 to pave the way for the process of peer-on-peer review.

## **Health**

### **Objectives for 2005**

#### **Performance in 2005**

Improved medical surveillance to

Improvements in the quality of medical surveillance at Iduapriem and Bibiani be implemented in Ghana

have been achieved. Further work on the implementation of medical surveillance is required at Obuasi.

Establish leading indicators to manage progress

in meeting the South African Mine Health and

Safety Council's targets on NIHL and silicosis.

These targets are:

- OLD: by 2008, 95% of all silica exposure

- The agreed industry targets have not yet been achieved. In 2005, the average measurements will be below the occupational silica dust concentration was 0.04mg/m

3  
, with the 95th percentile at exposure limit of 0,1mg/m

3  
; and by 2013 no 0.13mg/m

3  
. Since 2004, a number of initiatives had been implemented, new cases of silicosis will occur in previously including the spraying of dust suppressant on footwalls, development of unexposed employees. standards on dust controls and workshops held for Mine Occupational Hygienists.

- NIHL: by 2013 noise emissions from all equipment

- The company is on track to achieve the targets. The results of a recent baseline will be below 110dB(A); and by 2008 no assessment on equipment noise were submitted to the Noise Steering Committee deterioration in hearing greater than 10%

who will draw up a strategic plan on equipment silencing. will occur in noise-exposed employees.

Continue to monitor and manage the incidence of TB incidence rate decreased to 25 per 1,000 employees. This is despite TB on the South Africa operations: a high prevalence rate of HIV/AIDS.

- mobile Digital Diagnostic Radiography (DDR)

- One mobile DDR clinic commissioned and another on order clinics to be commissioned in 2005 for May 2006. (*See case study on page SH26: Taking TB control a step*

- Aurum Health Research to lead Gates *closer to employees.*)

Foundation on TB prophylaxis

- Aurum study under way. (*See case study on page SH28: Pioneering TB research programme launched in gold mining industry.*)

OCCUPATIONAL SAFETY AND HEALTH

4. Review 2005

SH4



The company's performance in 2005 has been reported against its own business principles as they relate to health and safety (indicated in orange below).

***We are committed to providing a working environment that is conducive to safety and health***

The management of safety and health is considered at the highest level within the company – by the Board of Directors and the Board Committee on Safety, Health and Sustainable Development – and is the subject of intense interaction with unions and other employee representatives. Safety and health information is presented and reported on a regular basis both internally and externally.

While the company is pleased to be able to report significant improvements in safety and health performance since 1998, the long-term target remains the elimination of all fatal accidents and a consistent decrease in lost-time accidents and instances of occupational disease.

***We will monitor the effects of the company's operational activities on the safety and health of our employees and others, and we will conduct regular performance reviews***

Safety and health performance is monitored and managed as an integral part of operational performance.

### **Safety**

A range of leading indicators are used to monitor and manage performance across the group. These are usually operation-specific and related to identified risks, for example, at Cerro Vanguardia in Argentina, geotechnical parameters are considered leading indicators; at Sunrise Dam in Australia staff turnover is a leading indicator. The primary lagging indicators of safety performance are the FIFR, the LTIFR and the days lost per lost-time injury (which provides an indication of the severity of the lost-time injuries).

Performance during 2005 improved with a significant reduction in the fatality rate, and a marginal increase in LTIFR.

#### *Fatal accidents*

Progress continued to be made towards AngloGold Ashanti's long-term goal of achieving zero fatalities. Regrettably, however, there were 25 fatal accidents across the group in 2005 (2004: 31). Seventeen of these deaths occurred in South Africa, seven at Obuasi in Ghana and one at AngloGold Ashanti Mineração in Brazil.

The names and details of those employees who died during 2005 appear on the website.

The board and management of the company extend their deepest sympathy to the families and colleagues of the deceased.

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**FIFR and LTIFR**

The FIFR decreased from 0.19 per million man-hours in 2004, to 0.14 per million man hours in 2005, an improvement of 26%. Since 1998 (when the company was established in its current form) this rate has improved by 64%. However, the LTIFR rose from 6.56 per million man-hours to 6.77 in 2005. While this is a marginal increase, it does break the downward trend and means that the year-on-year targeted decrease of 20% was not met. Nonetheless, many of the individual operations within the company turned in a good performance as can be seen from the table alongside.

The primary causes of fatalities in the South Africa region remain falls of ground (88%), with seismically induced falls of ground accounting for 41% of all fatalities. Other major causes are transport-related accidents (6%).

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**Fatal Injury Frequency Rate (FIFR)**

**per million man hours**

**05**

**04**

**03**

**Argentina**

Cerro Vanguardia

**0.00**

0.00

0.00

**Australia**

Sunrise Dam

**0.00**

0.00

0.00

**Brazil**

AngloGold Ashanti

**0.18**

0.00 0.20

Mineração

Serra Grande

**0.00**

0.00

0.00

**Ghana**

Bibiani

**0.00**

0.00

—

Iduapriem

**0.00**

0.00

—

Obuasi

**0.29**

0.00

—

**Guinea**

Siguiri

**0.00**

0.00

—

**Mali**

Morila

**0.00**

0.32

0.31

Sadiola

**0.00**

0.00

0.31

Yatela

**0.00**

0.00

0.00

**Namibia**

Navachab

**0.00**

0.00

0.00

**South Africa**

Great Noligwa

**0.22**

0.26

0.32

Kopanang

**0.07**

0.06

0.41

Moab Khotsong

**0.16**

0.22

0.00

Mponeng

**0.21**

0.37

0.33

Savuka

**0.00**

0.73

0.47

Tau Lekoa

**0.41**

0.19

0.09

TauTona

**0.29**

0.78

1.10

**Tanzania**

Geita

**0.00**

0.00

0.00

**USA**

CC&V

**0.00**

0.00

0.00

**Group**

**0.14**

0.19

0.29

Using leading and lagging indicators in the management of safety

AngloGold Ashanti operations use both leading and lagging indicators in monitoring safety performance.

The lagging indicators are those that have traditionally been used to measure actual performance. These include: LTIFR, serious injury frequency rate (only in South Africa), FIFR and severity frequency rate. All these rates are expressed as per million hours worked.

Through the enterprise-wide risk management programme that has been implemented within the South Africa region, it is now possible to identify at operational level most of the significant risks and then to establish the related leading indicators – those that indicate a predisposition to an event or situation that could precipitate or be conducive to an accident or incident. These include, for example, the amount of overtime worked in a section and the disciplinary processes applied.

**Health**

The most significant occupational health threats to AngloGold Ashanti are noise-induced hearing loss (NIHL) and occupational lung disease (OLD). In South Africa, TB in silica-exposed employees is also considered to be an occupational disease.

*Noise-induced hearing loss*

Hearing conservation programmes exist at all operations. Based on current performance, NIHL is still a health threat in the South Africa region despite a downward trend over the past three years. Baseline audiograms, performed in terms of new compensation regulations, form the basis for future assessment of employees in terms of hearing loss.

Using engineering initiatives to reduce noise at source is the priority management tool, with all drills and fans having been silenced to date. Other noisy equipment is being attended to on a priority basis and investigations aimed at identifying other sources that could result in hearing loss are continuing. Emphasis is also being placed on auditing and evaluating underground work areas in terms of risk.

The hearing conservation programme includes the provision of hearing protection devices (HPDs) and annual audiometry examination of all employees. While indications are that HPDs are increasingly being used, the monitoring systems and training efforts also emphasise the employee's responsibility to protect his/her hearing. While NIHL rates have decreased, the region continues to focus on this area as there is evidence of continued hearing loss occurring since the baseline study, although the degree of loss is not yet at a level that would warrant compensation.

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**Lost Time Injury Frequency Rate (LTIFR) per million man hours**

**05**

**04**

**03**

**Argentina**

Cerro Vanguardia

**3.09**

6.66

7.95

**Australia**

Sunrise Dam

**3.06**

3.73

6.05

**Brazil**

AngloGold Ashanti

**2.95**

1.56

4.04

Mineração

Serra Grande

**2.39**

1.21

1.94

**Ghana**

Bibiani

**0.86**

0.00

—

Iduapriem

**0.58**

0.00

—

Obuasi

**2.89**

2.53

—

**Guinea**

Siguiri

**0.64**

0.94

—

**Mali**

Morila

**2.17**

1.94

3.78

Sadiola

**1.30**

1.13

0.31

Yatela

**1.25**

0.76

2.92

**Namibia**

Navachab

**3.02**

0.90

3.60

**South Africa**

Great Noligwa

**12.13**

10.04

9.83

Kopanang

**11.58**

12.96

14.08

Moab Khotsong

**12.98**

6.70

7.11

Mponeng

**12.20**

9.50

9.81

Savuka

**14.13**

12.91

17.57

Tau Lekoa

**14.58**

15.43

25.96

TauTona

**10.76**

11.40

8.24

**Tanzania**

Geita

**0.79**

1.00

0.79

**USA**

CC&V

**0.00**

0.00

3.22

**Group**

**6.77**

6.56

8.83

*Occupational lung disease*

In South Africa, exposure to silica dust remains one of the major contributing factors to the development of OLD. In this context OLD includes TB, TB silicosis and obstructive airways disease. Of these, TB is the most pervasive and is compounded by a high (estimated 30%) HIV prevalence in the mining population, which greatly increases the risk of TB. About 85% of employees with TB are HIV positive.

Initiatives to eradicate dust and improve methods of dust control have continued, as have TB control programmes. The latter have been enhanced through the use of active TB case finding, supported by digital diagnostic radiography (DDR). The Occupational Health Centres at the Vaal River and West Wits operations each have a DDR facility. In addition a mobile DDR unit was commissioned during 2005 at Vaal River. The unit moves from shaft to shaft to facilitate more frequent x-raying of employees in an effort to detect and treat TB infection earlier, thereby preventing its spread and lessening the severity of its impact. The success of this mobile DDR has prompted the order of a further unit for the West Wits operations. (*See case study on page SH26: Taking TB control a step closer to employees.*)

Treatment of TB is available free of charge to all employees and contractors. The extension of the TB control programme to contractors is believed to be one of the reasons behind the success of the AngloGold Ashanti TB management programme by reducing the prevalence and therefore infectious pool of the illness among contractor employees.

While the rate for new TB infections has decreased, the disease remains an area of concerted effort in light of HIV/AIDS, an ageing workforce and longer careers underground.

In 2004 Aurum Health Research, then a subsidiary of AngloGold Health Service, was granted \$14 million over a five-year period by the Consortium to Respond Effectively to the AIDS/TB Epidemic (CREATE) and a research programme is now being implemented. The grant, which is part of a larger award of \$45 million to CREATE by the Bill and Melinda Gates Foundation, is being used to research strategies around TB control in the South African gold mining industry. In addition to Aurum, members of CREATE include, among others, the Johns Hopkins University Center for Tuberculosis Research, the London School of Hygiene and Tropical Medicine, the University of Stellenbosch and the World Health Organization. (*See case study on page SH28: Pioneering TB research programme launched.*)

The research being conducted by Aurum follows extensive consultation and collaboration with several South African gold mining companies, including AngloGold Ashanti, Gold Fields and Harmony, the departments of Health, Labour, and Minerals and Energy and various labour unions and associations. The aim of this specific research programme is to determine the effects of community-wide preventive therapy on TB rates in the South African gold mining industry.

*Silicosis*

Silicosis is an occupational lung disease caused by the inhalation of free silica dust present in mining areas with high quartz concentrations, as is frequently the case in deep-level mines.

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**Number of shifts lost  
due to injuries**

**05**

**04**

**Argentina**

Cerro Vanguardia

**283**

575

**Australia**

Sunrise Dam

**12**



31

**Brazil**

AngloGold Ashanti

**437**

491

Mineração

Serra Grande

**181**

107

**Ghana**

Bibiani

**44**

0

Iduapriem

**87**

0

Obuasi

**841**

496

**Guinea**

Siguiri

**65**

74

**Mali**

Morila

**22**

42

Sadiola

**177**

76

Yatela

**156**

150

**Namibia**

Navachab

**116**

122

**South Africa**

Great Noligwa

**10,867**

9,746

Kopanang

**5,428**

6,134

Moab Khotsong

**4,074**

1,268

Mponeng

**7,325**

5,343

Savuka

**2,346**

3,008

Tau Lekoa

**8,601**

5,369

TauTona

**4,523**

3,444

**Tanzania**

Geita

**148**

149

**USA**

CC&V

**0**

244

AngloGold Ashanti is working with the state, unions and other mining companies in developing strategies to improve access to and use of the follow-up treatment and compensation systems under the Occupational Diseases in Mines and Works Act (ODMWA), especially for ex-employees.

In Brazil new cases of silicosis have largely been eradicated. The company continues to provide medical and other support services to ex-employees who have contracted silicosis.

*HIV/AIDS*

HIV/AIDS continued to receive attention in the South Africa region. By the end of December 2005, 32.4% of the workforce had undergone voluntary counselling and testing (VCT), with over 3,250 employees currently enrolled in the Wellness Programme and 934 of these on anti-retroviral treatment (ART). HIV/AIDS is dealt with under the Regional Health Threats section of this report.

*Malaria*

Malaria is one of the most significant health threats at the East and West African operations and is discussed in the Regional Health Threats section of this report.

*Heat and physical fitness*

Deep-level mining is often accompanied by exposure to heat. AngloGold Ashanti employs a heat stress management programme to promote the health and well-being of its employees and to meet the requirements of legislation. (*See case study in Report to Society 2004: New heat tolerance centre at West Wits.*)

AngloGold Ashanti's South African mines operate some of the most sophisticated and largest refrigeration plants in the world. These are used to cool the underground working environment. Stopping wet-bulb temperatures averaged 28.3°C for the year, while development face wet-bulb temperatures averaged 28.3°C. A temperature greater than 29.5°C is believed to affect the safety and productivity of employees. Temperatures of greater than 27.5°C require that a Heat Stress Management Programme be maintained at that mine. A related issue is the operation of the Functional Work Capacity (FWC) test battery developed by AHS and featured in the Report to Society 2003. The use of this test battery has been extended to assess the fitness of women for work underground, which is particularly important in light of the South African mining industry's Charter requirements.

*Fatigue management*

The management of fatigue is an issue at a number of operations, particularly where rotational shifts are worked, and where work is continuous. In Western Australia, AngloGold Ashanti has been engaged in discussions with authorities with respect to fatigue and fatigue management and, in particular, a risk-based approach to managing the issue. Extensive work has been undertaken at Sunrise Dam in Australia in assessing risk, identifying potential problems and putting the appropriate controls in place. Work done at Sunrise Dam will be extended to Navachab in Namibia in 2006. (*See case study on page SH22: Managing fatigue at Sunrise Dam.*)

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**Absenteeism rate \***

**05**

**04**

**Argentina**

Cerro Vanguardia

**0.14**

0.35

**Australia**

Sunrise Dam

**0.00**

0.02

**Brazil**

AngloGold Ashanti

**0.08**

0.10

Mineração

Serra Grande

**0.01**

0.46

**Ghana**

Bibiani

**0.01**

0.00

Iduapriem

**0.02**

0.00

Obuasi

**0.03**

0.03

**Guinea**

Siguiri

**0.01**

0.01

**Mali**

Morila

**0.00**

0.01

Sadiola

**0.04**

0.02

Yatela

**0.06**

0.06

**Namibia**

Navachab

**0.11**

0.05

**South Africa**

Great Noligwa

**0.59**

0.51

Kopanang

**0.14**

0.39

Moab Khotsong

**0.61**

0.27

Mponeng

**0.51**

0.39

Savuka

**0.39**

0.37

Tau Lekoa

**0.88**

0.51

TauTona

**0.33**

0.27

**Tanzania**

Geita

**0.01**

0.02

**USA**

CC&V

**0.00**

0.32

*\* Occupational injury only*

***The management of occupational safety and health is a prime responsibility of line management, from the executive level to the first-line supervisory level***

Safety and health is overseen by the Board Committee on Safety, Health and Sustainable Development. This committee's role is to evaluate the social, economic, environmental and health effects of the company's operations on both local and global communities and to achieve a sustainable balance between economic and social development with due regard to the safety and health of employees and the impact of AngloGold Ashanti's operations on the environment. One of the stated primary objectives of this committee is to ensure the elimination of all work-related accidents and diseases. The committee conducts on-site inspections on matters of serious concern and in 2005 such a visit was conducted at Ergo, which is currently in closure mode.

The constitution of the committee requires a majority representation by non-executive directors. The committee currently comprises four non-executive directors, Bill Nairn (chairman), Dr James Motlatsi, Dr Sam Jonah and Simon Thompson, as well as chief executive officer Bobby Godsell and Neville Nicolau, chief operating officer, Africa; members of management, including the other chief operating officers; regional heads; and heads of disciplines (environment, safety and health, community and corporate affairs) are invited to attend.

The management of safety and health is the responsibility of line management at an operational level, who in turn are supported by specialist safety and health personnel. In South Africa, health services are provided by AngloGold Health Service (AHS), a separate but wholly-owned subsidiary of AngloGold Ashanti.

On 15 June 2005 AngloGold Ashanti became a signatory to the South African Mine Health and Safety Council's (MHSC) new safety and health targets in respect of injuries, silicosis and noise at a summit held in Johannesburg. The MHSC is a tripartite (employers, labour and government) body. This was followed by operational safety launches which were aimed at revitalising the strategic safety and health thrusts launched in 2004, and to demonstrate support for the MHSC's targets and plans.

***We will set safety and health objectives based on comprehensive strategic plans and will measure performance against these plans***

The group's values and business principles on safety and health and the accompanying safety and health policy are minimum guidelines for the group in respect of safety and health. Regions and operations are encouraged to develop their own specific principles, guidelines and policies in line with local conditions and legislation. Examples of mine safety and health policies may be found on the website.

It is the company's view that safety and health must form an integral part of the management of the operations. In the South Africa region the company has taken this a step further with the belief that ill health has an impact on both safety and productivity and has put in place a new strategic framework – Wellness in the Workplace – which adopts an integrated

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approach. The overall aim of this approach is to engage and retire healthy and productive people. The concept refers to physical well-being – from the employees' entry into the organisation through to departure – and recognises the interdependence between safety, health, the environment and productivity. This requires an integrated and co-ordinated approach by the safety, health and environment, medical and human resource disciplines. The programme has three phases, namely: the pre-employment/engagement phase; the exposure to the social and occupational environment during the employment phase; and the termination/post-employment phase.

Falls of ground workshops are held every quarter in the South African region. An action plan was developed and some improvement has been evident in the latter part of the year. (*See case study on page SH32: Fall of ground management in South Africa.*)

***We are committed to complying with all relevant occupational health and safety laws, regulations and standards. In the absence of such standards, leading practice will be adopted. The company will not tolerate or condone deliberate breaches in standards and procedures***

During 2005 there were no significant breaches of the safety and health legislation and regulations, applicable to the company's operations.

A list of some of the laws, regulations and standards applicable to safety and health may be found on the Report to Society website.

***The company is committed to providing all necessary resources to enable compliance with these principles. We will provide all necessary personal protective equipment***

Mining operations frequently take place in areas where there is limited infrastructure, particularly in respect of health care services. In these cases, or where the economies of scale make it cost-effective for the company to provide for its own needs, specialist facilities and infrastructure are established.

In South Africa health care and medical surveillance are handled by AHS, which provides health care services to the group's more than 37,000 South African employees and a growing number of dependants.

AHS owns and manages two world-class hospitals, numerous community-based clinics, on-mine medical stations and two occupational health centres. The service employs 1,134 people, 60% of whom are health care professionals. Each AHS hospital has medical, surgical and maternity wards, an intensive care unit, operating theatres, casualty and outpatient facilities, as well as radiography, occupational therapy and physiotherapy services. Employees have unlimited access to these facilities.

At Obuasi in Ghana health care services are provided at the Edwin Cade hospital. (*See Report to Society 2004: Upgrade planned for the Edwin Cade Memorial Hospital at Obuasi.*) At other smaller operations such as Geita, Navachab, Sigui, Sadiola, Yatela, Morila, Bibiani and

## OCCUPATIONAL SAFETY AND HEALTH

### SH11

#### Managing safety and health in South America

Roles and responsibilities are well defined in the management of safety and health in the South American operations. Each operational unit has its own safety department (run by a safety engineer and technicians at plant, mine and maintenance departments) and health department.

These in turn report to the operating manager who reports to the general

operating manager responsible for the region. Safety and health information from all the operations is co-ordinated at a central point, under the auspices of the South American regional office.



Iduapriem, on-mine medical facilities cater for employees needs and, in some cases, for their dependants. (*See Report to Society 2004: Model mine medical facility at Iduapriem.*)

The Siguiri medical centre, for example, is overseen by three medical doctors and has a facility for minor surgery and 14-bed in-patient accommodation. The facility is available to the entire workforce and dependants, and also provides limited services to surrounding communities.

At Sadiola and Yatela in Mali, the medical surveillance programme is run jointly by the medical staff and the Human Resources Department. The on-mine medical facilities are considered by the company to be among the best in the region and, at Sadiola, a well-equipped small hospital is on site.

***We will implement safety and health management systems based on internationally recognised standards and we will assess the effectiveness of these systems through periodic audits***

While safety and health performance is overseen at a corporate level, with strategies for specific issues being driven at this level (such as protocols for and the auditing of the management of cyanide), individual regions and operations are encouraged to develop their own safety management systems and cultures.

Twelve of AngloGold Ashanti's global operations have, up until now, used the National Occupational and Safety Association (NOSA) specifications for safety management systems and external auditing and certification. NOSA had been in existence for 54 years but was placed into provisional liquidation in May 2005. The principles underlying the NOSA system have been maintained at these operations and plans to use an alternative specification, OHSAS 18001, have begun. (*See box on OHSAS page SH13.*)

Operations set their own strategic plans in terms of safety and health management in accordance with their own specific circumstances. At Geita mine in Tanzania, for example, emphasis in 2006 will be placed on, among other things: development and training of safety representatives; compliance with site driving regulations; increased drug and alcohol awareness and testing; investigation and implementation of behaviour-based safety systems; worker fatigue management; and succession planning and localisation in respect of safety.

At Morila in Mali, the focus remains on the implementation of the Behaviour-Based Safety Programme, first introduced two years ago. This remains necessary as the majority of accidents is still related to the behaviour and attitude of the individuals involved.

At Bibiani in Ghana, a behaviour-based safety system is to be introduced in 2006, while attention will also be given to improved contractor management to ensure greater contractor commitment to safety. At Iduapriem, also in Ghana, the most significant safety challenge

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On-mine facility provides  
high level of service to Geita  
employees

Geita's on-site medical facility provides  
medical surveillance and care to mine  
employees. Overseen by the mine's  
health services manager, the facility  
employs four doctors and associated  
medical care staff. The nurses are trained  
to conduct visual acuity, spirometry,  
audiometry tests and to operate the  
X-ray machine; a qualified radiographer  
visits the facility for three hours per day.  
The doctors conduct the physical

medical examinations and issue the certificates of fitness to the employees. The facility is equipped with a five-bed ward, digital X-ray unit, audiometer with a booth, sperometer and lung function test equipment, and Snellens chart for visual acuity testing.

This facility promotes prevention and provides diagnosis and treatment for work-related injuries and illnesses for employees of Geita.

## OCCUPATIONAL SAFETY AND HEALTH

### SH13

#### Defining OHSAS 18001

The Occupational Health and Safety Assessment Series (OHSAS 18001) specification, presents requirements for an occupational health and safety management system, to enable an organisation to assume a proactive role in controlling its occupational health and safety risks as well as to improve its overall performance. It does not state specific OHSAS 18001 performance criteria, nor does it give detailed specifications for the design of a management system, but rather suggests standards covering the following aspects:

- general requirements
- policy
- planning for hazard identification, risk assessment and risk control
- legal and other requirements
- objectives
- management programme
- structure and responsibility
- training, awareness and competence
- consultation and communication
- documentation
- document and data control
- operational control
- emergency preparedness and response
- checking and corrective action
- performance measurement and monitoring
- accidents, incidents, non-conformance and corrective and preventive actions
- records and records management
- audit
- management review

A company implements safety management systems based on the OHSAS 18001 specification in order to eliminate or minimise risk to employees and other interested parties who may be exposed to risks related to its activities; implement, maintain and continually improve the safety and health management system; assure itself of its conformance with its

stated policy; demonstrate such conformance to others; seek certification/registration of its safety and health management system by an external organisation or make a self-determination and declaration of conformance with this OHSAS 18001 specification.

Medical surveillance

facilities in South America

Medical surveillance programmes are in place at each operation. Services include health examinations on admission to employment, on transfers, on returning to work following more than 30 days' sick leave, and on disengagement from the company. All employees undergo annual periodical health examinations. First-aid facilities are available at each operation, and there are agreements in place with local hospitals to attend to more serious cases.

•

At Cerro Vanguardia a mobile ICU and an ambulance are available full-time. Two medical teams work on weekly shifts, each comprising a doctor, two nurses and a radiologist.

•

At Serra Grande a doctor and a nurse work full-time; X-rays are taken at the local hospital.

•

At AngloGold Ashanti Mineração a team consisting of three doctors, 10 nurses, one radiologist and an audiotherapist work on shifts at all units (Cuiabá and Córrego do Sítio Mines, Queiroz Plant, and the Lamego Project).

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**Safety and health – recognition and awards in 2005**

AngloGold Ashanti

ISO 14001 – May 2005 by NQA (National Quality Assurance)

Mineração

5-Star NOSA Integrated System – February 2005 by NCA- NOSA Certification

ISO 9001 to the Laboratory – July 2004 by BVQI /

UKAS Certification

Bibiani

ISO 14001: 2004 re-certification successful

First place in the Zone B National First Aid Competition

Placed first as Best Safety Mine in Ghana at National Safety Competition, both organised by the Ghana Mines Department and the Chamber of Mines.

CC&V

On 6 May 2005, the Colorado State Senate recognised the outstanding achievement made at CC&V for their ‘exemplary record of over 1 million hours without a lost-time accident’.

Senator Tom Wiens introduced and read the resolution of behalf of the 65th General Assembly.

CC&V has been nominated to the Colorado Mining Association for recognition of 24 months without a lost-time injury.

A mine operations general foreman has also been nominated in recognition of his outstanding role in championing the DuPont STOP programme and the recently introduced Risk Assessment and Management process.

Geita

Retained ISO 14001 certification for the second time

Retained NOSA 4-Star rating

Tanzanian Presidential Merit Award for Environmental Excellence

Achieved 3.4 million LTI free hours in August

Achieved 25 million fatality-free hours

Great Nologwa

Achieved 1,000,000 fatality-free shifts on 2 July 2005

Savuka Mine

South Africa Region Underground Operations – Safety Shield

Competition for the second consecutive year

Iduapriem

Achieved 6 million man hours without a lost-time injury in May 2005

Won the Ghana Mines Department/Chamber of Mines Safety Competition and placed second behind Bibiani in the national event

Was adjudged the most improved mine in safety practices by the Ghana Mines Department

Kopanang

Reached 1,000,000 fatality-free shifts in November 2005

Dick Fisher Award for 2005

Moab Khotsong

Was awarded a Special Recognition Award for Outstanding Safety  
Performance by the Mine Health and Safety Council

Morila

Second place in the Mali INPS Safety Competition in April 2005

Mponeng

For the first time, reached 1,000,000 fatality-free shifts in

January 2005

Navachab

NOSA award for safety for best open-pit mine in Namibia

Retained NOSA 4-star status

Sunrise Dam

Finalist in the Chamber of Minerals and Energy Safety and Health

Innovations Awards for the electrical tag idea

relates to vehicular safety. A high-profile campaign implemented in the latter half of 2005 has shown some success and will be continued in 2006.

***We will conduct the necessary risk assessments to anticipate, minimise and control occupational hazards. We will promote initiatives to continuously reduce the safety and health risks associated with our business activities***

Risk assessments are conducted at both group and operational level, from the risks relating to the group as a whole to risks associated with specific working places, with the aim of understanding the potential safety and health risks that exist so that they may be removed or reduced to tolerable levels. A detailed discussion on risk analysis within the group can be found in the Annual Report 2005.

Risk assessment may be conducted by or with the assistance of external consultants, by the group's corporate office, by underwriters (for insurance purposes) or by the operations themselves. In recent years, risk assessment has been extended to the rock face, with basic hazard identification skills being taught to front-line supervisors and employees.

At Navachab in Namibia, for example, internal risk assessments were conducted by every mine department during the year, with an overall risk assessment also having been completed. In addition, risk assessments are conducted for specific issues, such as pit slope stability and on the tailings storage facility, and these are undertaken by external consultants.

In Australia, risk management is a primary management tool that is used on new projects and day-to-day activities. Each department has identified all of their risks and controls and during 2006 will review these registers for compliance.

The South Africa region has embarked on an enterprise-wide risk management process over the last two years. As part of this, the most serious risks have been extensively assessed and management plans have been put in place to address them. These are those risks that have traditionally been identified as disaster risks, namely, flooding, explosions from explosives and flammable gases, falls of ground, fires, incidents relating to cyanide, chemicals, tailings facilities (slime dams), vertical transport, horizontal transport, dust, noise and thermal environment.

At Geita mine in Tanzania, a major quantitative risk assessment was undertaken during the year by a combined corporate office and on-site team. The outcomes included recommendations for pit slope design, emergency evacuation procedures and training, and high-wall stability monitoring.

A risk-based safety management programme has been initiated at CC&V in the United States. Verification of the risk assessment baseline and commitments for action plans on higher rated risks in operating departments were undertaken, and the first quarterly review of risk reduction efforts was completed at the end of September. Encouraging results were achieved, with an improvement of about 60% in the higher rated risks.

## OCCUPATIONAL SAFETY AND HEALTH

### SH15

Risk assessment processes  
at CC&V

A safety and health risk assessment was performed at CC&V during the year, with the assistance of the corporate office.

The assessment, along with risk rankings and the risk index matrix, was rolled out to operating departments at the end of the second quarter. The assessment was accepted and during the first quarterly progress review at the end of September, approximately 60% of the risk rankings of

action items (highest risk rankings) identified by the assessment showed improvement.

In June a risk assessment was undertaken by Zurich North America, CC&V's workers' compensation, business interruption and general liability insurance carrier. This assessment recommended that a defensive driving course be taken by people who drive company-owned transportation. By the end of the third quarter, approximately 75% of the affected people had completed the course.

International Mining Industry Underwriters (IMIU) performed an annual assessment in July. Current risk reduction initiatives at CC&V achieved an overall score of 79%, which was better than the world average of 73% (as observed by IMIU). Several new recommendations were received from the assessment. By the end of the third quarter, most of these recommendations had been undertaken.



At the South American operations, annual Hazard Identification and Risk Assessments (HIRAs) are undertaken by company teams and these are subject to internal and external audits. The HIRA is carried out for each activity, identifying hazards, outcomes, likelihood, and existing and proposed control measures. The final result is a matrix indicating a Residual Risk Profile and respective controls. The process has brought about 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.

While risk management has become a normal part of the operation of the business, specific projects also require risk assessments to be undertaken. This is the case with the Cuiabá Expansion Project where raise-boring of a 780-metre long, 5-metre diameter upcast shaft was undertaken. This upcast shaft, which serves the purpose of conveying used air from lower stoping zones to surface, will significantly improve environmental conditions on the lower levels of Cuiabá mine. A geotechnical risk assessment has been undertaken and will be considered in the planning of this operation. (*See case study on page SH23: Ventilation system upgrade at Cuiabá mine in line with expansion.*)

Emergency preparedness plans are in place at all operations. At Morila, for example, cyanide 'man-down' (when an employee has been exposed to and affected by a cyanide-related incident) and fire drills are conducted on a regular basis, while an emergency management plan involving local government, the local chief and other regulatory authorities is in place. At Navachab, the mine's emergency preparedness plan is currently under review and includes assisting the local community in the event of an emergency. In 2005 the following emergency drills were held: pit evacuation; motor vehicle accident on the main road; fire drills in the different departments; fire drill, combined with two first aid cases at the plant; and cyanide 'man-down' drills.

At Geita, the site emergency response team train twice a week after hours and one full day per month. They also receive training in all aspects of emergency response from external agencies. Emergency procedures have been developed for a wide range of potential emergencies at Bibiani mine, and all shifts have been trained accordingly. Bibiani has worked closely with the Local National Disaster Management Organisation so as to integrate with the procedures in place for the wider community. In 2005, 20 members of the community were trained in basic first aid as part of this process.

There is a comprehensive mine-wide emergency response plan in place at Iduapriem with four emergency rescue stations and a trained response team in each department.

A comprehensive drill schedule is overseen by the health and safety manager, who also liaises with the community on emergency-related issues.

CC&V has several emergency response plans in place: a cyanide emergency response plan, a waste management plan which includes a hazardous waste contingency and a waste minimisation plan, a spill countermeasure and contingency plan, and the code 90 procedures designed to provide medical response to injuries and accidents. The emergency response plans specify responses by on-site personnel with the skills normally required in the event of a particular emergency. Notable exceptions are the cyanide emergency response plan and the code 90 procedures where the personnel assigned responsibilities are members of CC&V's mine rescue team. Members of this team are specially trained to provide medical assistance in the case of injuries and cyanide exposures.

In the Australia region, there is an integrated crisis and emergency management plan in place and this is tested regularly by desk top scenarios or actual 'man-down' type exercises for the emergency response team.

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***We will establish and maintain a system of medical surveillance for our employees***

Medical surveillance is an integral part of the management of occupational safety and health. At the South African operations medical surveillance is conducted in line with the Mine Health and Safety Act 29 of 1996: two occupational health centres are in place, one at Vaal River and one at West Wits. Each has two doctors qualified in occupational health and 25 supporting staff. In addition, each mine has an on-site occupational nurse. These two centres perform about 50,000 medical surveillance examinations a year.

Medical surveillance is also undertaken at other operations, in line with specific needs and local legislation. At Geita pre-employment medical examinations were performed on all new employees in 2005 as part of a move to owner mining. At Morila, for example, a medical surveillance system and schedule is managed by the on-site medical practitioner and undertaken at the mine clinic. Each employee undergoes an annual medical examination, while random testing of employees in specific work-risk categories is also undertaken. Further details on medical surveillance for each operation can be found on the website.

OCCUPATIONAL SAFETY AND HEALTH

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Emergency preparedness in South America

A number of emergency action plans have been developed for the South American operations in Argentina and Brazil:

- to deal with residue spillages that may have an impact on the environment;
- for tailings dams, to ensure safety and/or minimise risk hazards to communities living around tailing dams or risk areas. Simulations of dam failures have been undertaken;
- in the event of an incident or accident underground or on surface, including first aid for victims, measures to control panic and to guide employees to safety, to minimise environmental damage and damage to assets;
- for sodium cyanide spillage or accidents; and
- underground fires, to protect employees and to minimise damage to company assets.

At Cerro Vanguardia in Argentina, where the operation is in a remote area, drills are conducted on a monthly basis.

In Brazil the operations are located close to a number of communities. Simulations of various emergency situations are

conducted regularly in conjunction with community members and specific organisations such as civil defence, hospitals and military police.

Emergency preparedness in place in South Africa

Emergency preparedness plans both in respect of employees and community members are in place in the South Africa region. The approach to identifying and preparing for emergency situations is governed by the risk management process and OHSAS 18001. Emergency preparedness plans include preparation for fires, hazardous material accidents, biological threats, high angle rescues and bomb threats and others.

Different emergencies are treated by different response teams. Each of these is trained to be effective within its area of activity. Among others, there are teams for asset protection services, fire and emergency services (both surface and underground), ambulance services, mine-based rescue teams and the Mines Rescue Service (MRS). All employees receive a level of basic training and paramedics are available at the operations to ensure a quick response. Refresher training is held at prescribed intervals, as are emergency drills and review processes.

The emergency Asset Protection Emergency Control Centre and the Mponeng Control Centre function as the centres from which fire and emergency services are dispatched to the Vaal River and West Wits operations respectively.

For employees, each of the two South African geographical regions has contracted ISOS to run their ambulance services. These are based at the two hospitals and manned round the clock by advanced life support paramedics. This service is available to the public in the event of a major disaster in the area, as is the use of the two hospitals, which have trauma facilities, theatres and ICU. *(See case study on page SH25: Emergency rescue services at the South African operations.)*

***We strive for employee involvement and consultation with employees or their representatives to gain commitment in the implementation of these principles***

Safety and health agreements and policies, which have been negotiated with representative unions, are in place at many of the operations.

In South Africa this process is governed by the Mine Health and Safety Act. Each operation has its own agreement with the union representative of the majority of employees, the National Union of Mineworkers (NUM), but these agreements are normally extended to all the unions represented in the company. Joint health and safety committees are in place at every operation, in line with the Mine Health and Safety Act and all working places are covered by such agreements. 2,030 workplace and 24 full-time safety and health representatives have been trained, designated and appointed.

At Morila, the union which represents 100% of the workforce participates in and signs off on the election of safety representatives, in conjunction with the labour inspector from regional government. These 20 employees are elected for a period of three years. The union is an active participant in monthly safety and health management meetings, as well as in investigations held into accidents and incidents.

Agreements are in place between management and the unions in respect of safety and health at Sadiola and Yatela. Union representatives are employed in the different departments and function as an extension of management. Fifteen union members are elected in total and they perform a vital function in terms of reporting defects and possible risk exposure areas.

At Navachab, safety and health agreements are in place with the Mineworkers Union of Namibia (MUN), which represents 80% of the workforce. The MUN participates in the mine's Health and Safety Steering Committee.

In Ghana employee safety and health is catered for in the collective bargaining agreements with the unions that cover all categories of employees. A Safety Day, the first of its kind, was held at Obuasi in September and was attended by employees and their families. This was followed by a safety workshop for senior production managers and safety managers from Ghana and Guinea. Following this workshop, these operations resolved to adopt OHSAS 18001 as their safety management system, including the accompanying risk management programmes.

Where no formal agreements are in place or where the operations are not unionised (such as at CC&V and Sunrise Dam), participation by employees is encouraged as it is a fundamental philosophy of the group that safety and health is the responsibility of each individual, as well as that of management.

***We will communicate openly on safety and health issues with employees and other stakeholders***

AngloGold Ashanti believes that the involvement of employees and, where applicable, employee representatives, in safety and health is crucial to success. Communication on matters relating to safety and health is not only necessary to create awareness and commitment to standards and best practices, but also enables information to be distributed

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to and shared by management and employees.

Communication tools include meetings, notices and signage, the intranet, mine-based newsletters, safety newsletters, launches and other events, posters, videos and induction procedures.

The company interacts on a regular basis with a wide range of stakeholders in respect of safety and health issues, both formally and informally.

At Geita, for example, there are a number of forums in which issues of common interest are discussed with community stakeholders.

At Sadiola use is made of oral and written communication. Activities include posters and the use of local FM radio broadcasts covering different topics each week. The community is involved in safety communication, which is discussed at scheduled meetings at the mine to inform and to educate stakeholders on issues of concern. At the workplace weekly communications meetings and monthly meetings of safety representatives are held while the SafeGold report is published monthly.

A list of some of the key safety and health stakeholders may be found on the website.

***We will ensure that employees at all levels receive appropriate training and are competent to carry out their duties and responsibilities***

The provision of appropriate training is essential to ensure that employees are competent to carry out both their duties and responsibilities safely. In South Africa, the Department of Minerals and Energy (DME) has formulated new Fall of Ground regulations which legislates that first-line supervisors are empowered, both in terms of examining and making safe their work areas, and in withdrawing from working areas should these be considered by employees to be unsafe. (*See Report to Society 2004 page L33: Implementing fall of ground regulations.*) A wide range of safety training initiatives was undertaken in 2005, and details of these may be viewed on the website.

***We will require our contractors to comply with these principles and we will seek to influence joint venture partners to apply them as well***

In a number of AngloGold Ashanti operations contractors are employed to undertake some mining and processing operations and specialist services. It is the company's philosophy that contractors must act and be treated in the same way as employees.

All accidents involving contractor employees are reported and investigated in exactly the same way as they would be for AngloGold Ashanti's own employees. Contractors on the South African operations, for example, are required to appoint safety representatives and participate in various safety and health meetings. At Geita, contractors have been brought into the monthly meetings with senior staff on safety, health and environmental issues.

In Argentina and Brazil, the training and management of contractors is seen an important safety initiative as contractors, in particular, have high turnover rates.

In Australia, where much of the operational mining and processing is outsourced to contractors, they are included in an evaluation of the company's risk profile.

#### 5. Case studies

The case studies on the following pages illustrate the safety and health performance and challenges of the group in 2005. Follow-ups on the case studies presented in the Report to Society 2004 may be found on the website.

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Safety communication

at CC&V

Safety and health issues are communicated through safety meetings conducted by line supervision – crew supervisor, general foremen, super-

intendent and upward to include the vice president and general manager. Formal notification of on-site and international incidents is made through the Safety Department to all email addresses at CC&V; all line supervisors have access to a computer in their work area. Statistics, special notices, etc. are posted on bulletin boards site-wide. The employee handbook contains a special safety message from the vice president and general manager.

AngloGold Ashanti uses seismic systems developed by Integrated Seismic Systems International Ltd (ISSI) to assess 'ground behaviour', in an effort to reduce fall of ground incidents and accidents at its mines. Anglo American Corporation's Gold and Uranium Division had initially set up a research centre in 1985 to develop seismic systems at its Free State goldfields. By the time systems had been developed in 1988, a number of other South African gold mining companies, as well as other countries, were interested in the technology that had been developed. ISSI was then established as an independent company, wholly-owned by Anglo American, catering for mining and non-mining environments. It then became a subsidiary of AngloGold when the company was formed in 1998, and more recently of AngloGold Ashanti following the business combination in 2004.

The seismic systems are a network of seismic stations that detect and record energy releases in the ground. This information is then transferred to the surface where it is processed, entered into a database, analysed and interpreted. AngloGold Ashanti has a computer aided design-based set of mine plans for all its underground operations and, when linked to the input from the seismic monitoring and analysis system, the performance of the mine plans can be determined. Essentially, the data is converted into management information which has a range of advantages, and allows AngloGold Ashanti to optimise its mine design. The actual measurement of ground movement is with sophisticated measuring devices, called accelerometers and geophones. State-of-the-art in their design and sensitivity, these sensors, which monitor all underground movement, are able to distinguish between rock noise and mechanical noise, as made, for example, by locomotives. While all AngloGold Ashanti mines have sensors, the number of sensors installed depends on the mine's seismicity, the intensity of monitoring and size of the lease area. Tau Lekoa mine, for example has six sensors, while Great Nologwa has up to 60. Each network's seismic system has a defined area of accuracy, and seismic information is shared, not only with other mines, but also with industry and government on request.

Although the mining industry uses various magnitude scales to measure seismicity, the most commonly referred to is the Richter scale. To approximate the energy indicated by the Richter scale ranges, an event stated as magnitude -1.5 (the smallest event discernible by our seismic network) equates to energy released by detonating 3 kg of explosive whereas an event stated as a magnitude 10.0 (not noted in recorded history) approximates to the energy released from a one teraton explosion. Two types of seismic event are measured – earthquakes, where ground moves typically along faults or other geological-type structures; and rock bursts where mining-induced stress exceeds the rock's strength causing it to explode. In mining terms, a seismic event of magnitude 3.5 (73 metric tons) would be relatively large, but small in earthquake terms – earthquakes with magnitudes of 4.5 or greater are strong enough to be recorded by seismographs all over the world, including the South African government's nationwide seismic network.

ISSI's seismologists work closely with AngloGold Ashanti's rock engineers in linking seismic data with mine design. Mine design and layout is implemented in such a way that predicted large events are either mitigated or eliminated. Support systems are then installed to withstand these large events. (*See case study on page SH32: Fall of ground management in South Africa.*) The success of the mine design layout and support has been proven at Great Nologwa mine where there have been several seismic events of 3.5 magnitude with zero injuries.

#### OCCUPATIONAL SAFETY AND HEALTH – CASE STUDY GROUP

##### 5.1 Integrated Seismic Systems International (ISSI) SH20

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CASE STUDY GROUP

5.1 Integrated Seismic Systems International (ISSI)

*cont.*

SH21

About ISSI

ISSI's core business is “the development and marketing of technologies, methodologies and services in monitoring and modelling the seismic response of rock mass and engineering structures to natural and/or induced forces, as well as safety and environmental policing”. Its field of expertise covers seismic monitoring and modelling of, for example, mines, dams, municipalities and cities (for example, San Francisco which lies on the San Andreas fault line) and has now extended to assisting volcanologists in the study of volcanic activity.

The company has four divisions – a technology division based in Stellenbosch in the Cape; mining and customer divisions at AngloGold Ashanti's West Wits operations; and ISS Pacific based in Perth, Australia. Each division has a specific focus:

- technology: research & development, software engineering, and system engineering;
  - mining: seismological processing, analysis & interpretation (SPAI) and modelling with data;
  - customer services: hardware & software maintenance, customer support and technical services; and
  - ISS Pacific: system engineering, SPAI, and modelling with data.
- Seismology-related services applicable to the mining industry include:
- support: technical and operational assistance of system design, installation, training and maintenance;
  - seismological services: routine seismological processing, analysis, interpretation and reporting;
  - modelling: mine layout design audit for rockmass stability and integration for controlled mining; and
  - engineering seismology: measurements and characteristics of ground motion and structure vibration.

Another critical aspect in rating seismic events is not just the magnitude, or energy release, but the location or epicentre, which refers to the point on the earth's surface directly above where an earthquake has occurred, whereas the hypocentre measures the depth at which it occurred. The majority of major seismic events in the mining industry are related to geological anomalies and, if they occur at some distance from the workface, are fairly harmless. A seismic event which took place on 12 October 2005 at Great Nologwa mine at AngloGold Ashanti's Vaal River operations, measured 4.9 on the Richter scale, but took place 5.5 km below surface – which was about two kilometres below operations – and did not affect mining operations.

A common misconception about seismic monitoring is that actual seismic events can be predicted. However, one can only predict the likelihood of an event but not when and precisely where it will take place. Says Nigel Trevarthen, head of mining and mineral resource management at AngloGold Ashanti and recently appointed to the board of ISSI, “We use reality to verify our models and we use models in the design of our mines. Where monitoring shows that seismic activity is building up in a certain area, the mining methodology and strategy is revised. A case in point is seen at Great Nologwa when we decided to move six crews from an area of the mine as a precautionary measure in July 2005. This decision was reported to the market as one of the causes of a drop in the mine's production. The decision was



vindicated when, following a 4.7 magnitude earthquake at the mine, no serious injuries were reported.” Seismic monitoring, an important tool in minimising fall of ground-related accidents and incidents, is constantly under review through ISSI’s research projects. The secondment of a rock engineer to its Integrated Damage Rheology Model (IDRM) project coupled with the close relationship between ISSI and AngloGold Ashanti through dint of ownership, ensures that the latter is at the forefront of cutting-edge seismic system technology.

In Western Australia, the number of hours worked by employees has been an issue of concern for government particularly as certain working arrangements have been linked to occupational safety and health risks, such as fatigue and impaired performance and thus increased exposure to some hazards. As a result, a tripartite consultative committee (comprising government, union representatives and industry associations) has drafted a Code of Practice on working hours.

While the field of fatigue management is still relatively new in the mining industry, some evidence suggests that sleep deprivation, sleep disturbances and fatigue are health risks commonly associated with long working hours. Fatigue has also been identified as a potential health risk related to work that involves shifts or regular or periodic night shifts.

Because of its location, most employees who work at Sunrise Dam gold mine live in Perth and surrounding areas and are engaged on a fly-in/fly out (FIFO) roster, where they work for 14 days at the mine and then spend seven days at home.

As part of their induction training, all employees - both AngloGold Ashanti employees and contractors - must complete a compulsory module on fatigue management. This covers aspects such as what is fatigue, the cause and effects of fatigue, circadian rhythms, sleep factors, work factors, health factors, danger periods, sleep debt, stimulants and ways of reducing fatigue.

In addition, during November and December 2005, Roche Mining, the main contractor on site at Sunrise Dam (employing 60% of employees on site), conducted a fatigue management training programme for all its employees. The programme covered the causes of fatigue, rosters, circadian rhythms, sleep, drugs and alcohol, managing shift change, eating, exercising, life away from work and evaluating and developing individual fatigue plans. Examples of the advice given include: listen to your body clock – when you feel tired sleep, stick to regular sleep/waking routines, the only way to cure fatigue is by sleeping, the only way to prevent fatigue is by getting enough sleep. It is known that a minimum of 6.5 hours of good quality continuous sleep is required.

The programme has been accepted by Roche employees as an essential part of their training.

In addition, a code of practice has been developed by the tripartite committee listing hazards that have been identified against a general risk indicator ranging from low risk to high risk. Those at low risk include those working on average 34 to 40 hours a week, while those at high risk are those working above 56 hours a week. In terms of daily working hours, those working eight hours a day are at low risk, while those working 12 hours a day or more are at high risk.

Sunrise Dam has evaluated its operations against this code and has identified areas that can be improved upon. All contractors at Sunrise Dam have also evaluated their own operations against the code using the template developed by Sunrise Dam and are working towards compliance with the code.

Sunrise Dam Gold Mine has been used by the Western Australian mining industry as the mine site that has led the evaluation process and identified leading practices in fatigue management. Sunrise Dam undertook a thorough review over three months of the actions required out of the code, with each contractor site management and safety representative group signing off on their review and agreeing the action plans.

## OCCUPATIONAL SAFETY AND HEALTH – CASE STUDY AUSTRALIA

### 5.2 Managing fatigue at Sunrise Dam SH22

The Cuiabá Expansion project in Brazil will involve the extraction of deeper blocks of ore (about 1,562 m below surface).

Among the major infrastructural developments planned as part of the project, 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.

A study conducted by independent mine ventilation consultants in conjunction with AngloGold Ashanti Technical Services and the technical team at Cuiabá, indicated the future demand in air quality and quantity for ventilation and cooling purposes as a result of the expansion of mining areas. The study determined that the two new ventilation shafts

would be required to be raise-bored between Level 11 (770 m below surface) and the surface, with one shaft to serve as a main intake downcast airway, and the second as a main return airway for upcast air, both of 5.1 m in diameter as recommended diameter.

Raiseboring, which in this case consisted of the upward drilling of a tunnel through the Nova Lima Group rock formation,

from one position underground to surface, has been challenging. A number of technical features have had to be considered in the process and an extensive risk assessment exercise was undertaken.

Previously, raisebored smaller-diameter holes showed a tendency to deviate significantly from a projected path with the

deviations caused by, among others factors, dense and highly foliated schist formations. The possibility of large deviations occurring while drilling the pilot-hole that guides the raiseboring cut was an important concern. The impact of deviation could certainly compromise integrity during reaming operations and eventually shaft stability.

The risk of large deviations occurring during the required 770 m-deep pilot-holes (up-cast and down-cast holes) was mitigated by using active deviation-correction technology in the Rotary Vertical Drilling System (RVDS). This instrument

allows for corrections to be carried out while drilling takes place by systematically computing changes in the original trajectory. This instrument is pre-programmed to enforce that the drilling trajectory follows a given path and is activated

when deviations from vertical reach a set value. The control permits drilling accuracy up to a 0.05% from a set path. The RVDS deviation control instrument was used in the drilling of about 50% of the full length of the first raisebored upcast hole. Its use resulted in a deviation of only 13 m from a planned holing position, quite within the acceptable range. To further minimise deviations in the second ventilation hole, a RVDS instrument will be used when raiseboring

the entire length of this hole, i.e. over 770 m.

The independent ventilation study recommended that the upcast ventilation hole should have an optimum diameter of 5.10 m over its collar on surface. A comprehensive geotechnical risk assessment was carried out to assess the risks associated with the raiseboring of the two ventilation holes.

The geotechnical surveys carried out revealed poor ground conditions near surface, where various layers of weathered and weakly competent rocks prevail. Risk of instability arising from poor ground conditions was thus identified. From a

geotechnical view point, therefore, it would be ideal not to affect the integrity of a raisebored excavation with further enlargement operations, in particular with the use of explosives.

On the basis of the geotechnical stability analysis, it was recommended that a diameter of 4.8 m for the up cast shaft would be preferable.

Though the reduction from 5.1 to 4.8 m in shaft diameter is optimal from the point of view of excavation stability, the adopted size should not compromise the previously designed ventilation capacity. Indeed, a suitable ventilation system

model was run, which indicated that a marginal loss in air volume would result from the reduction in shaft diameter. However, it was found that the magnitude of this loss could be compensated by routing air through currently existent airways. As a result, it was decided to retain the 4.8 m size as the final diameter for the ventilation shaft.

For further information on the safety and health aspects of underground ventilation, see the case study on page SH24:

Multi million dollar refrigeration project for Obuasi.

OCCUPATIONAL SAFETY AND HEALTH –  
CASE STUDY BRAZIL

5.3 Ventilation system upgrade at Cuiabá mine in  
line with expansion

SH23

OCCUPATIONAL SAFETY AND HEALTH –  
CASE STUDY GHANA

5.4 Multimillion dollar refrigeration project for Obuasi  
SH24

AngloGold Ashanti's commitment to its African operations is evidenced by significant capital investment at the Ghanaian Obuasi mine, one of the oldest currently-operated underground mines in the world. A major capital project to come on stream at Obuasi was the installation and commissioning in January 2006 of a new refrigeration plant, at a total cost of \$25 million.

Obuasi's underground workings are at an average depth of 1,500 m, and current ventilation infrastructure is inadequate to keep working areas sufficiently cool for effective and safe underground mining. Extensive research, carried out most recently by the Council for Scientific and Industrial Research (CSIR) in South Africa, has shown that there is an inverse correlation between cognitive abilities and temperature, and workplace temperatures in excess of 29.5°C wet-bulb have a marked negative impact upon people's ability to think logically and follow a sequence of tasks. Clearly, this has major safety implications.

Industry-level research in South Africa has also shown a positive correlation between workplace temperature and disabling injuries. Wet-bulb temperature measures the amount of moisture or humidity in the air, in underground mines. The implementation of the new fridge plant is expected to result in maximum underground temperatures below 30.5°C wet-bulb, with most workings at 27.5°C wet-bulb.

In terms of the process, water passes through a cooling circuit in the machine room and the bulk air cooler. Water in the bulk air cooler sump is pumped through the chillers which run on the environmentally-friendly R134a refrigerant. The chilled water is then sprayed in two stages into the air blown into the chamber by the bulk air cooler fans to cool it for use underground. The mist eliminator removes moisture from the cooled air, ensuring that the air underground contains minimal humidity.

In the heat rejection circuit the heat removed from the chilled water is dissipated. Cool water from the condenser cooling tower sumps is pumped to the chillers to remove the heat, and the heated water forced by the pumping action to the spray system at the top of the condenser cooling tower. As the spray falls through the splashing system, heat is released in the form of water vapour, which is drawn away by the exhaust fans into the atmosphere.

The project will not only improve air circulation underground but will serve to provide cooler and safer working areas, promoting more effective working underground. The completion of the first phase of the project means that average specific cooling will also improve by about 50%.

Neville Nicolau, Chief Operating Officer (Africa), observed, "Mining blocks in this area of the mine, which were put on hold due to high temperatures, can now be accessed. The project demonstrates the commitment of AngloGold Ashanti management to creating a safer working environment for its employees."

OCCUPATIONAL SAFETY AND HEALTH –  
CASE STUDY SOUTH AFRICA

5.5 Emergency rescue services at the South African operations

SH25

Emergency preparedness forms an integral part of AngloGold Ashanti's South African operations' safety and health strategy. The ability to respond rapidly and effectively to both isolated and mass casualty situations is a crucial aspect of the company's medical response facility. The pre-hospital management of trauma and injury at AngloGold Ashanti's South African operations has, since the late 1990s, been outsourced to International SOS (ISOS) in both the Vaal River and West Wits regions.

"We previously ran an in-house ambulance service," says Dr Roxanne Schutte, Health Services Manager at AngloGold Health Service (AHS), "but took the view this was outside our core business. It was difficult to find paramedics of the right calibre, nor could we provide appropriate training or career development opportunities."

ISOS is an international medical assistance and outsourced healthcare company, with 40,000 personnel operating in 60 countries. In South Africa, all staff are registered with the Health Professions Council of South Africa (HPCSA). Regular training and scenario planning – including joint plans with AHS for dealing with response to mass casualty events – are an integral part of the company's approach. All staff are trained to one of three levels: basic, intermediate and advanced life support. Fourteen ISOS employees service the West Wits area, with 18 based at Vaal River.

Detailed logging procedures are in place to record the steps taken, and the amount of time elapsed, from the moment an emergency call reaches the ISOS control room to the time the patient reaches the relevant AHS hospital. Occurrences of poly-trauma, such as severe head injury, which AngloGold Ashanti's two hospitals at Western Deep Levels and Vaal River may not be equipped to treat, are referred to other hospitals such as the Milpark Hospital in Johannesburg.

In the event of a multiple fatality or other major emergency, both the West Wits and Vaal River regional ISOS control offices are in constant contact with the central control room in Johannesburg, and additional emergency vehicles and staff are available as required. ISOS does not run a helicopter service, and has established a relationship with Netcare 911, a reputable local service provider, for cases where helicopter evacuation is needed.

Quality control in the West Region is the responsibility of Chief Medical Officer Dr Danie van Tonder, who receives monthly reports from ISOS Service Manager Wessie van der Westhuizen. "Response time obviously varies with the distances vehicles have to travel, but the average for last month from notification, immediate resuscitation and stabilisation, to handover at the hospital was 25 minutes," says Van Tonder.

Ambulances and support vehicles respond to calls from anywhere on the three West Wits mines (Mponeng, TauTona and Savuka). There is a dressing station, staffed by a unit manager, and a shaft clinic staffed by an occupational health practitioner, at each mine. ISOS responds to calls from all these sites.

ISOS is responsible for recruiting and training staff, and for maintaining equipment in the fleet of ambulances and support vehicles (four and two ambulances and one response vehicle at West Wits and Vaal River respectively). The vehicles themselves, however, remain the property of AHS. "Our transport department works closely with ISOS in respect of servicing and maintenance," says Schutte. "When greater numbers of vehicles are required, for example to transport people from the scene of a major accident, we can also use other mine vehicles. We also have a reciprocal agreement with other mines in the surrounding area and could provide mutual assistance in a major emergency."

All employees at AngloGold Ashanti's South African operations are given chest X-ray examinations on engagement and at intervals varying from six to 12 months depending on occupation, as part of the company's TB surveillance programme.

TB in silica-exposed employees is a compensable disease in South Africa. Despite significant interventions to identify, treat and prevent exposure, TB infection rates in the South African gold mining industry have increased in recent years. These higher rates are attributable to the increasing average age of the workforce and the increasing levels of HIV/AIDS in a silica exposed workforce.

Digital diagnostic radiology (DDR) has revolutionised the application of TB examinations in recent years, facilitating earlier detection of the disease. The fixed digital radiology units at each of AngloGold Ashanti's two occupational health centres (at Vaal River and West Wits) can handle up to 450 X-ray images per day. Although the capital costs associated with these systems are high, running costs are significantly cheaper and, most important, their technological benefits are proving to be significant.

Now, in a move to take this sophisticated technology to the rock face, on 22 August 2005, a mobile DDR unit was commissioned to serve the four mines in the Vaal River area; Tau Lekoa, Kopanang, Moab Khotsonq and Great Nologwa. Together these mines employ about 17,000 people. Following on from this, in late 2005, approval was given for the purchase of another mobile DDR unit for the three shafts in the West Wits area, which together employ a further 13,000 people. The second unit will be commissioned in the first quarter of 2006.

"The mobile units have the same characteristics as the fixed machines, but offer the advantage of direct access to employees," says Dr DB de Villiers, occupational medical practitioner for the Vaal River region. Elaborating on the benefit of DDR when compared with standard X-ray technology, Dr de Villiers says, "The radiation dose that was present in the mass-miniature X-rays previously used is virtually eliminated; only one image is taken and then digitally manipulated; no developing of film is required as images are stored digitally; this in turn saves the cost of potentially hazardous chemicals used in the developing process, as well as the cost and space involved in storing conventional X-ray films over time." The DDRs can be transmitted electronically, so the image is available in the occupational health centres, TB clinics and wards, removing the need for repeat X-rays at those sites once one DDR has been taken. As South African law requires that occupational medical surveillance records be retained for 40 years, the issue of saving space is a significant one. Discussions are currently in progress with the Medical Bureau of Occupational Diseases (MBOD) regarding the possible future submission of X-rays in digital format.

"The introduction of the mobile units means that, instead of having to travel to the occupational health centre, employees are now examined at the shaft, on the way to or from work. says De Villiers. "Symptom screening is done on site and the X-ray can be read immediately. The experienced crew can then refer patients showing signs of TB to the hospital."

#### OCCUPATIONAL SAFETY AND HEALTH – CASE STUDY SOUTH AFRICA

##### 5.6 Taking TB control a step closer to employees

SH26

OCCUPATIONAL SAFETY AND HEALTH –  
CASE STUDY SOUTH AFRICA  
SH27

At Vaal River, the mobile unit services the four shafts on a weekly cycle. Employees from the metallurgical plant and service departments arrange to visit the closest shaft. As the equipment is highly sensitive, an elaborate procedure is in place for transport and connection to the four docking stations. “The sequence covering travel from point to point, and securing the X-ray machine resembles the pre-flight check of an aircraft,” says De Villiers. The docking stations are powered with 380 volt power supply and fibre-optic computer network connections. Setting up and moving the unit is a team effort between AHS radiology and maintenance staff, and the information technology, human resources and asset protection departments based at the various shafts.

De Villiers notes that, looking ahead, even greater benefits are foreseen in being able to individually risk-rate employees for TB. Variables such as age, past medical history, occupation, and years underground would be combined in a risk matrix to determine the frequency of TB screening. Low risk employees would only need to be screened every three years, whilst those at high risk would be screened by DDR every six months.

5.6 Taking TB control a step closer to employees  
*cont.*



OCCUPATIONAL SAFETY AND HEALTH –  
CASE STUDY SOUTH AFRICA  
SH28

A pioneering research programme to identify appropriate strategies to reduce the incidence of pulmonary tuberculosis (TB) in the gold mining industry in South Africa was launched nationally at the end of October 2005, followed by regional launches on 1 November 2005. The local programme is part of a global research programme to find a way, in the face of escalating TB infection, to reduce the incidence of the disease. The programme is based on the premise that administering TB preventive therapy to an entire community may result in a significant reduction in the incidence of the disease.

In South Africa, the research programme is being led by the Aurum Institute for Health Research in collaboration with the London School of Hygiene and Tropical Medicine and the Johns Hopkins University Center for Tuberculosis Research.

According to Professor Gavin Churchyard, CEO of the Aurum Institute and principal investigator for the study, “Computer modelling suggests that community-wide preventive therapy will reduce the incidence of TB by up to 60%. This in turn will have a marked effect on the communities concerned in terms of both their financial and social well-being.”

The research being conducted by the Aurum Institute, under the auspices of the Mine Health and Safety Council and CREATE, is being done in collaboration and after extensive consultation with several South African gold mining companies as well as various labour unions and associations. The study has received strong support from the government departments of labour, health and minerals and energy. CREATE recently participated in various site visits and was impressed with the progress made to date.

The aim of the research is to determine the likely effects of community-wide preventive therapy on TB rates in the gold mining industry as it has become increasingly apparent in the last 15 years that, despite meeting World Health Organization (WHO) targets for the detection and cure of TB, the rates of TB among employees in the South African gold mining industry have risen sharply, in tandem with the onset of the HIV epidemic in the country. According to the WHO’s report Global Tuberculosis Control 2005, since 1990, the rate of TB has tripled in countries in Africa with a high incidence of HIV/AIDS. This is in stark contrast to a decline in the rate of TB in developed countries.

The incidence of TB in the South African gold mining industry is rising despite the implementation of control programmes which meet international standards. This is largely attributable to silicosis together with the escalating HIV/AIDS epidemic, which compounds the incidence of TB.

The objective of the research is to compare the efficacy of nine months of TB preventive therapy using the TB drug isoniazid offered on a community-wide basis in addition to the standard TB control programme, with that of the standard TB control programme currently practised in the gold mining industry.

The primary research project, Thibela TB (Prevent TB) is being funded by grants from the Mine Health and Safety Council, a tripartite body mandating safety-related research and development and representing government, labour and industry, and CREATE (as part of a grant from the Bill and Melinda Gates Foundation – *see box*), and a grant from Thibela TB will be conducted on AngloGold Ashanti, Gold Fields and Harmony mines in Gauteng, North West Province and the Free State. Around 68,000 miners will participate in the study. Participating mines were allocated by chance, by public lottery, either as control sites or as a site which will receive community-wide preventive treatment. The process of enrolling participating mines and individuals and the administration of therapy will begin in January 2006 and should last 15 months.

5.7 Pioneering TB research programme launched in gold mining industry

OCCUPATIONAL SAFETY AND HEALTH –  
CASE STUDY SOUTH AFRICA  
SH29

The rationale behind the research is that all individuals in a community at risk of developing TB in the population would be treated rather than only those identified as being high-risk, such as those who have the HIV infection or silicosis. If successful, such a programme would reduce the rate of transmission of TB between people, which would lead to fewer TB cases occurring later, thus resulting in improved control of the disease.

The aim of the programme is to demonstrate that community-wide preventive therapy, used in addition to standard TB control measures, is effective in reducing both the incidence of TB and its consequences and that it can improve the control of TB in high-risk areas such as those with a high incidence of HIV/AIDS. Similar studies are being conducted by CREATE in high-risk communities in Zambia and Brazil.

TB has a high social and economic cost, both for the individual concerned and the industry as a whole. Improved employee health would lead to improved quality of life, improved productivity and reduced costs.

The findings of the CREATE research portfolio will be used to develop new global policies to combat TB/HIV, a key criterion of projects which the Bill and Melinda Gates Foundation supports. If these studies are successful, the use of community-wide treatment could transform international policy on the control of TB, particularly in high-risk communities such as those with high-density living and working conditions where the population is susceptible to TB.

5.7 Pioneering TB research programme launched in  
gold mining industry

*cont.*

Aurum Institute for Health Research broadens its scope

The Aurum Institute for Health Research, formerly Aurum Health Service and a wholly-owned subsidiary of AngloGold Ashanti, is now an independent, section 21 company (not-for-profit) with public benefit organisation status (with the latter conferring tax exemption). Allied to these changes and increased independence, there is to be a change in the composition of the directorship of the Aurum Institute. The new board of directors will represent the newly transformed Aurum Institute which in turn will represent a range of interests and will undertake and conduct research and health systems development in the interests of the broader South African community as opposed to just one sector of society.

The Aurum Institute receives funding from a range of sources including the President's Emergency Plan for AIDS Relief (PEPFAR) in the United States.

In 2004, the Aurum Institute was granted funding by CREATE, the international Consortium to Respond Effectively to the AIDS/TB Epidemic, of \$14 million over a five-year period, and by the Mine Health and Safety Council to research strategies to improve TB control in the South African gold mining industry. CREATE was established in response to the growing recognition by TB and HIV experts that innovative and radical approaches to TB control are necessary to reverse the increasing incidence of the disease in Africa. The grant from CREATE, of which former President Nelson Mandela is a patron, is part of a larger award of \$45 million made to CREATE by the Bill and Melinda Gates Foundation to fund research into combating TB.

OCCUPATIONAL SAFETY AND HEALTH –  
CASE STUDY SOUTH AFRICA

5.8 Significant improvements in safety at Kopanang  
SH30

Kopanang mine, employing some 4,700 people including contractors, is situated in the Vaal River region of the South African operations. Kopanang means ‘place where people come together’ in Sotho. Seven employees died in work-related accidents during 2003 (compared with four in 2002 and none in 2001). Drastic action was called for, and a safety strategy was developed along a broad front. All employees, together with the unions and associations, were kept on surface for a whole day, section by section over a period of time. All pertinent issues were workshopped with the employees and action plans per section were drawn up.

Interventions taken can be grouped under three broad headings: improving the infrastructure/working environment; behaviour; and risk management.

**Improving infrastructure**

The deep level of South Africa’s underground mines means that underground working places are naturally hot. Heat increases fatigue and stress, and, apart from the dangers of heat stroke, reduces concentration, consequently increasing the likelihood of accidents.

A series of raise bore holes was drilled between the various levels to ensure that fresh cold air could circulate to the deepest levels of the mine (at Kopanang, mining is carried out at a maximum depth of 2,850 m). Temperatures at the stope face are measured in wet-bulb temperature, which takes account of the effect of humidity.

“In December 2005, the average stope face wet-bulb temperature was 27.7°C, compared with 29.5°C for December 2002,” says Occupational Environmental Safety and Health manager Danie Hoffman. (The wet-bulb temperature indicates the air’s capacity to absorb moisture and therefore aid cooling.)

A reduction in underground temperatures was also achieved by drilling annex holes between the levels, and installing pumps and drain water pipes to enable the mine to transport all the ‘dirty’ water in columns to the settlers. Enclosing the water in pipes reduced the humidity and consequently ameliorated the effects of the ambient temperature.

Finally, a new orepass system, through which all the ore is transported to the lowest level of the mine before being transported to surface, was constructed on 70 level at a greater distance from the shaft than the previous orepass system. All the ore is now transported to the station on one level, eliminating the previous congestion of locomotives in the haulages and consequent risk of injury.

**Mindset**

All supervisors, safety representatives and underground teams working at Kopanang went through behaviour-based safety observation training between 2003 and 2005. “The ‘power training’ process, developed at Kopanang was used as a vehicle,” says Hoffman. “All crews at Kopanang go through a three-week intensive orientation, of which mindset change is a major part. SMAT (safety management audit techniques) principles are explained, and reinforced annually on an employee’s return from leave. New employees receive the training as part of their induction. DuPont, a global consulting service providing innovative solutions based on systems and culture change to improve safety in the workplace,

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CASE STUDY SOUTH AFRICA  
SH31

carried out a qualitative audit of Kopanang safety systems and procedures during 2006, and commented favourably upon an increased openness in discussing safety-related issues.

”It is commendable that SMAT training has been incorporated in the mine’s interventions to achieve its safety targets,” says Henry Walters of DuPont Safety Resources.

**Risk management**

All workplace risks at Kopanang are grouped into major hazards. For example, falls of ground, horizontal and vertical transport, fire, flooding flammable gas are all classified as major hazards, A committee comprising workers/safety representatives and line management has been established for each major hazard and meets monthly to review, assess and revise the systems and procedures connected with these. Action plans are drawn up to reduce the risks identified.

A major shift in approach has been the change in emphasis from lagging to leading indicators. This means that the focus has moved from determining the causes of incidents after the event to preventing them before they arise through identifying at-risk circumstances or behaviour.

**The present position**

Kopanang’s LTFIR has continued to improve year-on-year. One fatality was recorded in 2004, and the last fatality was registered on 25 February 2005. On 5 November 2005 Kopanang reached one million fatality-free shifts.

“Our target is to reach 2 million fatality free shifts by August 2006,” says Hoffman. “An intensive campaign has been developed to maintain employee motivation and focus in this regard.”

5.8 Significant improvements in safety at Kopanang

*cont.*

OCCUPATIONAL SAFETY AND HEALTH –  
CASE STUDY SOUTH AFRICA  
SH32

Because of the nature of mining which puts considerable stress on rock masses, some of which already lie on fault lines, many injuries and the majority of the fatalities are attributed to falls of ground. These are either seismic-related or gravity-based: seismic-related falls of ground occur when energy is released into the environment resulting in ground movement and possible rock falls; whereas gravity-based falls of ground are induced by an external stressor, for example, exertion of a pinchbar on rock.

Typically speaking, seismic events create large falls of ground and, therefore far greater damage, while gravity-based falls of ground are usually less severe, often involving rock fragments smaller than 30 centimetres in diameter. All of AngloGold Ashanti's South African mines house sensitive monitoring equipment which detect all types of rock movement and rock fracturing, whether on a small or large scale. (See box on SH21 on *Integrated Seismic Systems International (ISSI)*).

Of the 17 fatalities recorded at AngloGold Ashanti for 2005, 15 (88%) were fall of ground-related. Statistics show that AngloGold Ashanti attained a 0.17 fatal injury frequency rate (FIFR), for 2005 (41% improvement on 2004's FIFR of 0.29) which, while comparing favourably with other deep level South African gold mining companies' statistics for the same period, is well above the group's target of zero fatalities."

In complying with mine health and safety legislation to effect specific outcomes, AngloGold Ashanti is proactive in a number of safety and health strategies

In 2002, the company initiated a holistic five-point fall of ground management strategy to address the incidence of fall of ground-related accidents and fatalities. This is a five-pronged strategy focusing on mine design, mine support standards, mindset, monitoring and research.

When the strategy was implemented four years ago, it was decided to allocate a specific focus to each year. The focus in 2002 was on the prevention of adverse rock conditions by looking at mine design and mine layout. Numerical modelling systems are introduced at this stage looking at, for example, the size of the support pillar, stope dimension and extraction sequence. Since mining involves either fracturing rock structures or working with already fractured rock, this is the stage where proactive measures can be taken to minimise damage to the rock during mining. Back analysis of previous rock-related accidents is also useful in preventing accidents due to 'bad ground behaviour'.

In 2003, focus was placed on the stage at which one controls the conditions that have been created in the mine design and layout phase. This stage of the programme addresses the design of support, including types, systems, standards and procedures. All types of mine support standards were reviewed and paper-based systems were replaced by electronic-based systems which could be incorporated into computer aided design (CAD) plans and made accessible by all mines.

2004's focus was on the monitoring stage – evaluating how well the mine's design (stage 1) and support strategy (stage 2) has been implemented. Stringent auditing systems were introduced during 2004, including the concept of 'Rock Stars' – whose job is to complete regular audits so that information is immediately fed into a database, prior to analysis and implementation of remediation strategies. Driven by AngloGold Ashanti's Integrated Risk Management System, this information is released monthly in the form of a safety, health and environmental statistical report which is accessible by all mines. Improvements have

#### 5.9 Fall of ground management in South Africa

been apparent particularly in the reduced number of underground panels with sub-standard support. Lessons are also learnt from mine accidents and incidents, which are followed up by in-depth reviews to determine remediation strategies.

The third stage, which is about changing and managing ‘mindset’, was the key focus in 2005 and emphasises performance standards, education, training, knowledge, attitude and level of compliance. It often requires reversing bad habits and discarding the ‘it won’t happen to me’ maxim. World-renowned safety training organisation DuPont was tasked with implementing a peer-on-peer safety management and auditing technique (SMAT), which is being implemented top-down at all mines. Production managers have been given the responsibility of ensuring that the system cascades to every employee at every level of each operation. Instead of delivering a set of safety commands, SMAT training adopts an ‘observe and discuss’ approach. Training and education takes place both on surface and in the workplace, and workers are equipped with mini-fall of ground management manuals in various forms for quick and easy reference at any time. Although success is difficult to quantify, tangible improvements have been witnessed during several mine visits by management.

Research, development and technology, which make up the fifth stage, are ongoing elements of the whole strategy and are an essential precursor to mine design and layout, the starting point for actual operations. AngloGold Ashanti interacts with a number of industry bodies which deal with developing systems, methodologies and technologies – for example, the Council for Scientific and Industrial Research (CSIR), Safety in Mines Research Advisory Council (SIMRAC) and ISSI. Through its own Technology and Innovation Fund, AngloGold Ashanti is funding the secondment of a rock engineer to ISSI to take part in a three-year project called Integrated Damage Rheology Model (IDRM). IDRM is focusing on numerical modelling of mining and seismic data, and integrating the two in an attempt to distinguish between theoretical and actual outcomes. AngloGold Ashanti is also one of the drivers of the Rock Engineering Advisory Committee, a SIMRAC initiative focusing on rockfall and rockburst research.

Having reinforced the four operational fall of ground management pillars, AngloGold Ashanti’s focus for 2006 is revitalisation and integration of those components. It comes at a time when the whole industry is under scrutiny by the Department of Minerals and Energy, following the March 2005 seismic event at Stilfontein which closed down DRDGOLD’s North West operations. A panel of experts has been appointed to examine a range of issues from the efficacy of support systems to whether the event was natural or mining-induced. AngloGold Ashanti has been invited to give submissions to the panel of experts who are expected to release their findings in late 2006.

The fall of ground management strategy, currently only in place at AngloGold Ashanti deep-level South African mines, is to be extended to Obuasi mine in Ghana, the company’s only other deep-level mine on the continent.

#### OCCUPATIONAL SAFETY AND HEALTH – CASE STUDY SOUTH AFRICA

##### 5.9 Fall of ground management in South Africa

*cont.*

SH33

Safety

- 
- Long-term objective remains to eliminate all accidents.
- 
- Reduce LTIFR by 20% year-on-year.
- 
- Incorporating risk management as a critical aspect of management.
- 
- All operations working towards OHSAS 18001.

Health

- 
- Plan to meet the South African Mine Health and Safety Council's targets on NIHL and silicosis. These targets are:
  - OLD: by 2008, 95% of all silica exposure measurements will be below the occupational exposure limit of 0,1mg/m<sup>3</sup>
  - ; and by 2013, no new cases of silicosis will occur in previously unexposed employees.
  - NIHL: by 2013, noise emissions of all equipment will be below 110dBA; and by 2008, no deterioration in hearing greater than 10% will occur in noise-exposed employees.
- 

TB: to build on 2005's success and further drive down the TB incidence in the South African region.

OCCUPATIONAL SAFETY AND HEALTH

6. Objectives for 2006

SH34

1. Introduction

RH1

2. Business principle

RH2

3. Key indicators

RH3

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RH13

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RH14

5.2 Malaria study at Bibiani

RH16

5.3 Anti-cholera campaign at Siguiri benefits communities

RH18

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RH19

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RH21

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RH22

5.7 A new approach to HIV/AIDS

– the Mponeng Mine Workplace Programme

RH23

5.8 Into the community – home- and community-based care

RH24

6. Objectives for 2006

RH26

REGIONAL HEALTH

THREATS

contents

Regional health

threats

We are committed to prompt and supportive action in response to any major health threats in the regions in which we operate.

OUR VALUES:



AngloGold Ashanti's policies and practices relating to regional health threats are guided by the group's business principle, AngloGold Ashanti as an employer – our labour practice (see overleaf), which indicates that “the company is committed to prompt and supportive action in response to any major health threats in the regions in which we operate”.

Information pertaining to HIV/AIDS and malaria – the major public health threats facing the company – is believed to be relevant to the African operations only.

While HIV/AIDS remains a significant challenge in southern Africa, this is less so at AngloGold Ashanti's other African operations as the prevalence levels in East, West and Central Africa are far lower. Furthermore, the risks posed by HIV/AIDS are of greater significance in South Africa as the country's mining operations there tend to be labour-intensive. Information related to the South African operations has therefore been included in the key indicators and these have been assured by external auditors PricewaterhouseCoopers

, while information

relating to the other African operations may be found in the discussion that follows.

The risks associated with malaria are more significant at the company's operations in Mali, Tanzania, Ghana and Guinea. Although more data is being generated by these operations in respect of malaria, the programmes are still new and data gathering at these operations is in its infancy. The key indicators regarding malaria have therefore not been assured, although it is the company's intention that they will be in future.

The company has once again reported in accordance with the Global Reporting Initiative (GRI) guidelines. The response to GRI may be found on page 14 of the introductory section of this report.

## REGIONAL HEALTH THREATS

### 1. Introduction

RH1

## REGIONAL HEALTH THREATS

### 2. Business principle

RH2

AngloGold Ashanti as an employer – our labour practice

- AngloGold Ashanti is committed to upholding the Fundamental Rights Conventions of the International Labour Organization. Accordingly, we seek to ensure the implementation of fair employment practices by prohibiting forced, compulsory or child labour.

- AngloGold Ashanti is committed to creating workplaces free of harassment and unfair discrimination.

- As an international company, we face different challenges in different countries with regard to, for example, offering opportunities to citizens who may not have enjoyed equal opportunities in the past. In such cases, the company is committed to addressing the challenge in a manner appropriate to the local circumstances.

- We will seek to understand the different cultural dynamics in host communities and adapt work practices to accommodate these where doing so is possible and compatible with the principles expressed in this document.

- The company will promote the development of a workforce that reflects the international and local diversity of the organisation.

- The company will provide all employees with the opportunity to participate in training that will improve their workplace competency.

- The company is committed to ensuring that every employee has the opportunity to become numerate and functionally literate in the language of the workplace.

- The company is committed to developing motivated, competent and experienced teams of employees through appropriate recruitment, retention and development initiatives. An emphasis is placed on the identification of potential talent, mentoring and personal development planning.

- Remuneration systems will reward both individual and team effort in a meaningful way.

- Guided by local circumstances, we shall continue to work together with stakeholders to ensure minimum standards for company-provided accommodation.

- The company ensures access to affordable health care for employees and where possible, for their families.

W

W

**e are committed to prompt and supportive action in response to any major health threats in the regions in which we operate.**

Our assurance is based on a test of the reliability of the selected data marked with the symbol , by way of:

- conducting interviews and holding discussions with management, key personnel and/or stakeholders of AngloGold Ashanti Limited and assessing data trends;
- obtaining an understanding of the systems used to generate, aggregate and report the selected data;
- conducting site visits to test systems and data and inspecting premises where necessary;
- assessing the completeness and accuracy of the selected data; and
- reviewing and analysing collected information and effecting re-calculations where considered appropriate.

#### HIV/AIDS

The following indicators relate to the South African operations only.

- AngloGold Ashanti estimates a 2005 HIV prevalence rate of 30% among its South African workforce. This estimate is based on best available information, including surveys, regional antenatal data, and an extrapolation from comparable reference groups. In 2004, the HIV/AIDS prevalence level was estimated to be 30.24% and the figure in 2003 was 29.95%.

- 10,219 visits were recorded at AngloGold Ashanti's voluntary counselling and testing (VCT) centres in 2005, an increase of 150% on those recorded in 2004. By the end of December 2005, 32.4% of the workforce had undergone VCT in comparison with 10% in 2004.

- 1,267 employees were registered for the first time on AngloGold Ashanti's Wellness Programme during 2005, an increase of 35.5% on the previous year. The cumulative number of employees registered with the Wellness Programme by the end of 2005 was 5,013, with 3,254 currently enrolled in the programme.

- 630 employees were enrolled in the anti-retroviral therapy (ART) programme in 2005, bringing the cumulative total of employees currently on ART to 934.

- Expenditure\* related to chronic disease management of HIV-infected employees (including the provision of ART), VCT, home-based care for terminally ill ex-employees, the personnel managing the company HIV-programme, and some programme-related research, monitoring and evaluation, amounted to R16.45 million.

- During 2005, 225 employees were known to have died in hospital from AIDS.

*\* This excludes on-mine expenditure on, for example, awareness campaigns, induction programmes, training, etc. It also excludes hospitalisation costs for AIDS-related illnesses*

#### REGIONAL HEALTH THREATS

##### 3. Key indicators

RH3

Total numbers of employees ever on ART, at year-end – South Africa

0  
200  
400  
600

800  
1,000  
1,200  
1,400  
1,600

Malaria:

- The total number of cases of malaria among employees at affected mines was as follows:

- The Malaria Lost-Time Injury Frequency Rate (MLTIFR), which is a means of measuring the impact on productivity and is similar to the Lost-Time Injury Frequency Rate (LTIFR) used in the management of safety and health, was as follows (measured at a rate of per million man hours):

**REGIONAL HEALTH THREATS**

RH4

**2005**

**Mali**

Sadiola/Yatela 316

Morila 425

**Ghana**

Obuasi

17,460

Iduapriem

1,287

Bibiani

2,050

**Tanzania**

Geita

2,289

**Guinea**

Siguiri

159

**MLTIFR affected mines**

(per million man hours) (average)

**2005**

**Mali**

Sadiola/Yatela 51.4

Morila 138.3

**Ghana**

Obuasi

721.7

Iduapriem

416.5

Bibiani

534.9

**Tanzania**

Geita

244.7

**Guinea**

Siguiri

23.7

REGIONAL HEALTH THREATS

4. Review 2005

RH5

In the Report to Society 2004, a number of safety and health objectives were set and the company's performance against these objectives is summarised below.

**O**

**O**

**bjectives for 2005**

**Performance in 2005**

Ensure all AngloGold Ashanti operations

According to external research, internal experts and feedback from the susceptible to a higher HIV/AIDS risk adhere

government, all business units in South Africa compare favourably.

to best practice and common reporting standards

Reinforce prevention education efforts through

Good progress achieved. Guidelines for the Business Unit Prevention

more rigorous interaction between business

programmes distributed and implemented in 2005 with HIV/AIDS

units and the HIV management team

co-coordinators appointed at all business units.

Increase ratio of peer educators to employees

265 new peer educators appointed and trained during the year and a ratio

to 1:80

of 1:110 achieved.

Increase number of VCT visits by 100%

VCT visits increased by 150% to 10,219 in 2005.

Increase wellness clinic patients by 80%

wellness patient numbers increased by 31% to 3,254.

Increase number of patients on ART by 80%

Patients on ART (cumulative total) rose by 27% to 934.

Consolidate the provision of supportive care to

The company has provided financial and where possible technical

the company's ill-health retired employees as

support to local home-based care programmes, especially in areas where

well as to the communities in which

ill-health retired employees live and where the company operates.

AngloGold Ashanti operates

In South Africa, HIV/AIDS is recognised as a serious threat to the health of not only employees but also their families. Globally, between 34 and 46 million people are believed to be infected with HIV, with between 25 and 28 million people infected in sub-Saharan Africa. The national HIV prevalence level in South Africa is estimated at about 11% (Source: Human Sciences Research Council (HSRC)) while UNAIDS estimate an adult (15 to 49 years) prevalence of 21.5%. The age-specific rate for men aged 30 to 34 years in South Africa is estimated to be 24% (Source: HSRC) and for women also aged 30 to 34 years, attending antenatal clinics in South Africa, 34% (Source: National Antenatal Sero-Prevalence Survey 2004). The HIV prevalence level at AngloGold Ashanti's South African operations is estimated to be in the region of 30% (about 10,000 employees), based on research undertaken in 1999 and 2000 (See graph alongside).

Based on these estimates, the HIV prevalence level is expected to have peaked in 2005, decreasing to about 26% in 2010. However, these projections are based on the assumption that the HIV/AIDS epidemic is maturing and that the number of HIV/AIDS deaths will exceed the number of new infections. With the advent of ART, it is expected that HIV-infected employees will live longer and that the prevalence level will thus rise. However, no more accurate data is available in the absence of a company-wide testing programme, to which the unions have historically been opposed.

AngloGold Ashanti has played an active role in developing programmes to combat the spread of HIV/AIDS and to deal humanely with its consequences. While the company's programme is primarily aimed at employees, in many instances, VCT and home-based care have been extended to communities surrounding operations or from which employees have been drawn.

**E**

**E**

#### **Engaging with unions**

In line with the tripartite approach to safety and health in the South African mining industry, the company has actively engaged with unions to participate in the programme. AngloGold Ashanti has in place an HIV/AIDS policy which is supported by an agreement signed with the National Union of Mineworkers (NUM), Mineworkers' Solidarity (MWU), National Employees' Trade Union (NETU), South African Equity Workers' Association (SAEWA) and the United Associations of South Africa (UASA) in July 2002. Both the policy and agreement provide for:

- the creation of a workplace environment conducive to eliminating the stigma associated with the disease and unfair discrimination, and upholding the dignity and rights of affected employees;
- education and training related to the infection;
- the distribution of condoms and the treatment of sexually transmitted infections (STIs);
- VCT and wellness programmes, including the provision of ART; and
- care of employees both while they are working for the company and after they retire.

#### **REGIONAL HEALTH THREATS**

HIV/AIDS in South Africa

RH6

HIV prevalence rate projections (%)

within AngloGold Ashanti – South Africa

T  
T

### **he AngloGold Ashanti HIV/AIDS Programme**

AngloGold Ashanti's HIV/AIDS programme is managed primarily at an operational level, overseen by joint management/union committees, with clinical expertise, resources and oversight provided by AngloGold Health Service (AHS). AHS provides a comprehensive medical service to AngloGold Ashanti's employees at on-mine clinics, occupational health centres and two world-class hospitals.

The company's HIV/AIDS programme has as its aim the reduction of new infections and the efficient management of those already infected. To achieve these objectives, the programme is based on three fundamental pillars: prevention, treatment and support.

#### **Prevention**

The primary aim of this segment of the programme is the reduction of the rate of new infections among the workforce by effecting behavioural change. A key element of the programme is to encourage employees to know their HIV status and some success was achieved in this regard during 2005 as 10,219 visits were recorded at AngloGold Ashanti's VCT centres, an increase of 150% on those recorded in 2004. By the end of December 2005, 32.4% of the workforce had undergone VCT, 22% of whom tested positive for HIV while 78% were HIV-negative. Importantly 77% of those who underwent VCT in 2005 had the test taken for the first time. This follows the introduction of a comprehensive strategy to increase VCT uptake in 2005.

At the beginning of 2005, guidelines for the Business Unit Prevention programmes were distributed and implemented at all the South African business units. These guidelines address:

- VCT;
- the responsibilities of AIDS co-coordinators;
- the role of HIV/AIDS committees;
- information and training programmes for employees (induction), supervisors, management and organised labour;
- peer education;
- quarterly campaigns (to promote VCT, non-discrimination and destigmatisation);
- condom distribution; and
- STI and HIV prevention programmes for local commercial sex workers.

The business unit line managers are accountable for these programmes, although they receive technical support from AHS. AIDS co-coordinators and AIDS awareness committees have been established at all business units with awareness campaigns run on a quarterly basis, supported by annual induction and supervisory training in respect of HIV/AIDS. These committees

REGIONAL HEALTH THREATS

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comprise both management and union representatives and generally meet on a monthly basis to discuss issues of concern, evaluate the current programme and plan for special events. Greater emphasis was placed on the training of peer educators during the year with 265 new peer educators being trained. *(See case study on page RH22: New impetus for peer education to combat HIV/AIDS.)*

In 2005, 2,844 cases of STIs were treated by AHS during the year, a decrease of approximately 18% on the number recorded in 2004. This may be as a result of the prevention campaigns, but may be an indication that employees are receiving treatment elsewhere.

#### **Treatment**

Central to the campaign is the effective management of those already infected with HIV. The programme includes early identification of the disease, prophylactic treatment for opportunistic infections and ART where appropriate.

The company has provided wellness clinics for HIV-infected individuals since 1999 with the provision of ART having been introduced in November 2002. During 2005, 1,267 employees were registered for the first time on AngloGold Ashanti's Wellness Programme, an increase of 35.5%. The cumulative number of employees remaining registered with the wellness programme by the end of 2005 was 3,254.

A major challenge facing the company is that, although these facilities and services are provided free of charge to employees, there are still large numbers of employees at the early stages of the infection, who are not undergoing VCT (that is before they become ill) and who then present themselves too late for the effective provision of ART.

While the number of HIV-infected patients attending the treatment programmes remains lower than desired, the programme has shown significant success with steady improvements in the immune status of HIV-infected individuals. *(See case study on page RH19: Delivering ART at AngloGold Ashanti.)* In 2005, 653 employees were enrolled in the ART programme for the first time, bringing the cumulative total of employees currently on ART to 934. Importantly, 63% of those who started ART remain on the treatment. The majority (87% at West Wits and 80% at Vaal River) of those employees currently receiving ART are healthy and have returned to work.

#### **Support**

The third pillar of the HIV/AIDS programme is that of support. This starts with the appropriate placement of personnel through objective assessment (physical and functional work assessment – see Report to Society 2004) and early retirement on the grounds of ill-health for individuals unable to continue working. This is followed by palliative care where possible.

In 2005, 274 employees in the West Wits region applied for and received ill-health retirement benefits from the company, although not all of these applications can be ascribed to AIDS.

Also during 2005, 225 employees were known to have died in hospital from AIDS.

#### **REGIONAL HEALTH THREATS**

##### **RH8**

HIV/AIDS research projects

AngloGold Ashanti, together with Aurum Institute for Health Research, has been involved in a wide range of research projects aimed at improving understanding of the disease and, in particular, the use of ART specifically in the mining environment. In 2005, six research projects related to ART were undertaken by Aurum *(see box on Aurum in the Occupational Safety and*

*Health section on page SH28*). These include:

- Resistance study: Analysis of viral load specimens for patients who have failed the first-line regimen, and to ensure the appropriate second-line regimen is being followed.
- Efavirenz/Rifampic interaction study: Project undertaken in collaboration with the University of the Western Cape and involves an analysis of blood drug level testing to determine the interaction between Efavirenz and Rifampicin, two drugs used as part of the ART regimens.
- Efavirenz early side-effects study: A study of the early neuro-psychiatric effects of the drug at Western Deep Levels Hospital.
- DOT HAART trial: This involves the use of directly observed therapy using peer-nominated supporters. The trial is funded by the National Institute of Health of the United States and is being undertaken in collaboration with the Johns Hopkins University and the University of Cape Town.
- Functional work capacity study: A study to assess the fitness for work of patients on ART.
- Adherence study: A study to assess factors that have an impact on adherence to the ART programme.

AngloGold Ashanti is involved in numerous home-based care programmes for employees who are AIDS-ill, including TEBA Home-based Care, Carletonville Home- and Community-based Care, North West Hospice, Bambisanani Home-based Care and Rudo Home-based Care. (See case study on page RH24: *Into the community – home- and community-based care* and page RH21: *New lease on life for Lusikisiki Village Clinic.*)

**B**

**B**

**business impact**

There is no doubt that HIV/AIDS is a burden to the company and the country as a whole. The incidence of HIV infection, and its subsequent progression to AIDS, has contributed significantly to a change in the disease profile seen within the company, which has in turn resulted in a greater risk in respect of tuberculosis, in rising absenteeism (as a result of opportunistic infections), in early departures of skilled personnel from the company and death rates. The company has sought to manage the disease among its employees in a manner which both maximises their welfare and, as far as possible, minimises the economic cost. Indicators have been developed to evaluate the effectiveness of the HIV/AIDS programme and initiatives include disease burden, absenteeism, early retirement, death in service indicators, and HIV care efficacy. Targets related to the various indicators are being developed. In 2005 the company spent (\$3.1 million) R16.45 million on HIV/AIDS programmes, most of which was related to medical costs. It is recognised though that greater understanding is required on the direct effects of HIV and AIDS in the workplace and an HIV/AIDS impact analysis is currently under way.

HIV/AIDS in the African operations  
(excluding South Africa)

The prevalence rate of HIV/AIDS in the other African countries in which AngloGold Ashanti operates is not as high as it is in South Africa. Nonetheless, the disease has an impact on both employees and their communities, and programmes are in place at all of these operations to deal with the impact of the epidemic. While AHS plays an advisory role in the development and delivery of these programmes, the operations themselves are responsible for the programmes and initiatives are frequently undertaken in collaboration with government bodies and non-governmental organisations (NGOs).

REGIONAL HEALTH THREATS

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## Management of HIV/AIDS

The management of HIV/AIDS differs from country to country.

While HIV/AIDS prevalence levels in Namibia are at similar levels to those found in South Africa, the prevalence level among employees at Navachab mine is estimated at about 8%. The mine's on-site clinic provides VCT and ART as part of an integrated HIV/AIDS management campaign. In 2005, 42 employees underwent VCT and a cumulative total of three employees were on ART.

In Guinea, a national HIV/AIDS Committee oversees the work done by individual companies, national organisations and NGOs. At the Siguiiri mine, the Comity SIDA Enterprise SAG, a committee comprising members of management, the union and local authorities, has developed an action plan in respect of the management of HIV/AIDS.

In Ghana, a policy was developed under the auspices of the Ghana Employers' Association and the Ghana AIDS Commission. Although there is no formal VCT centre, the Iduapriem mine clinic is equipped to undertake VCT and undertook four tests in 2005. There are no confirmed cases of employees infected with HIV at Iduapriem. In 2005, the main thrust of the mine's HIV/AIDS programme was the distribution of condoms and the training of 35 peer educators.

At Bibiani, a company-specific policy has been in place since 2000. The on-mine medical officer is charged with oversight of the HIV/AIDS programme, the main thrust of which is aimed at the prevention of infection. A monthly message is communicated to employees by the on-mine peer educators, HIV/AIDS messages are printed on all pay slips, and the monthly company newsletter has a dedicated HIV/AIDS column. An HIV/AIDS talk is given at the clinic each day and condoms are freely available to employees. The clinic also treats all STIs and encourages the treatment of partners of those who present with STIs. The on-mine clinic also provides VCT free of charge to employees and their dependants, and at a highly subsidised rate to community members. Since December 2004, when the VCT programme began, 24 tests have been done. Although there is no formal wellness programme, two employees are on ART.

At Geita in Tanzania, HIV and STI prevention and management programmes are provided in a joint effort by the company and the African Medical and Research Foundation (AMREF). (See box on page RH11.) Based on a cross-sectional survey conducted by AMREF in 2004, the prevalence level is around 9.4% for male mine workers and 16.2% for female mine workers.

At Morila in Mali, the HIV/AIDS policy addresses the needs of employees and their dependants. In 2005, the programme activities included the recruitment of a community health educator, the provision of HIV testing kits, community peer educator training and specific awareness events (such as World AIDS day), condom distribution and training. The mine employs 19 peer educators, which is a ratio of 1:78.

A list of identified HIV/AIDS stakeholders, as well as the nature and frequency of interactions with them, may be found on the website.

## REGIONAL HEALTH THREATS

### RH10

#### **Estimated national prevalence levels**

##### **Country**

##### **Estimated adult**

##### **prevalence level**

##### **and source**

South Africa

21.5% (Source: UNAIDS)

Guinea

2.8% (Guinea Chamber of Mines)

Ghana

3.1% (Ghana AIDS  
Commission and Ghana  
Employers' Association)

Tanzania

9% (AMREF)

Namibia

21.3% (Source: UNAIDS)

Mali

1.7 (DNS)

HIV/AIDS campaign at  
Siguiri in Guinea

While the estimated national HIV/AIDS prevalence level is around 2.8% in Guinea, the estimated prevalence level at Siguiri is in the region of 0.04%.

Nonetheless, the mine involves itself in educational campaigns not only among workers, but also in the surrounding community.

Central to its strategy is an HIV/AIDS sensitisation campaign that involves the promotion of voluntary testing and the distribution of condoms.

VCT is provided free of charge to employees and their families, contractor employees and community members at the Koron Medical Centre. In 2005, 145 employees and their family members under went VCT, as well as 104 local community members.

On International AIDS Day on 1 December 2005, the mine's medical personnel were involved in an awareness campaign at work and in local villages, conducting educational talks and distributing T-shirts and condoms.

## REGIONAL HEALTH THREATS

### RH11

#### HIV/AIDS programmes at Geita

The Geita mine works closely with the African Medical and Research Foundation (AMREF)\*. The mine's strategy is based on a policy that was drawn up in consultation with a wide range of stakeholders. While the mine's own clinic provides medical services, the bulk of the programme is administered by AMREF and is funded by the mine. AMREF's brief is to provide services to both mine employees and their dependants, and community members.

On-mine activities include:

- ongoing peer health education scheme;
- ongoing HIV/AIDS awareness workshops for employees; and
- distribution of educational material.

Community-based activities include:

- ongoing peer health education scheme;
- awareness workshops;
- focused interventions for high-risk women;
- provision of sexual and reproductive health services at the Geita HIV Centre. Services (available to mine employees and community members) include VCT, management of STIs, family planning, basic medical follow-up and counselling;
- home-based care of HIV-infected individuals; and
- training and supervision of district health workers.

The AMREF-operated HIV centre is located in the centre of the town of Geita in an old bus station building. Its services are promoted within the company through the peer health educator network and awareness workshops.

The provision of ART at Geita District Hospital started in June 2005. Currently, about 80 people are on treatment. The cost of the ART programme is borne by the Tanzanian government as part of its national roll-out of ART. However, initial costs related to the roll-out, capacity building and equipment for the hospital in the town of Geita to be certified as an ART centre, were funded by Geita mine as part of the annual Kilimanjaro Challenge (*See Report to Society 2004*).

*\* AMREF is an NGO whose mission is to improve the health of disadvantaged people in Africa as a means for them to escape poverty and improve the quality of their lives. AMREF's work has six areas of focus: STIs, safe water and basic sanitation, family health, training and health learning materials. For more information see [www.amref.org](http://www.amref.org).*

The following table records the objectives set for 2005 and performance achieved against these objectives.

**Malaria**

**Objectives for 2005**

**Performance in 2005**

Roll out malaria control

The roll-out of this campaign was programme at Obuasi

delayed until the first quarter of 2006.

Malaria remains a significant risk for the AngloGold Ashanti operations in Central, West and East Africa, namely at Morila, Sadiola and Yatela in Mali; Siguiri in Guinea; Obuasi, Iduapriem and Bibiani in Ghana; and Geita in Tanzania. The disease has assumed epidemic proportions in many of these countries because of ineffective national control measures and despite the active intervention of international NGOs. The disease is a major cause of death in young children and pregnant women but also gives rise to morbidity and absenteeism in adult men. AngloGold Ashanti aims to implement integrated malaria control programmes at each of these operations. Such a programme comprises:

- vector control, which involves mosquito identification and insecticide susceptibility tests, as well as indoor residual house spraying, house screening and the provision of insecticide-impregnated bed nets (ITNs);
- disease management, which relates to effective diagnosis and treatment;
- surveillance and monitoring of both the vectors and parasites (for drug resistance) and the compilation of accurate records; and
- information, education, communication (IEC) and health promotion. A set of indicators has been developed to monitor the disease and its effects on local communities and the AngloGold Ashanti workforce and also to establish baselines against which the outcomes of regional malaria control programmes can be assessed.

Integrated Malaria Management Programme

REGIONAL HEALTH THREATS

Malaria

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The Malaria Lost-Time Injury Frequency Rate (MLTIFR) is expressed as the number of cases due to malaria for every million man-hours worked. This allows the rate to be compared with the conventional LTIFR and clearly demonstrates the negative impact malaria has on productivity and health in the workforce. Malaria incidence rates are expressed as a percentage of employees affected by malaria in a given period. Because of seasonal changes in malaria incidence, this is usually reported as a quarterly rate.

Integrated malaria control programmes have been successfully implemented at Sadiola, Yatela and Morila and malaria incidence rates have declined over time.

The integrated malaria programme planned for Obuasi (*See Report to Society 2004*) was delayed until the first quarter of 2006. (*See case study on page RH14: Integrated malaria campaign at Obuasi under way.*) A campaign is being implemented at Bibiani in Ghana. (*See case study on page RH16: Malaria study at Bibiani.*) A malaria audit was recently undertaken at Siguiri in Guinea, and an appropriate programme is being developed. In the interim, an entomology study has been commissioned.

**Impact of malaria 2005**

**Sadiola/**

**Morila**

**Geita**

**Obuasi**

**Iduapriem**

**Bibiani**

**Siguiri**

**Yatela**

Total malaria cases  
for employees  
and contractors

316

425

2,289

17,460

1,287

2,050

159

Total work days  
lost due to  
malaria in  
employees  
and contractors

640

209

1,482

372,249

144

522

87

MLTIFR – average

51

138

245

721

417



535

24

Malaria severity  
rate (days/case)

– average

1.5

0.5

0.6

2.0

0.11

0.3

1.0

Malaria incidence

(%) – average

0.76

2.6

7.3

27.1

11.1

14.2

0.4

Other regional health risks

At Siguiri in Guinea, the company has implemented a campaign to overcome cholera.

*(See case study on page RH18: Anti-cholera campaign at Siguiri benefits communities.)*

5. Case studies

Case studies that illustrate AngloGold Ashanti's effort and programmes in respect of regional health threats may be found on the pages that follow. Follow-ups on case studies presented in the Report to Society 2004 may be found on the website.

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RH13

REGIONAL HEALTH THREATS –  
CASE STUDY GHANA  
RH14

5.1 Integrated malaria campaign at Obuasi under way

AngloGold Ashanti is set to implement an integrated malaria control programme in Obuasi and outlying villages within the Obuasi Municipal Assembly area in mid 2006, with the aim of reducing malaria incidence in the region by 50% within two years. This campaign, first reported in the Report to Society 2004 (See case study: A scientific approach to malaria control at Obuasi) was originally scheduled to begin at the beginning of 2005, but was delayed to allow the programme planners more time to establish a proper scientific base from which to launch the project, and to interact with the community to determine their exact needs with regard to the prevention and treatment of malaria.

The focus of the programme is to formulate, develop and implement a sustainable system that will reduce the severe burden of malaria at Obuasi, promote community development, educate the community in all means of preventative measures and assist health practitioners in the early detection and treatment of malaria. The programme is to be managed in partnership with relevant stakeholders and in line with the Ghana government's malaria policy.

The Obuasi mine hospital, the Edwin Cade Memorial hospital, currently treats an average of 6,000 malaria patients per month, 1,900 of whom are mine employees. With an average of three days off per patient per bout of malaria, this equates to approximately 5,100 man shifts lost per month. Coupled with the slower work rate experienced during recuperation, malaria results in major production losses, and monthly medication costs alone often exceed \$40,000.

The main components of the integrated malaria control programme for Obuasi are:

- Vector control – Indoor residual spraying of the estimated 90,000 structures in the municipal area as well as the use of insecticide-impregnated bed nets. The cost of the spraying is estimated at \$823,000 per year.
- Larviciding of temporal and permanent water bodies which support mosquito breeding
- Disease management – Effective treatment protocols (such as early detection and diagnosis of malaria) have been introduced at the hospitals in Obuasi. These, coupled with the provision of the new malaria treatment drugs will help ensure acceptable cure rates and reduce the pool of infected individuals.
- Surveillance and monitoring – A malaria information system will measure programme outcomes to World Health Organization (WHO) established standards and monitor productivity, quality control and costs.
- Information, education and communication – Programme liaison teams and volunteer community advocates have been trained to provide health information on malaria prevention, symptoms and treatment. Educational material such as pamphlets, posters and videos on malaria will also be circulated. A malaria control centre in the Sansu area is nearing completion and, although primarily the headquarters for the Obuasi programme, it will also serve as a training centre for members of AngloGold Ashanti's malaria projects at other mines, and also for other companies operating in Ghana. It is seen as an asset to Ghana and Africa in the fight against malaria and as such will be available for use as a satellite research centre by the Noguchi Memorial Institute for Medical Research at the University of Ghana, government departments, and other agencies. The centre is well equipped as an information centre and comprises

REGIONAL HEALTH THREATS –  
CASE STUDY GHANA  
RH15

offices and training facilities. Incorporated is an insectary and laboratory, which will be used for surveillance, research, and maintaining a mosquito colony to measure and test insecticide efficacy and vector resistance.

The resident entomologist is a local graduate, who was nominated by the Noguchi Institute and sponsored by AGA for a doctorate in Entomology at the University of the Witwatersrand in South Africa.

**Job creation**

In addition to the entomologist, 125 additional jobs have been created by the programme within the local community. A course for spray team supervisors, conducted in association with Avima, the company supplying the insecticide, covered all aspects of indoor residual spraying with emphasis on community relations and administration. Personnel from the Ghana Health Services, Ghana National Malaria Programme and the University of Ghana School of Public Health participated in the course.

In all, 116 spray operators were subject to stringent selection criteria and an intensive training course in the methodology and techniques of indoor residual spraying. Specialists involved in the Lubombo Spatial Development Initiative (LSDI) malaria control programme of South Africa, Mozambique and Swaziland provided training assistance.

The skills provided to trainees can also be applied in agriculture and in pest control operations.

**Community involvement**

The community liaison section of the malaria control centre is a vital component of the campaign since the success of the programme depends on its acceptance by the community. Presentations have been made to local stakeholders, including relevant government departments, the director of health services in Obuasi, the WHO malaria officer, community liaison committees, assemblymen, local and district chiefs, NGOs, church groups and schools.

“The programme is a partnership with the Obuasi community and all relevant parties have indicated their support of the campaign,” said Steve Knowles, Manager: Malaria Control Programme. “The Director of Obuasi Health Services has also aligned his public health focus with our malaria control programme.”

150 community malaria advocates (volunteers from the different communities and surrounding villages) were appointed to educate people on the need to change the environment in which they live, so as not to encourage or harbour mosquito breeding. These volunteers attended an intensive two-day training course on the cause and prevention of malaria presented by the Obuasi Malaria Control staff. They were issued with a distinctive shirt and cap to ensure they were easily recognisable, so that the community could approach them with questions or concerns. This feature of the campaign has been extremely successful and the advocates assisted the Noguchi Institute during their baseline malaria prevalence study in Obuasi and the town planning department of the local municipality in verifying data. They will also help the spray teams with community awareness during the indoor residual spraying phase.

5.1 Integrated malaria campaign at Obuasi under way

*cont.*

Key statistics

– Indoor residual  
spraying

Indoor residual spraying will  
take place bi-annually in a five-  
month cycle of spraying.

Approximately 90,000 structu-  
res will be sprayed in Obuasi  
town and villages, mine housing  
estates, offices and buildings.

The campaign will use 19,560  
kilograms of insecticide per

spray round, sprayed by 116  
sprayers, using 60 pumps,  
eight vehicles and nine trailers.

All insecticides used are  
Government approved and  
recommended by the World  
Health Organization (WHO) for  
malaria vector control and is  
supplied to WHO Specification  
(WHO/SIF/41).

REGIONAL HEALTH THREATS –  
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RH16

5.2 Malaria study at Bibiani

The prevalence of malaria has escalated at an alarming rate in many parts of Africa during the last decade. Malaria is ranked the third most infectious disease threat after pneumococcal acute respiratory infections and tuberculosis. Of the 300 million people affected by malaria worldwide, there are between 1 million and 1.5 million deaths each year, with 85% of these being in Africa.

Those most seriously affected are children under the age of five and pregnant women. Inadequate health structures and poor socio-economic conditions are major factors contributing to the incidence of the disease, which is exacerbated by a growing resistance to drugs used to combat the parasites that cause the disease. Malaria, an infectious disease characterised by fever, shivering, joint pains and headaches, is caused by protozoan parasites of the genus Plasmodium (P.) and is transmitted to humans by the bite of an infected female anopheles mosquito. The P. falciparum parasite is the most widespread and dangerous of four parasite species, leading, as it can, to fatal cerebral malaria if untreated.

This type is prevalent in Ghana, where Bibiani mine is located. In an effort to reduce the incidence of malaria among its employees and their dependants, the mine embarked on an anti-malaria campaign two years ago. Measures implemented at the mine and at employee accommodation include:

- **vector control:** this includes regular spraying of residential areas with insecticides; desisting of drains and water bodies; supplying insecticide-treated mosquito nets to employees and dependants at subsidised rates; and supplying mosquito repellents to night-shift workers in exposed areas;

- **education on malaria prevention:** education for employees takes place at regular ‘Tool Box Talk’ meetings and daily at the mine’s on-site clinic which is open to employees, dependants and private patients. Malaria prevention is also emphasised at the twice-weekly antenatal clinics held for expectant mothers; notable is the fact that in 2005 less than 5% of pregnant women reported to the clinic with malaria; and

- **effective malaria management:** all malaria cases are treated at the mine clinic. No malarial fatalities were reported during the last three years at the clinic. Children under the age of five and pregnant women are prioritised. In line with the national treatment protocol, all pregnant women are placed on an anti-malaria prophylaxis.

Despite these efforts, however, the incidence of malaria has not declined, as would have been expected, but has increased significantly. Between 2003 and 2005, the number of employees and contractors disagreed with malaria almost doubled, rising from 1,180 to 2,050; 522 work days were lost to malaria in 2005. Out of a total number of 11,516 cases presenting at the clinic in 2005, including employees, dependants and private patients, 4,430, or 38.5%, were diagnosed with malaria.

Bibiani mine is now undertaking a study to investigate why the incidence of malaria is on the increase. Headed by Dr Ernest Nagali from Bibiani mine clinic, the study team is attempting to find out how effective the vector control measures are at the mine and its residential areas, compared to the rest the town of Bibiani – the largest in the district with an estimated population of 45,000 – which was not included in the mine’s vector control programme.

REGIONAL HEALTH THREATS –  
CASE STUDY GHANA  
RH17

5.2 Malaria study at Bibiani *cont.*

The two-year long study, which commenced in June 2004, involves the collection of data from families living in certain areas of the town of Bibiani, where some employees reside, as well as employees and their families who live on mine premises, namely Old Administration Estates, Dan Owiredu Estates and Junior Village. At these locations, 131 housing units are available for families of employees, who have been allocated accommodation. (When the study commenced, there was a total of 2,878 employees, dependants and contractors, but with downscaling of the operation, the current figure is 1,785 and it is expected to decline further.)

Because the housing address system in Bibiani is poor, the team has mapped out the area of study into 17 sections, and is cross-referencing malaria cases presenting at the clinic with the section from which each case originates. Once all the malaria cases and their corresponding sections have been ascertained, the team will then conduct interviews with affected families in an attempt to find out why some sections have a higher malaria incidence than others. Demographic data will be collected at this stage to ensure the study is as reliable as possible and also applicable in other regions where malaria is endemic.

Information being sought includes:

- the size of each respondent's household; the number of times each member was treated for malaria in the six months prior to the interview; and how many times each was infected;
- whether respondents have acquired mosquito nets; and if they have, whether they use them, and how strict their adherence is; and

- what their basic knowledge of malaria prevention is – for example, whether they wear protective clothing in the evenings and whether they use mosquito repellents, like basic mosquito coils.

Expected to come out of the study is possible evidence that malaria prevention cannot be achieved with a homogeneous 'one size fits all' approach but should perhaps rather be adapted to suit local conditions. The study's findings and recommendations – which will look at practical solutions, taking into account prevailing socio-economic conditions and cultural practices – are expected to be available by August 2006 and will be presented to Bibiani mine, local health authorities and other interested parties. It is hoped the study will have relevance, not only for the Bibiani community, but for the country at large, prompting a possible re-think on the way forward with regard to effective malaria control and prevention.

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CASE STUDY GUINEA  
RH18

5.3 Anti-cholera campaign at Siguiri benefits communities

About cholera

Cholera epidemics, often related to poor sanitation, lack of hygiene and contaminated drinking water, are endemic in West Africa and may be exacerbated during the rainy season when latrines over-flow and wells become polluted. Cholera is an acute infectious disease of the small intestine, whose symptoms includes diarrhoea, vomiting, muscle cramps and severe dehydration. Cholera can be successfully treated with a number of interventions if reported in the early stages of the disease.

The Republic of Guinea's Ministry of Health reported 580 cases of cholera in the first seven months of 2005, 32 of which were fatal. Siguiri mine, situated in the north-west of the country, about 850 km from the coastal capital of Conakry, embarked on a cholera education and awareness campaign at the mine and in neighbouring communities to assist in efforts to curb cholera outbreaks. One of five prefectures located in the Kankan region of the country, Siguiri covers an area of 15,500 km

2

and has an estimated population of about 350,000.

Siguiri aims to reduce significantly the incidence of cholera through prevention. Inroads have already been made through Siguiri's first private radio station, which was made possible with funding of \$120,000 from Siguiri mine. This funding is a portion of the 0.04% of Siguiri's annual mine gross profits and part of the overall royalty that government legislates be allocated to investment and community relations projects.

Siguiri Radio Locale covers a number of community-related topics including health and sanitation, road safety, agriculture, small business, folk music and literature, and Islamic teachings. The rural radio station is being used to transmit education and awareness messages on cholera prevention, often reaching beyond the Siguiri footprint so that, in effect, an even greater number of people benefit from the campaign.

During 2005, a seven-person medical outreach team, headed by the mine's medical officer, was given the task of carrying out a comprehensive anti-cholera education programme aimed at mine employees and the greater Siguiri district. Set against a backdrop of strengthening relations with Siguiri's neighbouring communities, a delegation comprising professionals from the Koron Medical Centre, representatives from the public and community affairs department of the Siguiri Prefect and journalists from Siguiri's local radio station visited 18 villages in Boure, a gold mining zone that attracts small-scale and artisanal miners.

The campaign's key education and awareness messages focused on the causes of cholera, its treatment and prevention with an emphasis on hygiene, including washing fruit and vegetables before eating; washing hands before eating; covering foodstuffs to prevent contamination from flies and air-borne germs; and ensuring proper waste disposal so as not to attract house flies.

Over a 15-day period between 24 October and 8 November 2005, the delegation met with mine employees, as well as the local authorities, village chiefs and elders of the region's various districts and sectors: Siguiri, Kintinian, Setiguiya, Kamatiguiya, Kourani, Doubaya, Diaraya, Balato, Fatoya, Boukaria, Samani, Kofilani, Kourouda, Fenserekolen, Silabada, Kolenda, Tintisabani, Linkegoro and Cite Koron. Participants took the opportunity to apprise the delegation of specific infrastructural needs which would assist in successful cholera prevention and general community upliftment. They included drilling more bore holes to allow year-round access to water, and the construction of clinic facilities, schools and roads.

Following the campaign, the delegation informed Siguiri mine management of these requests, which would contribute both to closer relations between the mine and communities and to the socio-economic development of Siguiri and the Boure zone.

REGIONAL HEALTH THREATS –  
CASE STUDY SOUTH AFRICA

5.4 Delivering ART at AngloGold Ashanti

RH19

The provision of anti-retroviral therapy (ART) is an integral aspect of AngloGold Ashanti's HIV/AIDS programme in the South Africa region. This follows on from voluntary counselling and testing (VCT) and attendance at the wellness clinics. The objectives of the HIV/AIDS programme, which is based on three pillars – prevention, treatment and support – are to prevent new infections and to actively care for and support those infected with HIV/AIDS.

The provision of company-funded ART was introduced in November 2002. And although studies have shown that ART is effective in extending the lives of those who are HIV-positive, this effectiveness is inhibited by the relatively poor uptake of ART on the part of employees who are clinically indicated and by employees presenting themselves too late for treatment. This is because employees are mostly unaware of their HIV-status, and this in turn is a consequence of the poor attendance at VCT. As a result, too many employees die of AIDS-related illnesses or return home on ill-health retirement.

Once a person's HIV status is known, suitable action can be taken. Should test results be negative, appropriate behaviours can be reinforced to ensure that this status is maintained; if the results are positive, steps can be taken to delay the onset of end-stage AIDS for as long as possible by assisting with lifestyle planning, nutrition and appropriate behaviour to ensure that the person is able to lead as full a life as possible. People living with AIDS have an integral part to play in counselling, advising and demonstrating how to live a full life with AIDS. Thus, VCT is key in preventing HIV/AIDS by encouraging employees to know their HIV-status.

It is therefore a serious concern that the proportion of employees undergoing VCT is far less (32% of employees at the end of December 2005) than ideal. The company had set a target of 20% but ideally 100% of people should test. AngloGold Ashanti estimates its workforce to be 30% HIV-positive with ART being clinically indicated in approximately 20% of those infected. Again, the numbers of those attending wellness clinics and on ART are well below what they should be.

To address this issue, a concerted campaign to encourage attendance at VCT was begun at the start of 2005. This was over and above quarterly awareness campaigns and annual supervisory and induction training. In addition, AIDS co-coordinators and AIDS committees have been established at all business units in the South Africa region. A consequence of the campaign to encourage VCT has been that the monthly number of new patients embarking on ART increased steadily during the year, averaging 53 new ART patients per month in 2005, compared with a monthly average of 26 in 2004.

Although the take-up of ART is still lower than would be ideal, the outcomes for those on treatment is impressive. As at 31 December 2005, a total of 3,254 patients were enrolled in the HIV-wellness programme, 934 (29%) of whom are currently on ART. Over the past three years, of those who have begun ART, 63% remain on the treatment. Not adhering to the treatment regimes is the most frequently cited reason for not continuing with ART. Those patients who do not comply with the treatment are removed from ART as their non-compliance could lead to the development of a drug-resistant form of the HI virus which would place the entire community at risk.

The use of ART has led to significant improvements in the immune status of HIV-infected individuals. According to statistics, after two years of treatment, there is an average increase in the CD4 count from a baseline of 153 to 324. (Individuals are clinically eligible for ART if their CD4 count is less than 250, or if they have end-stage disease. The average CD4 count in an immuno-competent healthy person is in excess of 800.) Similarly, 78% of patients who begin ART have a viral load of less than 400 after two years on treatment, signifying a sustained positive response (viral suppression) to therapy for those who remain on ART. Most people currently on ART are healthy and have returned to work. In the West Wits region, 87% of patients on ART have been declared fit for work by their attending doctor and in the Vaal River region, the total is 80%. Of the patients on ART, 63% experienced only minor side-effects and just 2% of patients on ART have developed serious adverse reactions to the treatment.



Benefits of ART for the company include a significant reduction in absenteeism and in the use of health care facilities by those on ART.

Research by AngloGold Ashanti to improve its understanding of the use of ART on South African gold mines, its effectiveness, complications and the factors affecting adherence to ART, continues. Knowledge gained from this research will be applied to improve the implementation of the programme and to ensure that more of those clinically eligible take up ART. Investigations into the economic aspects, specifically absenteeism, health care costs and productivity, are also underway.

The costs of the HIV/AIDS programme for the year totalled R16.45 million: approximately R2 million for the prevention programme, R13.89 million for the treatment programme and the provision of ART, and another R2.5 million for the support programmes.

#### REGIONAL HEALTH THREATS –

#### CASE STUDY SOUTH AFRICA

#### 5.4 Delivering ART at AngloGold Ashanti

*cont.*

#### RH20

#### What is AIDS?

AIDS is caused by the human immunodeficiency virus (HIV) which enters the body's immune (or defence system) where it multiplies and slowly begins destroying the cells which protect the body before moving on to infect other cells. Cells which protect the body contain CD4 receptors and these CD4 cells are regarded as proxies for the immune state of an individual. As increasing numbers of the CD4 cells are destroyed, the body's defence systems are no longer able to prevent attack from disease. At this point, the body becomes susceptible to infection and cancers against which the immune system would ordinarily have protected the body and the HIV-positive person becomes AIDS-ill. Opportunistic illnesses such as tuberculosis and pneumonia then become more frequent and severe, leading ultimately to death.

#### What is ART and how is it delivered?

Anti-retroviral drugs act against certain viruses, including the human immunodeficiency virus, and are used in anti-retroviral therapy (ART). The anti-retroviral drugs used at AngloGold Ashanti are a combination of three

drugs – AZT and 3TC, which are combined into one tablet, and Stocrin – referred to as highly active anti-retroviral therapy (HAART). These drugs, which are used in combination to ensure optimal treatment to reduce the viral loads to very low levels as well as to reduce the risk of resistance, are referred to as first-line therapy and are supplied to 96% of those on ART. The remaining 4% for whom this medication is not strong enough are on what is termed second-line therapy. Anti-retroviral drugs prevent the virus from multiplying in the immune cells of the body. Although these drugs cannot cure AIDS, they do slow down the progression of the disease, enabling employees to remain productive and to enjoy a vastly improved quality of life. After intensive counselling and assessment to ensure that the patient is eligible for ART in terms of his/her clinical status, commitment and attitude, ART is supplied monthly through the primary health care clinics. The drugs are taken twice a day, 12 hours apart, and as close as possible to the same time every day. It is vital that once people begin treatment, they remain committed and continue their treatment. Blood tests are taken regularly to ensure compliance. Sub-optimal compliance can lead to the development of resistant strains of HIV which would put the entire community at risk. Intensive counselling is given prior to the start of treatment and once a month when the patient collects this medication from the clinic.

REGIONAL HEALTH THREATS –  
CASE STUDY SOUTH AFRICA

5.5 New lease on life for Lusikisiki Village Clinic

RH21

Lusikisiki Village Clinic, situated in the impoverished province of the Eastern Cape, and originally set up by AngloGold Ashanti in October 2000 to provide primary health care for the families of mine workers in this rural area, has found a new lease on life in providing primary health care and anti-retroviral therapy (ART) to a broad range of community members.

The clinic was run until December 2004 by AngloGold Health Service (AHS). While treatment for mineworkers was free and family members paid a nominal consulting fee, the broader community was charged higher rates. As a result, community members tended to make use of the free facility at the government clinic, based in a modified container in the village. Despite having the capacity to treat in the region of 4,000 patients a month, the AngloGold Ashanti clinic was largely under-utilised with less than a tenth of that number presenting monthly.

In order to ease pressure on the under-staffed government clinic that serviced around 300 patients daily, AngloGold Ashanti made a decision at the beginning of 2004, to hand the facility over to the Eastern Cape's Department of Health (DoH) for use as a community clinic.

This move is in alignment with AHS's own revised strategy – while AHS will provide health care only in areas in which the company operates, AngloGold Ashanti will continue to fulfil its social responsibility obligations by forming partnerships with host communities, including those from labour-sending areas. Besides donating all the clinic assets and the existing clinic stock – valued at around R350,000 (\$54,945) – AngloGold Ashanti also agreed to pay the monthly rental costs and a fixed maintenance fee to the clinic's owner, TEBA, on behalf of the Eastern Cape's DoH, for a three-year period – valued at approximately R170,000 (\$26,688).

The clinic, which has a large waiting room, three consulting rooms, a pharmacy, counselling room and staff room, was handed over to the DoH on 1 April 2005. With an increased staff complement comprising four professional nurses, four nursing assistants, two pharmacy assistants and two cleaners, the health centre, aptly renamed the Lusikisiki Village Clinic, is now able to provide a service to approximately 8,000 people a month.

Apart from providing primary health care, Lusikisiki Village Clinic was also chosen by the province's DoH as a roll-out site for the provision of ART. This is being provided in conjunction with the Eastern Cape DoH and international humanitarian aid organisation, Médecins Sans Frontières (MSF) – Doctors Without Borders – that assists in countries where health structures are either insufficient or non-existent. MSF launched its ART campaign at Khayelitsha Clinic in Cape Town and project leaders were seconded to the Eastern Cape in 2004 to administer and manage ART for HIV/AIDS patients presenting at Lusikisiki's Village and Gateway clinics, as well as the clinic in Port St Johns. So successful is the programme, which has strong nursing and community components, that about 1,000 HIV-infected patients presented for free ART at these three facilities in the first six months of the DoH's ART roll-out in the region.

Cognisant of the pressures government faces to provide primary health care for all South Africans, and in keeping with the company's aim to focus on broader social responsibility and not solely the provision of health care for its immediate employees and their families where possible, it is AngloGold Ashanti's intention to further bolster its partnership with the Eastern Cape's DoH by exploring similar assistance opportunities in other needy communities.

New impetus is being given to peer education, a key element of AngloGold Ashanti's HIV/AIDS prevention programmes. As the name suggests, peer education brings together people of equal standing in the workplace to directly influence safe sexual behaviour. AngloGold Ashanti trained its first peer educators in 2001 and has been using them successfully since then. The company is now developing greater capacity in its HIV/AIDS workplace department and moving towards establishing formal accredited in-house training, using the bridging services of an external provider, Education Training and Counselling (ETC), which has South African Qualifications Authority (SAQA) accreditation. ETC has a slightly different emphasis – mainly on managing the progress of the disease and the importance of early diagnosis. This is especially important since anti-retroviral treatment (ART), as an aid to slowing the progression of the disease from HIV to end-stage AIDS, is most effective if administered in the early stages. The effectiveness of peer educators in encouraging people to undergo voluntary counselling and testing (VCT) is now being measured.

“A diary system has been introduced to monitor the activities of peer educators and to gauge their success,” says Buti Kulwane, HIV/AIDS workplace programme manager. At this stage a monitoring tool, by way of a tear-off strip which the educator gives to the client to present at VCT, measures how many people report for testing following peer education sessions, as well as the source of the referral. Of AngloGold Ashanti's 37,000 employees in the South Africa region, 30% are estimated to be HIV positive, yet only 3,250 are currently attending the wellness programme, and 934 of these are currently on ART, both of which are offered at the West Wits and Vaal River operations. AngloGold Ashanti's 2005 target of 20% VCT attendance had been exceeded by October 2005, with 7,590 employees having tested at that stage. The majority of them were motivated to attend VCT as a result of VCT promotions and campaigns: 17% through having had VCT previously, and 8% through peer educators. However, since AngloGold Ashanti believes that peer education is ultimately one of the most sustainable prevention programmes, it is aiming for a much higher percentage of peer education referrals in 2006.

To achieve this, the company is working towards a ratio of 1:60 peer educators, more than doubling its current ratio of 1:110. Between April (when the 2005 courses started) and November 2005, 265 peer educators completed training. This number will have to be boosted to 550 in order to improve on the current ratio, which Kulwane believes is achievable. As a result, classes may be held bi-monthly in future, instead of monthly, to accommodate as many people as possible. Also being mooted is recognition of prior learning (RPL) for those who score highly – 70% to 80% – in the pre-peer education programme test and the introduction of training in African languages to accommodate those whose grasp of English is limited. ETC has also developed a 36-week programme for peer educators to take into the workplace after training.

This programme, currently being piloted at the AngloGold Health Service (AHS) hospital at West Wits, discusses a wider range of topics including company HIV/AIDS policy; peer educators and their function; and the immune system. There is also a move to integrate HIV/AIDS into health and safety programmes, so that peer education is recognised and supported by workplace supervisors. Kulwane believes that the more interest and encouragement there is from individual business units and management, the more motivated peer educators are likely to be.

REGIONAL HEALTH THREATS –

CASE STUDY SOUTH AFRICA

5.6 New impetus for peer education to combat HIV/AIDS

RH22

REGIONAL HEALTH THREATS –  
CASE STUDY SOUTH AFRICA

5.7 A new approach to HIV/AIDS  
– the Mponeng Mine Workplace Programme  
RH23

The Mponeng mine, which employs about 5,000 people, has developed a comprehensive workplace HIV/AIDS programme. The workplace programme is driven by an employment equity steering committee, comprising representatives from all disciplines, AngloGold Health Service (AHS) and organised labour. In turn, four sub-committees have been set up (labour availability, training and education, employment equity and wellness). Each of the four sub-committees is required to set annual action plans and report monthly to the main committee on issues identified and action taken.

The wellness sub-committee incorporates HIV/AIDS in its portfolio. “After extensive investigation and benchmarking of best practice, we found that there was still a poor uptake of the voluntary counselling and testing (VCT) programme, due largely to the stigma and fear of victimisation still attached in people's minds to taking the HIV test,” says training and development officer Derrick Naidoo.

Every induction presentation (for new employees and those returning from annual leave) now includes a comprehensive presentation on HIV/AIDS, its causes and effects, the treatment available within AngloGold Ashanti, and an overview of the company's HIV/AIDS policy. This induction includes generic pre- and post-test counselling. Should employees opt for an immediate test, qualified testers and appropriate facilities are available on site.

HIV-negative employees are requested to undergo a follow-up test three months later, to cater for the possibility of their having been in the ‘window period’ (the interval between becoming infected and the infection becoming apparent in a test). HIV-positive employees are referred to the wellness programme for additional counselling, management of tuberculosis (TB) and other infections, lifestyle and diet counselling, and, when medically indicated, anti-retroviral therapy (ART).

Naidoo reports that increasing numbers of employees have been opting to take the test immediately after induction. “We are now even finding that a number of employees are quite open and confident about declaring their HIV-positive status,” he says. “Our research also showed that mature, male employees are more comfortable talking to a male tester and AHS have factored this into their programmes.” (All staff involved in VCT, and the wellness programme of counselling and treating HIV-positive employees, are employed by AHS, and not the mine, to maintain confidentiality.)

Education and information about HIV/AIDS are not restricted to induction programmes, but permeate all aspects of life on the mine. “We took a top-down approach, in that the executive and management teams and an increasing number of officials have had themselves tested. We have regular ‘Gold Safe’ days, which include presentations on a variety of health- and safety-related topics, with VCT facilities also available,” says Peter Lombard, Human Resources Manager. “These ‘Gold Safe’ days are intended to influence the mindset of all employees in terms of the safety of all Mponeng employees, and continue the culture-change on the entire mine towards our adopted value of a caring organisation. ‘Gold Safe’ days are conducted by every section and facilitated by the section heads.

The programme has borne fruit in steadily improving results.

“Our target for the year was to have 20% of employees come forward for VCT: we have achieved 50.4%,” says Naidoo. “We will start again from zero in 2006 – because periodic re-testing is essential – and are confident we will achieve close to 70%. We have noted a 15% reduction in sexually transmitted infections (STIs), against a target of 10%, and have achieved a ratio of one peer educator per 70 employees, against a target of one peer educator per 80 employees.”

Taking monthly average figures, 196 employees per month were tested in 2005 compared with 26 in 2004.

Home- and community-based care (HCBC) is one leg of AngloGold Ashanti's HIV/AIDS support programmes, along with prevention and treatment.

HCBC is generally run by community-based organisations (CBOs) and non-governmental organisations (NGOs), which rely on funding from both government and the private sector to provide technical and financial assistance to operate effectively, often in remote areas, to provide care for sick and dying community members and to care for orphaned children.

Five HCBC organisations have been identified for inclusion in the company's wider HIV/AIDS outreach programme. They are the Carletonville HCBC and the Rudo Project, both based near its operations at West Wits in Gauteng; North West Hospice in Klerksdorp located near its Vaal River operations; Bambisanani Project in the Eastern Cape, a major labour-sending area; and TEBA (The Employment Bureau of Africa), which provides HCBC in the four major labour-sending areas comprising the Eastern Cape, Northern KwaZulu-Natal, Lesotho and Mozambique.

Depending on the focus of community care, these organisations offer some or all of the following components of integrated care:

- palliative care for bed-ridden sufferers, daily or three times a week, as well as educating family members on caring techniques;
  - visits to child-, granny- and relative-headed households, about three times a week;
  - support groups for people who, although infected with HIV/AIDS, live positive lives; and
  - income-generation and poverty alleviation through, for example, vegetable gardening and bread baking. Support group members are also involved in other projects like beadwork and sewing.
- Most of the NGOs have teams of professional nurses, social workers and counsellors, all volunteers recruited from within the community. Recognising that NGOs and community volunteers provide a range of community-based health services, most provincial health departments offer community health worker training on patient care. Heartbeat (a community development organisation) has developed a care programme for orphaned children and TEBA training is provided under the auspices of Goldfields Nursing College.
- AngloGold Ashanti's involvement is to finance certain aspects of their support programmes, either from the AngloGold Ashanti Fund or from the AngloGold Health Service (AHS) budget.
- Carletonville HCBC, formed in 1999, provides assistance to the Khutsong, East Driefontein, Welverdiend and Carletonville communities, with a focus on palliative care for patients and orphans. The AngloGold Ashanti Fund donated R200,000 in 2005 and AHS also provides a limited financial management service to assist with book-keeping and administration. Buti Kulwane, AngloGold Ashanti's HIV/AIDS workplace programme manager, who has been closely involved with the Carletonville HCBC for many years, also sits on its board. In this capacity, he is able to offer technical advice, for example, on the importance of good governance in attracting resources from both the public and private sectors. The staff comprises some 30 volunteers, and by the end of October 2005, assistance had been extended to 102 bed-bound patients in all three areas under the project, 462 people living with AIDS and members of support groups, and 503 orphaned children.

#### REGIONAL HEALTH THREATS – CASE STUDY SOUTH AFRICA

##### 5.8 Into the community – home- and community-based care

RH24

Although the Rudo project in Fochville has not received direct funding from AngloGold Ashanti, it hopes to be a beneficiary of pooled skills and resources in a move to incorporate all HCBC programmes in the region under one roof – namely Carletonville HCBC, the strongest in terms of capital and capacity. In order to create one strong and effective organisation with combined expertise and resources, key stakeholders in the Carletonville area have come together to develop a municipal response to HCBC. They include AngloGold Ashanti, Gold Fields, Heartbeat, Rudo, Carletonville HCBC and government. The amalgamated organisation is expected to be effective by June 2006.

For the past 12 years, North West Hospice has served the Klerksdorp, Orkney, Stilfontein and Hartebeesfontein (KOSH) communities, as well as the townships of Jouberton, Kanana, Khuma and Alabama. Primarily offering home-based care for all patients with life-threatening illnesses, it has now extended its services with the provision of a day-care centre for children up to the age of six. At the end of October 2005, 400 patients were on the HCBC programme, while 48 children were being looked after at the day-care centre. The home-based care programme is manned by 69 volunteers while the children's centre employs a manager, a social worker, a teacher and four assistant teachers. The hospice is about to open its first eight-bed in-patient unit in Jouberton to care for patients in the last stage of life. The AngloGold Ashanti Fund has donated an annual grant of R300,000 for a three-year period commencing 2005.

The Bambisanani Project assists the communities of Umzimkulu, Bizana, Flagstaff, Ntabankulu and Lusikisiki in the Kokstad region of the Eastern Cape. During 2005 AngloGold Ashanti provided for the employment of a professional nurse, at a cost of about R190,000 a year. A total of 3,258 visits for home-based care were made in the first half of 2005.

TEBA, formed in 1902 to recruit unskilled labour for the Witwatersrand gold mines in South Africa, commercialised its services in 1998. TEBA's rural support arm includes community HIV/AIDS programmes. AngloGold Ashanti, along with other mining companies, entered into an agreement with TEBA in 2002 for the provision of HCBC care for terminally ill former employees. The bulk of AngloGold Ashanti's HCBC funding – in 2005 this figure totalled R794,000 – is directed towards TEBA, which has offices in the Eastern Cape, Northern KwaZulu-Natal, Lesotho and Mozambique. Funding by TEBA is on a capitation fee of R3.75 per employee per month. Since its inception in 2002, 620 ex-AngloGold Ashanti employees have been enrolled in TEBA HCBC.

AngloGold Ashanti recognises that the high prevalence of HIV/AIDS in South Africa presents significant challenges to government, industry and civil society groups. In recognising that government alone cannot shoulder the burden of HIV/AIDS care, the company is committed to assisting CBOs and NGOs, which have been instrumental in the shift from hospital to home-based care, thereby easing the pressures on under-staffed and under-resourced provincial health departments.

REGIONAL HEALTH THREATS –  
CASE STUDY SOUTH AFRICA

5.8 Into the community – home- and community-based care

*cont.*

RH25

## HIV/AIDS

- Minimise the risk of HIV/AIDS at AngloGold Ashanti by ensuring that all operations susceptible to a HIV/AIDS risk, adhere to best practice.
- Reduce the rate of new infections by increasing the focus on prevention initiatives, increasing VCT uptake to 40% of employees and increasing the ratio of peer educators to employees to 1:60.
- Efficiently manage those infected by HIV/AIDS by increasing the number of wellness clinic patients by 40% and the number of patients on ART by 40%.
- Consolidate the provision of supportive care to the company's ill-health retired employees as well as to the communities in which AngloGold Ashanti operates.

## Malaria

- Complete baseline study at Siguirri in Guinea.
- Implement integrated campaign at Geita in Tanzania.
- Implement integrated campaign at Obuasi in Ghana. A 50% decrease in incidence and absenteeism is being targeted.

## REGIONAL HEALTH THREATS

### 6. Objectives for 2006

RH26



1. Introduction

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2. Business principle

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3. Key indicators

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4. Review 2005

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L29

LABOUR

PRACTICE

contents

Labour Practice

We provide our employees with opportunities to develop their skills while sharing risks and rewards in workplaces that promote innovation, teamwork and freedom with accountability. We embrace cultural diversity.

OUR VALUES:

AngloGold Ashanti's labour practices are guided by relevant legislation and the group's business principle, AngloGold Ashanti as an employer – labour practices (*see page L2 of this report*). AngloGold Ashanti is also committed to upholding the Fundamental Rights Conventions of the International Labour Organization (ILO).

The key indicators in this section of the report have been assured by external auditors PricewaterhouseCoopers

and this report has been compiled in accordance with the

Global Reporting Initiative (GRI) guidelines. (*See page 14 for the GRI index.*)

## LABOUR PRACTICE

### 1. Introduction

L1

## LABOUR PRACTICE

### 2. Business principle

#### L2

AngloGold Ashanti as an employer – labour practice

- AngloGold Ashanti is committed to upholding the Fundamental Rights Conventions of the International Labour Organization. Accordingly, we seek to ensure the implementation of fair **employment practices** by prohibiting forced, compulsory or child labour.

- AngloGold Ashanti is committed to creating workplaces free of **harassment** and **unfair discrimination**.

- As an international company, we face different challenges in different countries with regard to, for example, offering opportunities to citizens who may not have enjoyed **equal opportunities** in the past. In such cases, the company is committed to addressing the challenge in a manner appropriate to the local circumstances.

- We will **seek to understand** the different cultural dynamics in host communities and adapt work practices to accommodate this where doing so is possible and compatible with the principles expressed in this document.

- The company will promote the development of a work force that reflects the international and local **diversity** of the organisation.

- The company will provide all employees with the opportunity to participate in **training** that will improve their workplace competency.

- The company is committed to ensuring that every employee has the opportunity to become **numerate** and functionally **literate** in the language of the workplace.

- The company is committed to developing motivated, competent and experienced **teams** of employees through appropriate recruitment, retention and development initiatives. An emphasis is placed on the identification of potential talent, mentoring and personal development planning.

- Remuneration systems will **reward** both individual and team effort in a meaningful way.

- Guided by local circumstances, we shall continue to work together with stakeholders to ensure minimum standards for company-provided **accommodation**.

- The company assures access to affordable **health care** for employees and where possible, for their families.

- We are committed to prompt and supportive action in response to any major **health threats** in the regions in which we operate.

## LABOUR PRACTICE

### 3. Key indicators

L3  
0  
10  
20  
30  
40  
50  
60  
70  
80  
90  
100

- AngloGold Ashanti employed 63,993 people in 2005 (calculated on a monthly average basis), made up of 47,848 (74.8%) permanent employees and 16,145 (25.2%) contractors and JV employees. In 2004, the group employed 65,400 people, comprising 50,737 employees and 14,663 contractors. The changes related to:
  - restructuring at the South African operations, in particular, the closure of Ergo and the beginning of the closure process at Savuka;
  - transition to owner maintenance crews resulted in duplication for some months in Argentina, while the Cuiabá Expansion project resulted in an increase in Brazil; and
  - reductions at Bibiani in Ghana (as a result of ore depletion) and at Siguiri in Guinea (mainly contractors).

- No breaches of fundamental rights conventions of the International Labour Organization (ILO) were alleged or charged during 2005.

- There were seven industrial disputes during the period: Mali (3); Guinea (1); South Africa (2) and Ghana (1).

- Employee training and development costs for South African based operations amounted to \$23.2 million in 2005.

- 6,578 employees left the group in 2005, reflecting a turnover rate of 13.5%, while 1,471 employees joined the group.

- 89.4% of the total workforce is represented by a trade union or catered for by collective bargaining processes. All operations have recognised union or collective bargaining agreements in place except for CC&V in the USA and Sunrise Dam in Australia, both of which are non-unionised operations.

- Progress was made in respect of the representation of women at all levels:

- 6.1% of all permanent employees are women (2004: 4.5%);
- 12.4% of all managerial employees are women (2004: 9.8%); (managerial employees are defined as those in supervisory and management roles in Paterson job grades C-Upper and above);
- women make up 5.9% of the board (2004: 6%).

- It is standard practice for AngloGold Ashanti to employ indigenous people, rather than

expatriate employees, in the African operations (excluding South Africa).

Our assurance is based on a test of the reliability of the selected data marked with the symbol , by way of:

- conducting interviews and holding discussions with management, key personnel and/or stakeholders of AngloGold Ashanti Limited and assessing data trends;
- obtaining an understanding of the systems used to generate, aggregate and report the selected data;
- conducting site visits to test systems and data and inspecting premises where necessary;
- assessing the completeness and accuracy of the selected data; and
- reviewing and analysing collected information and effecting re-calculations where considered appropriate.

Women in management (%)  
Country of origin of  
South African employees (%)

0  
5  
10  
15  
20  
25  
30  
35  
40  
45  
50

#### LABOUR PRACTICE

L4

Women employed – Group (%)

Women on board – Group (%)

Key indicators – Reporting in line with the Mining Charter in  
South Africa

The Broad-Based Socio-Economic Charter for the Mining Industry (the Mining Charter) and its accompanying scorecard require that the company report on an annual basis against targets set in its Social and Labour Plans once the conversion of mineral rights is finalised. With this process near completion in the first quarter of 2006, the first formal report will likely be due in 2007. The following key indicators are reported in line with the Mining Charter:

- 3,892 employees were enrolled in Adult Basic Education and Training (ABET) at a cost to the company of \$1.1 million (R7.0 million). (2004: 5,147 employees – \$1.6 million or R10.4 million.)

- Employee training and development expenditure amounted to \$23.2 million in 2005.

- Employment targets and achievements are reported to the South African Department of Labour on an annual basis.

- Historically disadvantaged South Africans (HDSAs): within South Africa, 33% of management comprises HDSAs (2004: 32%). (Managerial employees are defined as those in supervisory and management roles in Paterson job grades C-Upper and above). HDSAs make up 18% of the board (2004: 20%).

- Women: 6.42% of all permanent employees in South Africa are women (2004: 6%); 14% of managerial level employees are women (2004: 14%).

- Foreign migrancy is reported in South Africa in line with the spirit of the Mining Charter. Foreign migrants are defined as employees drawn from outside of the borders of the country and generally from within the South African Customs Unions, plus Mozambique. Many other migrant workers originate from rural areas within South Africa. The percentage of foreign migrant employees (defined in this way) was 36% as at 31 December 2005 (2004: 37%).

Social and Labour Plans are in place for all the South African operations and have been accepted by the Department of Minerals and Energy (DME).

## LABOUR PRACTICE

### 4. Review 2005

#### L5

A single objective was set in this area in the Report to Society 2004, which encompasses a range of sub-objectives.

#### **Labour**

#### **Objectives for 2005**

#### **Performance in 2005**

Adherence to and achievement of the guidelines and targets set in the submissions made. This includes:

- Employment equity targets in South Africa.  
Employment equity targets and progress submitted to the Department of Labour.
  - Social and Labour Plan submissions  
Social and Labour Plans submitted to the Department of Minerals and Energy in South Africa.  
Conversion to 'new order' mineral rights granted to AngloGold Ashanti in August 2005. Details relating to compliance with the Mining Charter Scorecard can be found on page L4.
  - Compliance with the Mining Charter  
Social and Labour Plans submitted to the Department of Minerals and Energy in South Africa.  
Conversion to 'new order' mineral rights granted to AngloGold Ashanti in August 2005. Details relating to compliance with the Mining Charter Scorecard can be found on page L4.
- A significant employer  
AngloGold Ashanti is a large employer in the global gold mining industry. Of greater significance though is the fact that, owing to the location of its operations and the nature of the economies in which it operates, the company is frequently a significant employer in those countries and regions in which it operates.
- On average, in 2005, the company employed 63,993 people (calculated on a monthly average basis), made up of 47,848 (74.8%) permanent employees, 16,145 (25.2%) contractors and joint venture employees. The changes came about largely as a result of restructuring at the South African operations, in particular, the closure of Ergo and the beginning of the closure process at Savuka; the transition to owner maintenance crews resulted in duplication for some months in Argentina, while the Cuiabá Expansion project resulted in an increase in Brazil; the transition to owner-mining at Geita in Tanzania; and the downscaling of operations at Iduapriem and Bibiani in Ghana. (Note that the average monthly figures for 2004 include the operations from Ghana and Guinea for eight months only.)
- In 2006, employee numbers are expected to decline still further at the South African operations owing to ongoing restructuring and, in particular, the closure of Savuka mine.



LABOUR PRACTICE

L6

**Employees and contractors**

**Employees**

**Contractors**

**Total**

**Total**

**Variance**

**and JV**

**2005**

**2004**

**(%)**

**employees**

Argentina

491

459

950

791

16.7

Australia

142

299

441

455

-3.2

Brazil

2,046

1,443

3,489

2,686

23.0

Ghana

7,138

3,166

10,304

8,712

15.5

Guinea

1,170

808

1,978

2,335

-18.0

Mali

497

812

1,309

1,413

-7.9

Namibia

315

0
315
251
20.3
South Africa
34,645
7,891
42,536
44,867
-5.5
Tanzania*
1,066
1,214
2,280
2,258
1.0
USA
339
53
391
411
-5.1
Other**
0
0
0
1,221
–
<b>Total Group</b>
<b>47,848</b>
<b>16,145</b>
<b>63,993</b>
<b>65,400</b>
<b>-2.2</b>

\* Employee numbers increased from 2003 to 2005 as the mine moved towards owner mining.

\*\* Other includes employees from the Freda-Rebecca operation in Zimbabwe which was sold in 2004.

#### Management structure and governance

Five executive directors and 12 non-executive directors direct the AngloGold Ashanti board. The Board is chaired by non-executive chairman, Russell Edey, and supported by non-executive deputy chairman, James Motlatsi. The chief executive officer, Bobby Godsell, has been in that position since the inception of the company in 1998. The board structure and role is discussed in the Annual Report 2005 and in the Ethics and Governance section of the Report to Society 2005.

The five executive directors are charged with the day-to-day running of the company (making up the executive committee (Exco), which is chaired by the CEO), and they are supported by the operations committee. A member of the operations committee, Nigel Unwin, is responsible for human resources and the central human resource development policies that guide and support the human resources practice within the group. Two chief operating officers and the management of the regions/countries are responsible for the management of the company. Policies are developed and procedures implemented that are relevant to the country and circumstances inherent within the region, complying with

regional legislation and labour requirements, as well as region-specific imperatives. The discussion that follows reports on the company's performance as an employer and is in line with the company's business principles, which are shown in orange below.

## LABOUR PRACTICE

L7

*AngloGold Ashanti is committed to upholding the Fundamental Rights Conventions of the International Labour Organization. Accordingly, we seek to ensure the implementation of fair employment practices by prohibiting forced, compulsory or child labour*

By virtue of its South African domicile, AngloGold Ashanti is subject to certain conventions signed by the South African government, including the human rights and social conventions of the ILO (ILO 29, 87, 98, 100, 105, 111 and 138). South Africa's constitution, together with its associated laws, guarantees non-discrimination on the basis of race and other unfair grounds, freedom of association and the rights of children, among other basic human rights. Certain ILO conventions (such as ILO Convention 128 dealing with child labour, and ILO Convention No 29 dealing with forced and compulsory labour) are also governed by law in South Africa, Argentina, Brazil, Australia, Namibia, Tanzania and the USA, and by law and various codes such as the Malian Labour Code and Malian Collective Agreement in Mali. A wide range of agreements and policies are also in place at an operational level to ensure that human rights are protected and include recognition and collective bargaining agreements, disciplinary, grievance and appeal procedures and non-discrimination agreements.

AngloGold Ashanti and its operating subsidiaries engage with a wide range of stakeholders. Details of many of these stakeholders, as well as the type and frequency or interaction, may be found on the website.

## Unions and collective bargaining

In line with the groups upholding of human rights conventions, freedom of association is encouraged and collective bargaining structures are recognised in those regions where these structures commonly exist. In practice, this means they exist at all operations except CC&V in the USA and Sunrise Dam in Australia.

Management/union relationships are governed by negotiated agreements in respect of most of the group's workforce, with 89% of the global workforce represented by recognised trade unions or catered for through collective bargaining processes.

In South Africa, 95% of all employees are either represented by unions or catered for by the agency shop agreement. (An agency shop agreement exists across the lower level bargaining unit within the company. This means that non-union members contribute 0.75% of their monthly basic pay to a human and industrial relations fund, whereas union members contribute 1% of their monthly basic pay to this cause.)

**Employees represented by unions or collective bargaining agreements (%)**

Argentina

65

Australia

0

Brazil

100

Ghana

93

Guinea

0

Mali

95

Namibia

76

South Africa

95

Tanzania

5

USA

0

**Group**

**89**

**Group labour turnover and job creation  
in 2005 (permanent employees)\***

Number of resignations in 2005

2,683

**Percentage voluntary  
labour turnover**

**5.5%**

Number of employees

retrenched/made redundant

1,070

Number of employees dismissed

1,053

Number of employees leaving

for other reasons

1,772

**Total % labour turnover**

**13.5%**

Number of new jobs created

1,471

\* In the USA permanent employees are categorised as regular employees.

## LABOUR PRACTICE

### L8

The four unions that are recognised are the National Union of Mineworkers (NUM), the United Associations of South Africa (UASA), Solidarity and the South African Equity Workers' Association (SAEWA).

Overall, in 2005, the group experienced seven industrial disputes: three in Mali; one in Guinea; two in South Africa; and one in Ghana.

In 2005, the South African mining industry experienced the first industry-wide strike since 1987. A four-day wage strike affecting all gold mine companies that are members of the Chamber of Mines of South Africa was launched on the evening of Sunday, 7 August 2005, by the NUM and Solidarity.

The basis for the strike was a wage dispute: the industry was offering increases of between 4.5% and 5% and the unions were demanding 12%. Other issues in dispute were: the quantum of employer contributions to the risk benefit within the Mineworkers' Provident Fund (one of the industry retirement funds); improvements in accommodation subsidies; and formalising Christmas breaks.

On 11 August 2005, the strike ended, with three full production shifts having been lost. (*See case study on page L23: The changing face of labour relations at the South African operations.*)

At the Navachab mine in Namibia, a recognition agreement is in place with the Mineworkers Union of Namibia (MUN), and the union bargains with the company on behalf of all employees in the A2 to C1 Paterson bands. 76% of the workforce belongs to the MUN. An 18-month wage agreement was signed during the year, allowing for a 6.5% wage increase. A shift agreement (developed as part of the transition to owner-mining) was also signed in November 2005.

At the Sadiola and Yatela mines in Mali, all employees are represented by the Mining Industry Union (SECNAMI) and guided by the National Collective Convention. There are no specific recognition agreements at mine level at Sadiola and Yatela, while at Morila, where 100% of employees are represented through SECNAMI, an internal agreement provides for adaptation to the National Convention. In May 2005, agreement was reached with the union in respect of production bonus payments for Sadiola and Yatela (in which different parameters, namely safety, volumes and costs, all play a role).

There was no industrial action against AngloGold Ashanti at the Malian operations although the mining contractor at Morila, Somadex, experienced a strike which did not affect production at the mine. Agreements were negotiated and concluded in 2005 on a production bonus scheme and a water allowance scheme.

Agreement was reached on a range of issues as part of the collective bargaining processes at Siguiri in Guinea, including wages, family transport and accommodation benefits.

Employee participation in  
South Africa

Emphasis is placed on employee participation in South Africa. In addition to direct employee participation through the normal meetings and management briefing sessions, there are also a number of forums established for regulating the interaction with the unions and associations.

These include the NUM Steering Committee, which is the company-level body that interacts with

management at corporate level on general company level issues. Company-level interaction with the other unions and associations also takes place in the form of regular bilateral meetings, as and when the need arises. Other forums include: the HIV/AIDS Committee, the Accommodation Forum and the Skills/Equity Committee.

Interaction at an operational/business unit level largely takes place through the Vaal River NUM Branch Committee for the Vaal River operations and NUM Shaft Committees for each of the mines at the Vaal River operations. Each of the West Wits business units also has its own NUM Branch Committee.

## LABOUR PRACTICE

### L9

At Siguiri in 2005, a four-day wildcat strike related to wage demands prior to the start of the collective bargaining process, and was largely a result of local inflation. Four working days were lost. The strike was resolved through bargaining with union representatives.

New rates of pay were negotiated between the company and the Ghana Mineworkers' Union in 2005.

In Brazil, annual negotiations on salaries and fringe benefits were negotiated in August 2005, while in Argentina, a four-year wage agreement was reached in April 2005.

AngloGold Ashanti has in place a variety of strategies and structures designed to promote participation at all levels within the company. These are developed and adapted regularly to meet operational requirements and changing circumstances.

Management and employee representatives meet both formally and informally at industry, company and operational level on a wide range of issues to share information and address matters of mutual interest.

#### ***AngloGold Ashanti is committed to creating workplaces free of harassment and unfair discrimination***

Racial and sexual harassment and other forms of discrimination are prohibited by the company's business principles as well as, usually, by legislation. Specific policies are in place at all AngloGold Ashanti's operations to protect the interests of employees.

In Australia, harassment and discrimination are regulated by stringent legislation. The company's policies are available on the company intranet, and form part of the induction process for new employees. In addition, regular training is provided for employees. The Australian operations have to report progress on the advancement of women to government authorities on an annual basis.

The USA has a comprehensive legal regime that addresses discrimination. In line with this CC&V has developed an equal employment opportunity policy that prohibits discrimination on the basis of age, race, sexual orientation, colour, religion, national origin, marital status, disability, or any other status protected by law.

Harassment and unfair discrimination are covered in the Ghana region's handbook on corporate governance.

In South Africa, a sexual harassment policy was put in place in 2002. Sexual harassment is dealt with as a serious form of misconduct. A framework for diversity training has also been instituted.



LABOUR PRACTICE

L10

*As an international company, we face different challenges in different countries with regard to, for example, offering opportunities to citizens who may not have enjoyed equal opportunities in the past. In such cases, the company is committed to addressing the challenge in a manner appropriate to local circumstances*

*We will seek to understand the different cultural dynamics in host communities and adapt work practices to accommodate this where doing so is possible and compatible with the principles expressed in this document*

*The company will promote the development of a workforce that reflects the international and local diversity of the organisation*

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. The group's employment equity and equal opportunity programme covers employee development and retention, strategies to counteract losses, career development and the promotion of mobility in an environment that is free of unfair discrimination.

Employment equity and/or equal opportunity targets are set and their achievement is monitored by a board sub-committee, the Employment Equity and Skills Development Committee.

In South Africa the employment of historically disadvantaged South Africans (HDSAs) remains a particular priority. Employment targets and achievements are reported annually to the South African Department of Labour, and reporting will also be provided in terms of the Mining Charter from 2007. Within South Africa, 33% of management comprises HDSAs. (The latter term includes citizens of countries within the South African Customs Union – SACU – and Mozambique, and all women. Managerial employees are defined by AngloGold Ashanti as those in supervisory and management roles in Paterson job grades C-Upper and above). Again, within South Africa, 22% of management comprises HDSAs if managerial employees are defined as those in management roles, in Paterson job grades D-Lower and above, as recognised by the Department of Minerals and Energy.

A Women in Mining Audit was undertaken during the year and the results of this are being used to shape the company's plans to recruit, advance and retain women in the South Africa region. (See case study on page L25: *Women in mining – uncovering the barriers.*)

In Namibia, equal employment is provided for in the Employment Equity and Affirmative Action Act and Navachab mine's recruitment policies are aligned with this legislation.

A three-year plan has been submitted to the Office of the Equity Commissioner, detailing plans for the advancement of women in the company.

## LABOUR PRACTICE

### L11

In many African countries, such as Mali, Namibia and Tanzania, legislation governs the recruitment of expatriate employees and promotes the localisation of the workforce. Policies are in place giving preference to the employment of local citizens. Plans to increase employment of local citizens and consequently reduce the number of expatriates (particularly at a management level) are in place at these operations and entail the identification and training of local citizens to replace expatriate staff once they have the requisite skills.

In Namibia, in particular, understudies have been identified for all positions held by non-Namibians, as is required by legislation. The understudy programme is aimed at groups rather than individuals, and is separate from the succession planning programme, which is aimed at individuals.

At Sadiola and Yatela, the training of local employees as successors is stipulated in the expatriate's contract.

In Ghana, the use of expatriate labour is overseen by government and the state annually approves the company's expatriate quota. Expatriates are employed on a two-year contract during which local staff should be trained to take over their roles.

In terms of legislation in Guinea, priority should be given to Guinea nationals for all jobs. If a Guinea national cannot be found, an expatriate may be hired for a maximum of a two-year contract, renewable only once.

***The company will provide all employees with the opportunity to participate in training that will improve their workplace competency***

***The company is committed to ensuring that every employee has the opportunity to become numerate and functionally literate in the language of the workplace***

***The company is committed to developing motivated, competent and experienced teams of employees through appropriate recruitment, retention and development initiatives.***

***An emphasis is placed on the identification of potential talent, mentoring and personal development planning***

AngloGold Ashanti's philosophy encompasses a wide range of training initiatives. Four broad areas of training can be identified, namely Adult Basic Education and Training (ABET), vocational training, management training and training for life.

Increased employment of women in mining at South

American operations

Respecting cultural diversity is a key feature of AngloGold Ashanti's values, and this extends to facilitating the employment of women in fields traditionally reserved for men. In Brazil, thanks to AngloGold Ashanti's innovative thinking, many jobs formerly occupied only by men have been filled by women.

In 2004, a number of women were employed as truck drivers for the Cerro Vanguardia Mine (an AngloGold Ashanti joint venture with Formicruz) in Patagônia, Argentina, and as watchkeepers for the operations in Brazil.

Natalia Moscardi, Human Resources Manager at Cerro Vanguardia Mine, is the first woman to be appointed to a

managerial position there.

During 2005, three women were recruited to operate heavy mining equipment: two of them, a first for Brazil, are working underground in Cuiabá Mine, in the State of Minas Gerais.

Before women could be recruited into such positions, a long-standing tradition of suspicion and reluctance had to be overcome. As recently as the 1970s, when groups of female geology or engineering students visited the mine in Nova Lima, they were not allowed beyond certain underground levels.

## LABOUR PRACTICE

### L12

#### Adult Basic Education and Training

It is the company's policy to provide Adult Basic Education and Training (ABET) to ensure that all employees are able to become literate and numerate. (All employees at the Australian and USA operations are literate, as are most employees in Argentina, Brazil and Ghana.)

To be literate in a particular language, individuals should be able to use the language effectively to think, acquire knowledge, express their identity, feelings and ideas, and interact with others. To be numerate, an individual should be able to develop the ability and confidence to think numerically in order to interpret and critically analyse everyday situations and to solve problems.

The South African Mining Charter requires that all employees are offered the opportunity to become functionally literate and numerate. Currently, the company estimates that 80% of all Group 3 to 8 employees (about 75% of the total employed in the region) are literate and 45% have an ABET Level III and higher qualification.

In 2005, 3,892 employees participated in ABET training in South Africa at a cost to the company of R7 million. The company estimates that 72% of its employees in the South African region have an ABET qualification at ABET I Level and higher.

ABET training has been revised at Navachab in Namibia. The literacy rate is estimated at about 70% at Sadiola/Yatela in Mali following a survey undertaken in 2005. An ABET programme is planned for 2006. A community-based literacy and numeracy programme run under the auspices of an NGO, FANDEMA, is also open to employees. The literacy level at Morila is in the region of 78%. Although the mine does not run on-mine ABET programmes, it contributes to community-based literacy programmes and encourages employees to participate in these. Part-time adult literacy programmes are held on-mine at Siguiri.

## LABOUR PRACTICE

L13

Programmes in place to improve employee (and community)

literacy and numeracy levels:

There are six levels of ABET training available in the South Africa region:

1. Pre-ABET –

Vernacular

– English, Numeracy, Life Skills

2. Level I

– English, Numeracy

– Life Skills, Science and Technology

3. Level II

– English, Numeracy

– Life Skills, Science and Technology

4. Level III

– English, Numeracy

– Life Skills, Science and Technology

5. NQF Level I – Introductory Certificate to Mining and Minerals Industry (Level IV)

6. RPL

– In place for ABET Level I, II , III and NQF LI

ABET is available and accessible to all employees of AngloGold Ashanti in the South Africa region. Through the Recognition of Prior Learning (RPL) Programme, employees' current level of education can be established and acknowledged. RPL also assists the Human Resources Departments in the career path planning of employees.

Full-time and part-time courses are held at the ABET Centres and at individual mines.

Full-time ABET courses, which are generally for candidates who have been identified for career advancement, are run over a period of 10 weeks, and part-time courses over six months. The duration of the NQF Level I programme is 14 weeks full-time and 12 months part-time.

Teachers are recruited from the local community, either in a full-time or part-time capacity. Unemployed facilitators with a grade 12 plus an education certificate are eligible to teach and in-house training is also available for part-time teachers.

The ABET programme cost the company \$1.1 million (R7 million) in 2005.

### **Vocational training**

While many of the group's employees come to the company with skills, the group also plays an active role in providing vocational training to those who are new to the company and those who wish to acquire new skills.

In South Africa, the provision of vocational training is an important part of the company's Social and Labour Plan. AngloGold Ashanti is registered with the Mining and Minerals Sector Education and Training Authority (SETA) and the Mining Qualifications Authority (MQA). The region's centralised training venue provides accredited technical training in mining, mining services, engineering, metallurgy, and occupational environment safety and health. The centre is ISO 9002 certificated and accredited by the MQA.

### **Management training**

The group's Talent Management Programme identifies and develops the group's management for the future. The programme has three areas of intervention, namely, the development, retention and monitoring of talent, and includes an annual talent review at executive level to monitor succession plans for talented employees.

The programme is aimed at both specific individuals, who have been identified through their career development plans, and groups of individuals with high potential, all of whom attend a range of management development programmes. Development plans form part of the greater performance management process within the group and are reviewed on a bi-annual basis.

The group runs an Executive Development Programme (EDP), a Management Development Programme (MDP) and an Intermediate Management Development Programme (IMDP), where younger employees with management potential are identified and given an opportunity to develop their careers.

### **LABOUR PRACTICE**

L14

Talent management at  
Yatela

A career development and talent management programme has been initiated at Yatela in Mali. A number of employees with potential have been identified to form part of the talent management pool and the following interactions have been put in place:

- in-house training of management trainees under the mentorship of a senior manager;
- succession planning related to expatriate positions;
- promoting exposure to further technical or managerial experience elsewhere in the group; and
- participation in the group Management Development Programme.

## LABOUR PRACTICE

### L15

#### Graduate training

Study assistance programmes for employees and non-employees are provided across the group to increase the skills pool available to AngloGold Ashanti.

- The South Africa region supports students in full-time studies at universities and universities of technology (formerly technikons). The bursary scheme is open to employees (in-service bursary scheme) as well as to the general public or so-called 'off-the-street' candidates. The company currently supports 91 students in the respective schemes studying towards tertiary qualifications. The split per discipline is as follows: mining: 33 (17 at universities of technology, 12 at university, 4 pre-tertiary); engineering (mechanical, heavy current electrical as well as process and instrumentation control): 27 (10 at universities of technology, 17 at university); metallurgy: 16 (5 at universities of technology, 11 at university); mineral reserve management (geology and survey): 14 (2 at universities of technology, 12 at university) and finance 1 (university of technology). In respect of the 91 students, 27 are employees while 64 are 'off-the-street' students. \$1.7 million (R10.8 million) was spent on this programme in 2005.

- A bursary scheme was implemented in Mali in 2004. Ten top school leavers entered into graduate studies at the University of the Pretoria, South Africa, in the disciplines of mining, engineering, metallurgy, environment and geology, following a language bridging programme at the Wits Technikon at the end of 2003. Five of these bursars participated in practical training at Sadiola and Yatela during their vacations.

- In the USA, the company offers scholarships to eligible employee dependants to assist them with their college education. Some \$47,000 was spent on this programme in 2004. The company also provided tuition reimbursement to employees wishing to pursue a college degree in a discipline related to their position in the company at a cost to the company of some \$40,000 during the year.

- In Ghana, company bursaries are granted to the dependants of employees who have gained admission to government-approved secondary and tertiary educational institutions.

- The Namibian bursary programme is open to all Namibians (not necessarily employees or their dependants). Bursaries are offered in the fields of geology, metallurgy, chemical, mechanical and electrical engineering, human resources and accounting. Six bursaries were awarded by Navachab mine in 2005 at a cost to the company of N\$400,000.

- Staff at the corporate office may participate in the company's part-time study assistance programme in respect of studies undertaken for the purposes of career development.

#### Training for life

Training for life equips employees or ex-employees with skills to ensure their continued employability or ability to be self-employed after employment by the company and in preparation for career endings, both as a result of ill health or as a result of mine closure. The aim is to deliver training and development that are broadly applicable and transferable – a broad spectrum of programmes are made available ranging from basic literacy and numeracy learning, through to technical training as well as executive development at top business schools of international repute.

Employees who are retrenched are offered re-training in a skill that will assist them to remain economically active within their community. These skills include photography, engineering skills, candle-making, leather work etc.

Most mining operations in Australia have fly-in, fly-out arrangements owing to their remote location which leads to high staff turnovers. The company has a policy of maintaining a full development plan for all employees, not only in relation to their current roles but also for their potential roles and general employability, skills and competencies.

In Namibia, in terms of an agreement with the MUN, employees receive assistance (87.5% of fees) for the study of certain courses which may or may not be related to their job disciplines. 16 employees participated in this programme in 2005, at a cost to the company of N\$100,000.

#### ***Remuneration systems will reward both individual and team effort in a meaningful way***

The company seeks to remunerate employees fairly at both an individual and a team level. Remuneration levels are set taking into account the market as well as economic and inflation indicators. There is generally an annual review or annual negotiations with the representative unions in respect of those employees covered by collective bargaining agreements.

In South Africa, in particular, by far the majority of remuneration elements, although focused on the individual, are the result of collective bargaining between management and the representative unions. This has given rise to standard rates of pay for the majority of employees (non-supervisory employees, miners and artisans) rather than pay scales in which employees are remunerated for contributions, as in the case of management and officials.

In addition to basic pay, various productivity and safety bonus schemes exist at most operations to both motivate and reward employees. As well as employee benefits that are legally mandated, the various regions offer healthcare benefits, pension and provident funds, company vehicles, housing, housing allowances or home ownership schemes, life assurance, tuition assistance, maternity benefits and subsidised canteens, among others.

While collective bargaining forms the basis of remuneration packages in Namibia, incentive bonuses and individual bonuses based on individual appraisals are also paid.

#### LABOUR PRACTICE

##### L16

Training and development in South Africa

Central to the human resources strategy is talent management which encompasses various initiatives aimed at retaining the company's key asset, namely its people.

AngloGold Ashanti realises that it is not sufficient to focus solely on recruiting key skills, but also to appreciate that employee satisfaction in the work environment needs to be developed.

Two elements underpin this strategy,



namely, performance management and training and development.

AngloGold Ashanti has implemented a formal performance management system, which aims to align employer and employee work expectations. This process allows for constructive performance dialogue between all employees and supervisors / managers on a biannual basis, the outcome of which guarantees that each employee will have a performance contract as well as a development contract which is focused on career planning.

Central to AngloGold Ashanti's training and development philosophy is the concept of life-long learning. This aims to deliver excellent and valued training and development opportunities to all employees. This is evident in the broad spectrum of programmes made available to employees, ranging from basic literacy and numeracy learning to superior technical training as well as executive development at top business schools of international repute.

LABOUR PRACTICE

L17

***Guided by local circumstances, we shall continue to work together with stakeholders to ensure minimum standards for company-provided accommodation***

Mining operations are frequently located in remote areas, drawing employees to the operations who would normally not be accommodated locally. The provision of company accommodation varies from region to region and is dependent on the availability of accommodation, the make-up of the workforce and the remoteness of the region. In major cities, such as Johannesburg, Denver and Perth, housing is readily available. The same applies to a number of the operations, such as at CC&V.

At Sunrise Dam, Australia, many employees operate on a fly-in, fly-out basis and accommodation is therefore provided during the period that employees are at work. At Cerro Vanguardia, in South America, many employees come from outside the immediate area of operation and houses have either been constructed by the company in nearby Puerto San Julian, or facilities have been erected at the mine site.

At the Sadiola and Yatela mines in Mali, senior staff are housed in company accommodation, while other staff are paid housing allowances. Loans for the purchase of land and housing are facilitated in the Bamako area by the government. A housing loan scheme (for home ownership) is available for senior employees at Geita mine in Tanzania; the balance of employees receive a housing allowance. At Navachab in Namibia, 50% of employees are housed in company housing; the remainder of employees receive a housing allowance (for rental accommodation).

In South Africa, programmes are in place to encourage home ownership. Many employees are housed in company accommodation. Nutritional professionals oversee meals provided at staff accommodation, and regular health audits are conducted.

Historically, the South African mining industry has drawn a large percentage of its non-supervisory workforce from countries around South Africa – Lesotho, Mozambique, Swaziland and Botswana – as well as from rural areas within South Africa, such as the Eastern Cape, KwaZulu-Natal and Mpumalanga. These employees are accommodated on-mine in company hostels which comprise high-density rooms (housing between four and eight people per room), catering facilities and entertainment and recreational facilities. Their families, though, were not offered accommodation on-mine and remained in their countries or regions of origin.

Over the years, much effort has been focused on lowering room density, improving facilities (adding classrooms and gyms, for example), and transferring management of these hostels to combined union/management committees. More family units and facilities to accommodate visiting families for periods of time have also been constructed. At the same time, employees have been given the option of receiving allowances if they choose not to use the hostel facilities.

Hostel living is not ideal and not conducive to family life. However, even where employees have an option, large numbers remain on-mine without their families, choosing to reside

either in company accommodation or elsewhere (and, if the latter is chosen, receiving an allowance). Many employees canvassed by the company choose to maintain their homes and families in their country or region of origin, and return to their homes at the end of their employment.

Plans are in place to renovate many of the hostels, with the emphasis on the longer-life operations, to decrease room density and provide residents with improved facilities and a greater degree of privacy.

Meals are provided to all employees who reside in hostels. Menus are reviewed by committees made up of management and unions, and the nutritional value is regularly monitored by an independent nutritionist. Hostel meals provide approximately 13,070 kilojoules per day, in excess of the minimum requirement of 10,700 per day.

***The company ensures access to affordable healthcare for employees and where possible, for their families***

Healthcare provision and acceptable levels of care are determined by, among other factors, the existing infrastructure in the areas in which the employees are located. For the distant communities with which AngloGold Ashanti is associated, the focus is on facilitating access to basic care.

AngloGold Health Service (AHS), a subsidiary of AngloGold Ashanti, operates in South Africa. The Vaal River and West Wits areas both have a central hospital providing secondary, and to some extent tertiary level care, surrounded by a network of peripheral primary health care and occupational health clinics. Healthcare activities which focus on care to employees in these areas and care to immediate dependants where appropriate, include preventative, occupational, and primary healthcare, hospital care and the management of trauma, injury on duty, and of HIV/AIDS and tuberculosis.

The two occupational health centres are staffed by two doctors and some 30 support healthcare practitioners each. The occupational health discipline performs the functions of screening prior to employment, evaluation of baseline health status, surveillance during employment for purposes of early detection of disease (particularly high-risk diseases commonly associated with the mining industry) and directing the management of diseases detected, including workplace and compensation initiatives required.

Both hospitals have about 300 beds each with, in addition to emergency rooms, operating theatres and multi-disciplinary intensive care units. Speciality disciplines include internal medicine; general surgery; orthopaedic surgery; ear, nose and throat surgery; radiology; paediatrics; obstetrics, and gynaecology. These clinical disciplines are supported by the allied clinical disciplines of physiotherapy, occupational therapy and clinical psychology, which together ensure comprehensive patient care and rehabilitation.

LABOUR PRACTICE

L18

## LABOUR PRACTICE

L19

Access to healthcare is provided to all employees and, in certain circumstances, to their families. All employees not covered by formal medical scheme arrangements have access to healthcare at company facilities. The total cost to the company of AHS in 2005 was \$44 million (R281 million).

- In Argentina and Brazil, healthcare is provided by an external service provider to employees and their families.

- The Malian operations have on-site mine clinics that are registered with the national health authorities and provide healthcare for all employees and registered dependants.

- In Tanzania healthcare is provided for employees and their dependants at an on-site mine clinic and local healthcare structures. The mine supports the upgrading of the facilities at the local Geita hospital and offers technical support to its staff. The facilities at the on-mine occupational health clinic were also recently upgraded.

- Employees at the Navachab mine in Namibia are members of a medical scheme to which the company contributes and employees are entitled to private healthcare as part of this scheme. An on-mine clinic provides primary healthcare and occupational health services.

- Healthcare services are provided to the employee, his or her spouse and six dependants at the Edwin Cade Memorial Hospital at Obuasi in Ghana, while the Iduapriem and Bibiani mines in Ghana and the Siguiri mine in Guinea have a 24-hour clinic on site catering for employees and dependants. In Australia, healthcare is provided by the national government-run health system as well as employee-funded additional health insurance. On-site nurses are employed and other healthcare professionals are contracted to provide a level of care.

- In the USA, access to healthcare for employees is provided through a self-insured medical plan administered by a third party administrator.

***We are committed to prompt and supportive action in response to any major health threats in the regions in which we operate***

The primary regional health threats faced by employees and their families and communities are HIV/AIDS and malaria. (*TB is dealt with under the Occupational Safety and Health section of the Report to Society 2005 while HIV/AIDS is dealt with under regional health threats.*)

### 5. Case studies

The case studies that follow provide an illustration of the company's labour practices. Updates on the case studies presented in the Report to Society 2004 may be accessed on the website.

As a global gold company with a number of mining and exploration activities in many parts of the world, AngloGold Ashanti employs a diversity of people with different cultures and languages. Around 34 languages are spoken in a total of 17 countries, excluding the 11 official languages spoken in South Africa. Since English is recognised as the business language at the company's international operations, many employees either have a basic knowledge of the language or avail themselves of English courses offered by the various operations. However, a visit by Executive Officer: Human Resources (HR) & Information Technology, Nigel Unwin, to the South American operations two years ago, prompted a suggestion that English speakers should return the gesture by making some effort to converse in the host country's language.

"I realised that the effort that our South American colleagues were making to learn our language was not reciprocated by a similar desire on our part to learn theirs," comments Unwin.

In an effort to embrace cultural diversity, one of AngloGold Ashanti's values focusing on developing employees, the company decided that it would provide corporate office-based employees with the opportunity to learn another language. This would assist communication with their overseas colleagues, either on business visits or secondments. The offer was extended to other employees who were interested in learning a language for their own enjoyment.

Two accredited language schools – Wits Language School and Language Works – were chosen to provide instruction in languages at Level I (beginners), Level II (intermediate) and Level III (advanced). Once the interest level was ascertained, the first set of courses commenced at the beginning of 2004 with pure Portuguese, Spanish and French classes (there are slight variations in the Portuguese and Spanish spoken in South America and the French spoken in Africa). Sixteen opted to learn Portuguese, eight Spanish and 41 French (37 at Level I and four at Level II).

Ava Venter from Language Works explains that each level requires students to attend a 40-hour course. "Teaching, by mostly mother-tongue speakers, is informal and interactive, and focuses on the language skills required for everyday living, rather than on learning strict grammar rules," she adds. By the end of the beginners' course, students should have a vocabulary of 800 words, be able to speak in two tenses, and perform simple daily functions related to, for example, greetings, directions, time and money. By the end of the intermediate stage, vocabulary should have increased to around 1,000 words, with a grasp of two more tenses. This stage is a consolidation of Level I, focusing on language skills related to work, travel, and conversation. Language content can be customised to a specific environment or to suit the needs of a specific learner.

Catch-up classes are made available for those who miss classes owing to work commitments. Individual sessions are also offered for employees who are unable to participate for the full 10- or 20-week course because of regular business trips out of the office.

Language courses, which are now held annually, cost an average of R2,500 each. In order to ensure commitment to the language studies, AngloGold Ashanti funds 100% of the beginners' course and 50% of both the intermediate and advanced courses, with penalties in the event of failure for all three.

LABOUR PRACTICE –

CASE STUDY CORPORATE

5.1 Bridging the language divide

L20

LABOUR PRACTICE –  
CASE STUDY CORPORATE

5.1 Bridging the language divide *cont.*

L21

Certificates of achievement are awarded to those who successfully complete the oral and written exams, while an attendance certificate is granted to those who opt not to undertake formal language tests.

Zulu was introduced in 2005 after a survey showed a keen interest in learning the language. Thirteen employees signed up for the class, while 13 applied for French (seven at Level I and six at Level II) and eight for Portuguese (five at Level I and three at level II). At the start of the 2006 application process, 35 had applied for French (29 at Level I and three each at Levels II and III), five for Portuguese, 11 for Spanish (eight at Level I and three at Level II), and 19 for Zulu (16 at Level I and three at Level II). With exploration operations in Mongolia and Russia, Russian is already being studied privately by members of one department and is likely to become one of the languages open to everyone.

The informal classes, which cater for a diversity of employees at corporate office, have been well-received by participants who appreciate the chance to hone their skills in a number of languages. Feedback has also been positive from the international operations, whose employees appreciate the effort that their corporate office colleagues are making to bridge the language divide.

LABOUR PRACTICE –  
CASE STUDY SOUTH AFRICA

5.2 Taking training to the community

L22

AngloGold Ashanti's established training and skills development centres have, for a number of years, provided employee development opportunities at its South African operations. The focus of on-mine training has been on relevant technical disciplines including engineering, geology and metallurgy. At the same time, the company's adult basic education and training (ABET) courses have sought to promote functional literacy, numeracy and a basic understanding of business. Through these initiatives, many employees have been able to access a wider range of opportunities than would have been available to them in the past.

As the mines reach maturity and start preparing for closure, the human resource requirements of the business units also change. With the focus now shifting to building communities that will be sustainable after mining operations have ceased, business units are beginning to modify and extend their training programmes accordingly: the expertise built up at the business centres is being spread into the communities where the group operates.

One such initiative has seen the extension of the ABET initiative from the company's employees to the surrounding communities in the West Wits and Vaal River areas.

The programmes were marketed extensively through poster campaigns. During 2005, 156 community members enrolled in the programme. Of these, 137 wrote the relevant exams and 106 passed. Normal ABET entry level tests to determine existing literacy and numeracy levels were applied. Community students participated in the existing classes for employees, so no additional trainers were needed.

Starting in January 2006, full- and part-time classes for ABET Levels I, II and III (equivalent to grades 2, 5 and 7 respectively) are scheduled for both Vaal River and West Wits. With approximately 20 to 25 learners per class, training and development manager Emsie Le Roux expects to train some 400 students annually. Le Roux reports that feedback from the community has been positive.

In another initiative to ensure that communities derive sustained benefits from the mines' training programmes, AngloGold Ashanti's training and development department (ATDS) has been engaging with the human resources departments of the various business units, along with the Department of Labour and community leaders, to explore ways of providing people with so-called 'portable' skills to enable them to make a living outside the mining industry.

ATDS has developed this training for four target groups: those who have been retrenched; members of the community; employees who have retired through medical incapacitation; and existing AngloGold Ashanti employees. Training started at Savuka mine in September 2005.

"One hundred and seventeen people have been trained in a range of basic skills," says training manager: engineering skills Willie Jacobs. "We have had favourable feedback from the questionnaires each group of trainees is asked to complete, and are receiving increasing numbers of requests for the training."

Courses are presented by AngloGold Ashanti's training and development staff, with some assistance from private contractors.

With the move of the engineering training centre to Vaal River, plans are in hand to extend this initiative to the other South African operations.

Courses focus on basic skills such as bricklaying, welding and carpentry. The cost to the business unit is R260 per day, although Jacobs comments that this cost could reduce if there is sufficient uptake. "We are also involved in discussions with the Department of Labour with a view to arranging some form of joint funding mechanism," he comments. Through the business units, AGA has already committed to supplying basic safety gear for prospective candidates.

Going forward ATDS is putting together a prospectus for submission to the Department of Minerals and Energy. The planned courses at Vaal River during February and March 2006 will be used as a pilot, which, says Jacobs, will provide a useful opportunity to monitor controls such as tests and proof of competence.

LABOUR PRACTICE –  
CASE STUDY SOUTH AFRICA

5.3 The changing face of labour relations at the  
South African operations

L23

A four-day wage strike affecting all gold companies that are members of the Chamber of Mines of South Africa – the first such dispute since 1987 – was launched on the evening of Sunday, 7 August 2005, by the National Union of Mineworkers (NUM) and Solidarity.

The strike, quite literally, brought the industry to a halt and followed the lack of resolution in wage negotiations conducted between the Chamber of Mines (as the industry representative) and the unions. The crux of the dispute was wages. At the outset of the strike, while the industry was offering increases of between 4.5% and 5%, the unions were demanding 12%. Other issues in dispute were: the quantum of employer contributions to the risk benefit within the Mineworkers' Provident Fund (one of the industry retirement funds); improvements in accommodation subsidies; and formalising Christmas breaks. Companies affected were AngloGold Ashanti, Harmony, Gold Fields and South Deep.

Unlike the strike of the late 1980s which lasted for three weeks, amidst significant violence and mass dismissals, this strike was conducted peacefully and in line with industry and mine-based agreements. "It says a great deal for the stable, constructive nature of labour relations as they have developed over the last two decades, in the gold mining industry in general and at AngloGold Ashanti in particular, that the strike was resolved reasonably quickly and in an orderly way," says Abe Bardin, head of labour relations for AngloGold Ashanti's South African operations. "AngloGold Ashanti has been and remains of the opinion that a strong, well-organised union environment is an essential component of its approach to collective bargaining and to the way we do business."

On Monday, 8 August 2005, AngloGold Ashanti made a revised offer to its employees and on 11 August 2005, the strike ended, with three full production shifts having been lost. The agreement reached, which was effective 1 July 2005 and runs for two years, has the following main provisions:

- wage increases of between 6% and 7%, with the highest increase for the lowest job category;
- a wage increase in the second year of CPIX plus 1%, subject to a minimum guaranteed increase of between 5.5% and 6%, also depending on job category;
- increased employer contributions to the risk benefit within the retirement fund;
- improvements in accommodation subsidies; and
- recognition of the principle of a Christmas break, with detail to be agreed at mine level.

The framework within which collective bargaining takes place has evolved with the changing nature of the South African gold mining industry.

"Two wage cycles ago, in 2003, we moved from a highly centralised to a decentralised approach for officials," says Bardin. "We negotiated wage increases for officials (skilled and middle management workers) at company rather than industry level through the Chamber of Mines." A number of conditions of employment, having evolved over decades of negotiation, were complex. Examples include leave, and stand-by and shift-work allowances. The company was able to make significant strides in aligning its remuneration policies with modern business practice, eliminating a number of complex fringe benefits and implementing an all-inclusive cash package. Service increments (whereby an individual is rewarded for tenure) were replaced by merit increments aligned with the company's objectives-driven performance



5.3 The changing face of labour relations at the  
South African operations

*cont.*

LABOUR PRACTICE –  
CASE STUDY SOUTH AFRICA

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management system. Unions involved in this exercise were the United Association of South Africa (UASA) and the NUM, which represent some 60% and 20% respectively of the officials' bargaining unit.

Bardin explains that a distinction must be drawn between such issues as wages and conditions of employment on the one hand, and work practices and organisational restructuring on the other. "The latter type of issue has, for many years, been the subject of local process at operation level, rather than industry or company level. For example, the closure plan at Savuka was negotiated between management and labour at mine level. This is likely to continue."

This year's wage negotiations, however, saw a return to a more centralised approach. For the first time the negotiation process was carried out in a single forum for the three recognition units of officials and artisans. "This has always been the preferred approach for organised labour, particularly NUM as the biggest union," says Bardin. "From the employer's perspective, it has become increasingly difficult to maintain a united caucus, in the face of vastly differing cost profiles and operating philosophies. It is, however, a fact of life in the pattern of industrial relations."

Looking ahead, Bardin believes the model for future collective bargaining in the mining industry will be a bargaining council for the industry, including gold, coal, platinum and base metals producers. "Although many concerns remain for employers, from a union perspective this extension of the centralisation principle makes sense. Although it is likely that, in the medium term at least, separate negotiations would continue for each sector, a bargaining council would enable unions to focus resources more effectively. In terms of the South African Labour Relations Act, there is also provision, once a certain percentage of representation has been achieved in a specific industry, for conditions agreed in the central bargaining forum to be extended to other, smaller employers who are not part of the centralised process."

Collective bargaining by its very nature involves compromise. Although the final settlement was slightly higher than anticipated, the South Africa region has managed to contain unit labour costs within acceptable parameters. Also, by striking a two-year deal, the operations in the South African region will not have to contend with the uncertainties and possible disruptions of a wage review in 2006.

Commenting at the conclusion of the strike, AngloGold Ashanti CEO, Bobby Godsell reiterated that the settlement was significant in that it involved the lowest percentage increase in two decades, establishing a norm of lower single digit increases in an environment of low inflation.

LABOUR PRACTICE –  
CASE STUDY SOUTH AFRICA  
L25

5.4 Women in mining – uncovering the barriers

Internationally, the mining industry has not been an obvious career choice or preferred place of employment for women. In South Africa women were, until the 1990s, legislatively prohibited or otherwise constrained from being employed in operations underground. Mining as a discipline was not seen or marketed as a good career choice for professional women and, at the lower levels, the industry has traditionally drawn its labour from a largely male, rural workforce. Practically, working underground has been difficult for women with no or insufficient facilities dedicated to them.

As a company, AngloGold Ashanti is committed to providing development opportunities to all of its employees and to ensuring that the demographics of the organisation resemble the demographics of the regions and countries in which it operates, which would obviously include women. Supporting this philosophy is the company's commitment to ensuring that no grouping, including women, is discriminated against.

Further impetus to AngloGold Ashanti's need to encourage the development of women in the company is provided by South African minerals legislation which not only prohibits the exclusion of women, but requires companies to actively change the demographic profile of the company and to ensure that they have plans in place to achieve a target of 10% participation of women by 2009. Given that 94% of AngloGold Ashanti's South African employees in 2005 were men, this is likely to be a challenging target to achieve.

While the South Africa region has put in place a range of programmes to address the recruitment and advancement of women at both a corporate and operational level, there is clearly a need to try and understand some of the barriers to the employment of women in the industry and to develop a strategy that deals with this. With this in mind, the company commissioned an external consultant to undertake an audit to establish:

- what currently deters women from entering the mining industry; and
- what the company can do to overcome this.

Specifically, the outcome of the research was intended to assist in:

- developing actions to eliminate the risks and barriers to the employment of women at all occupational levels;
- setting up monitoring structures and responsibilities to ensure that the prescribed targets are set and met;
- developing ways in which to build an organisational environment that is supportive of the role of women;
- overcoming the specific barriers to achieving the numerical targets set and ensuring the retention of newly appointed candidates; and
- identifying significant findings at specific business units and those that are common to the region as a whole that can be used to support the strategy.

LABOUR PRACTICE –  
CASE STUDY SOUTH AFRICA  
L26

Three principal methods were adopted in undertaking the audit which was conducted in September/October 2005.

- First, a Women in Mining task team was formed comprising women nominated from the various business units as well as three representatives from each of the following recognised unions: National Union of Mineworkers (NUM); United Association of South Africa (UASA); and South African Equity Workers Association (SAEWA). This task team provided much guidance on the research and conducted site visits.

- Interviews, largely in focus groups, were conducted with a cross-section of women and men employed within the different business units. The aim was to gather qualitative data on individuals' specific workplace experiences and how these experiences influenced the critical decision-making processes used in career planning and lifestyle choices. In all, 350 interviews were conducted.

- A 'Women in Mining' questionnaire survey was conducted to obtain the responses of a wider group and to add further quantifiable context to the qualitative data gathered in the interviews. The primary issues identified during the audit were as follows:

- Women joining the mining industry often do not have sufficient knowledge of the industry or their workplaces and are frequently placed in inappropriate positions, thus setting them up for failure. Men in the industry have a resistance to women being 'pushed' into workplaces, and do not see or hear of many 'successes', but rather focus on the 'failures'.

- Physical constraints and health and safety are very real and perceived issues. This applies particularly to pregnancy and physical capacity where insufficient education is provided in respect of both women and their male team members. Specifically in terms of physical work capacity, insufficient care is taken in recruiting physically fit women, and in placing women in appropriate jobs. (*See Report to Society 2004 for details on the physical work capacity testing.*)

- The presence of discrimination was cited, as was the belief that commitment to equal employment opportunities was simply rhetorical. Some men said they feared accusations of harassment.

- The need for role models and mentors, and a lack of knowledge about career development opportunities were cited. Also, mentioned a few times was the belief that there were certain positions reserved for white females and others for black females.

- Concerns about the inequity of employee grading systems were raised as well as the perceived exclusion from the so-called 'old boys' network.

- Site infrastructure (such as a nursing facility or crèches), change houses, medical facilities and the provision of personal protective equipment (PPE) were also matters of concern.

5.4 Women in mining – uncovering the barriers *cont.*

LABOUR PRACTICE –  
CASE STUDY SOUTH AFRICA

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5.4 Women in mining – uncovering the barriers *cont.*

The recommendations made as a result of the survey and which are now being implemented by the company are listed below. Many of these recommendations were already in place and this research has simply supported them:

- demonstrate senior management support for diversity initiatives;
- provide diversity training;
- institute targeted recruitment programmes;
- identify and track high-potential female employees;
- establish women’s networking groups;
- provide high-potential women with coaches and mentors;
- provide women with line experience and cross-training;
- increase women’s visibility by assigning to them business critical roles;
- emphasise women in succession planning processes;
- assist all employees in balancing work and personal responsibility;
- hold management accountable for diversity progress; and
- create a comprehensive sustainable diversity strategy – not a quick fix.

Despite the significant challenges faced, particularly in overcoming the cultural and perceptual barriers to women in mining, AngloGold Ashanti has developed plans and targets to meet the requirements within the requisite time frame. Of greater concern to the company, though, is the need to effect a permanent change, and to create a sustainable model that will both encourage and retain women as employees and managers of the company.

Geita Gold Mine in Tanzania, which began production in 2000, is the largest of AngloGold Ashanti's eight open-pit African gold mines. Originally a joint venture between Ashanti Goldfields and AngloGold, the operation is now wholly-owned.

Mining was initially carried out on a contract basis, with DTP Terrassement, a subsidiary of French-owned Bouygues, taking over from AMS, the original Ghana-based contractor in 2003. In April 2005, the AngloGold Ashanti Board gave the go-ahead for the move from contractor to owner mining.

"Managing our risks, particularly cost increases and low productivity, was the main driver for the move," says project manager Henk Fourie. "We gave notice of termination to the contractor in April 2005, and took over operations on 1 August 2005. From a safety perspective, it is notable that no injuries were recorded during the three-month handover period."

All the Tanzanian nationals employed by the contract on, approximately 900, were employed by the mine, bringing the total complement to its current 1,800.

"This involved exit and take-on medical examinations for all transferring employees," says Fourie "as well as implementing procedures for taking over the stores and mining machinery. This was achieved without a negative impact on production."

A number of functions remain outsourced, either because of expanding production requirements (such as ore haulage from the satellite pits to the plant) or because they are specialised in nature.

The project comprises three principal phases:

- the take-over of the contractor's employees and equipment;
- the acquisition of a fleet of new large trucks and a shovel; and
- the development of new infrastructure such as additional housing, shift change and workshop facilities.

"We are adding 240 ton trucks to the fleet of 100 ton trucks used by the contractor," says Fourie. The last truck was commissioned in mid-February 2006. The development of the new infrastructure is expected to be completed by October 2006, and the refurbishment of existing mining equipment is scheduled for completion in mid-2007.

"The impact of the change will only be evident after project completion," says Fourie "but we are confident that we will meet world benchmark standards for machine utilisation and availability. This will naturally have a positive impact on production and costs. Mining cost is expected to drop from \$1.95/t mined to approximately \$1.40/t.

Capital expenditure for the change-over to owner mining is planned to total \$81 million while a further \$41 million is being spent on larger equipment fleets in the first two years.

The new equipment has required extensive operator and technical training, with representatives of the original equipment manufacturers on site to supplement the training personnel. The training department at Geita, under training manager Chris Britz, is continuing to give refresher training to all operators who were taken over from the contractor. It is planned to install a truck simulator in the near future, to be used in the training of truck operators, which will further assist with improved productivities.

The change to owner mining has resulted in improved occupational health services for employees.

Previously the contractor's employees were given an inclusive package out of which they had to fund the provision of health care, while now that they are Geita employees, they and their dependants are able to access the clinic at the mine and the health facility built by the mine in the neighbouring town of Geita, both free of charge. "Employee feedback has shown a positive response to the change, and an appreciation of the improved skills development opportunities offered by a long-term working relationship," says Fourie. An accommodation facility in the town of Geita which can cater for 85 single local employees is being refurbished.

Until the conversion, all but one of AngloGold Ashanti's open pit African mines were mined by contractors. Fourie is confident that the move to owner mining at Geita – the largest of these operations – will help develop a skills base in AngloGold Ashanti's African operations, providing opportunities for inter-mine and inter-country transfers for local as well as expatriate workers.

LABOUR PRACTICE –  
CASE STUDY TANZANIA  
L28

5.5 The transition from contractor to owner mining at Geita

- Alignment of employment practices throughout the group, while maintaining observance of local laws, customs and conventions.
- Enhancing the company's localisation and employment equity programmes, particularly at African operations, with a methodical focus on the skills transfer to, and career development of, local citizens.
- Implementation of performance contracts for each AngloGold Ashanti employee, either as an individual or as a member of a working team.
- Establishment of an Employee Share Ownership Programme (ESOP) in South Africa, and examination of the feasibility of ESOPS, or alternative structures or benefits aimed at aligning employee and company interests at company facilities elsewhere in the world.

LABOUR PRACTICE

6. Objectives for 2006

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ENVIRONMENT

contents

Environment

We strive to form partnerships with  
host communities, sharing their  
environments, traditions and values.

We want communities to be better off  
for AngloGold Ashanti having been  
there. We are committed to working  
in an environmentally friendly way.

OUR VALUES:



AngloGold Ashanti's environmental management and practices are guided by the group's business principle dealing with, AngloGold Ashanti and the environment (below). In this year's report on environmental issues, the key indicators presented below have been subject to assurance by external auditors PricewaterhouseCoopers

. While AngloGold

Ashanti has provided more quantitative detail in this section than in the past, not all of the data generation systems are at a stage where these may be subject to a rigorous assurance process and these have thus been excluded from the assurance process. It is the company's intention to improve this, incrementally, over the next few years.

The report has been presented in accordance with the Global Reporting Initiative (GRI) guidelines (*see page 14 for details*). In addition, a detailed response to the GRI environmental performance indicators by operation is provided on the website.

## 2. Business principle

AngloGold Ashanti and the environment

•

We recognise that the **long-term sustainability** of our business is dependent upon good stewardship in both the protection of the environment and the efficient management of the exploration and extraction of mineral resources.

•

We will comply with all applicable environmental **laws**, regulations and requirements.

•

We are committed to establishing and maintaining **management systems** to identify, monitor and control the environmental aspects of our activities.

•

The company will ensure that **financial resources** are available to meet its reclamation and environmental obligations.

•

The company will ensure that its employees and contractors are **aware of this policy** as well as their relevant responsibilities.

•

We will conduct **audits** to evaluate the effectiveness of our environmental management systems.

•

We are committed to **communicating and consulting** with interested and affected parties on environmental aspects of our activities.

•

We will work to **continually improve** our environmental performance.

•

The company will participate in **debate** on environmental matters at international, national and local levels.

## ENVIRONMENT

### 1. Introduction

EN1

Our assurance is based on a test of the reliability of the selected data marked with the symbol , by way of:

- conducting interviews and holding discussions with management, key personnel and/or stakeholders of AngloGold Ashanti Limited and assessing data trends;
- obtaining an understanding of the systems used to generate, aggregate and report the selected data;
- conducting site visits to test systems and data and inspecting premises where necessary;
- assessing the completeness and accuracy of the selected data; and
- reviewing and analysing collected information and effecting re-calculations where considered appropriate.

AngloGold Ashanti formally adopted ISO 14001 as the standard for the group's environmental management system during 2005. The group has set itself the target of achieving certification of its operating mines by the end of 2006. The following operations currently have ISO 14001 certification: Cerro Vanguardia in Argentina; AngloGold Ashanti Mineração and Serra Grande in Brazil; Bibiani and Iduapriem in Ghana; and Geita in Tanzania. Further details may be found on page EN6.

All the South African operations have approved Environmental Management Programmes (EMPs) in place. These EMPs are required in terms of South African environmental and mining legislation and were reviewed during the year as part of the company's application for the conversion of its mining rights in terms of the Minerals and Petroleum Resources Development Act (MPRDA). AngloGold Ashanti was the first gold mining company to receive all of its 'new order' mining rights in South Africa.

All operations have set aside financial resources for the rehabilitation and eventual closure of operations. As at the end of 2005, the estimated liability amounted to \$337.7 million (2004: \$350.1 million). A detailed breakdown by country/operation may be found on page EN14.

Environmental incidents of actual or potential significance are reported to the Board Committee on Safety, Health and Sustainable Development. 24 incidents of varying degrees of severity were reported in 2005. Further details may be found on pages EN8 to EN10.

AngloGold Ashanti is committed to complying with all applicable legislation and regulations pertaining to the environment. At Obuasi in Ghana, the Environmental Protection Agency raised a number of concerns about the failure of the operation to achieve water quality discharge standards. An internal review of the operation has identified a series of remedial actions to address this situation.

The following key performance indicators are reported for AngloGold Ashanti in 2005.\*

– Total cyanide usage was 31,939,528 kg. A table listing cyanide usage per country/operation may be found on page EN17.\*

– Total water use was 78,458,736 m

3

. A breakdown of water usage by

country/operation may be found on page EN22.\*

– Total direct energy use was 29,213,073 GJ. (See page EN23 for a breakdown of consumption by country/operation.)\*

\* *Note that only information from the South African operations was assured by PwC.*

## ENVIRONMENT

### 3. Key indicators

EN2

## ENVIRONMENT

### 4. Review 2005

#### EN3

In the Report to Society 2004, the company set a number of objectives for 2005. All of these targets have either been met in full or in part.

#### **Environment**

#### **Objectives for 2005**

#### **Performance in 2005**

Continued implementation of a “high level”

A ‘major incident’ environmental reporting system was put in place, with details environmental reporting system.

of incidents recorded on page EN8.

Improve environmental data gathering systems

Significant improvements have been made to environmental data collection

in accordance with stakeholder and

and reporting systems. A series of environmental guidelines are being

GRI reporting requirements.

prepared to provide appropriate guidance. See GRI document on the website for further details.

Consider the adoption of ISO 14001 as

ISO 14001 has been adopted as the group standard. A target has been set

the group-wide environmental

to achieve certification of all operating mines by the end of 2006.

management system.

Review mine closure plans and associated

Total environmental liability estimates are revised on an annual basis

costs across the group.

– see page EN14. Through the ICMM, AngloGold Ashanti is participating in a project aimed at understanding and improving current environmental and social practices related to mine closure.

Improve environmental awareness across

This continues to be driven at the regional and mine level. The need for a

the group.

series of group-wide environmental guidelines has been identified.

Develop criteria for company

A number of criteria have been identified but concern about the objectivity environmental award.

of such an award has resulted in this being postponed until such time as the set of guidelines have been developed against which to evaluate performance objectively.

Continue with the integration of the former

The integration of the former Ashanti operations has continued. Apart from the Ashanti operations.

routine visits to operations, involvement in management and board

subcommittee meetings, and reporting of performance, other efforts have

included:

- 

Participation in the selection and deployment of environmental staff within the region;

-

Secondment of Dr William Ahorator from Iduapriem Mine to the Corporate Environmental Office; and

•

A strategic environmental review of the Obuasi mine was carried out by a team of internal environmental specialists drawn from the United States, Australia and Ghana.

The discussion that follows reports on the group's environmental performance in line with the company's business principles, which appear in orange below.

***We recognise that the long-term sustainability of our business is dependent upon good stewardship in both the protection of the environment and the efficient management of the exploration and extraction of mineral resources.***

Environmental policy and strategy within AngloGold Ashanti is overseen by the Committee on Safety, Health and Sustainable Development. Although the committee is apprised of developments in all spheres of activity, the focus of each meeting rotates through safety, health, environment and community issues to ensure that adequate focus is given to each area.

The group has an environmental policy in place at a corporate level, although operations may have their own site-specific policies, which are consistent with group policy.

Environmental policy and strategy is driven at a corporate level. Within each region, the regional 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, when appropriate, 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, develop strategic response recommendations, and formulate plans for practical implementation.

As an example of the integrated approach that has been adopted, a strategic review of environmental management at the Obuasi operations was undertaken in November. The purpose of the exercise was to review environmental conditions at the operations, identify current environmental risks, prioritise these risks, develop short-term action plans and make recommendations for an improved environmental management programme.

***We will comply with applicable environmental laws, regulations and requirements***

The group's business principles and environmental policy guide AngloGold Ashanti's management of the impact that the company has on the environment. Operations are subject to the environmental laws, rules and regulations of the various countries in which they operate but, where no such laws exist or where these laws are perceived to be inadequate, operations are guided by the company's business principles, environmental policy and good practice.

Managing environmental issues is a key component of the overall risk management process. Thus, through effective environmental management, the company is able to manage its exposure to business risks and liabilities, providing assurance to shareholders and attracting potential investors.

## ENVIRONMENT

### EN4

Gold – a rare, safe and recyclable product

Gold has always been recycled because of its inherent high value, ever since it was first discovered before the Bronze age. It can be melted down, re-refined and re-used. It is therefore quite possible that modern jewellery and dental crowns may contain gold that was mined in prehistoric times. In modern times roughly 15% of annual gold consumption is recycled each

year. **Gold can be melted down, re-refined and re-used. But it is never lost.**

Gold is the most malleable and ductile of all metals and is usually alloyed to increase its strength. Gold is a good conductor of electricity and heat. It is not affected by exposure to air or to most reagents. It is inert and a good reflector of infrared radiation. Pure gold is measured in troy weight, but when gold is alloyed with other metals the term carat is used to express the amount of gold present.

In South Africa, for example, Environmental Management Programmes (EMP) are in place for the West Wits, Vaal River and Ergo operations as is required by the Minerals and Petroleum Resources Development Act (MPRDA). All policy issues that can be addressed at a business unit level are included in the EMP management actions, covering radiation management, waste management, air quality management, land management, surface water management and groundwater management. The EMPs are updated every two years. The conversion process started in 2005 with an Environmental Impact Assessment (EIA) being developed for each operating area where present direct and indirect impacts on the environment are identified and evaluated in terms of significance. Future direct and indirect impacts are identified and evaluated in the decommissioning and closure section of the EMP.

Management actions and opportunities required to reduce the negative impacts are identified. The South Africa region's environmental policy was also modified during the quarter to comply with the requirements of ISO 14001, regarding such issues as pollution prevention, legal compliance, continual improvement and policy availability to the public. No fines have been recorded during the year. A strategic environmental review of the Obuasi mine has been carried out by a team of internal environmental specialists drawn from the United States, Australia and Ghana. The purpose of the exercise was to review environmental conditions at the operations, identify current environmental risks, prioritise these risks, develop short-term action plans and make recommendations for an improved environmental management programme. The review has identified a series of remedial actions to address problem areas. A number of environmental licences and permits were granted during the year and none was retracted on the basis of environmental performance. At the Big Springs operation in Nevada, the Great Basin Mine Watch appealed against the renewal of the Water Pollution Control Permit issued by the Nevada Environmental Protection Division. AngloGold Ashanti (Nevada) Corp. filed a petition in response to intervene. Briefs have been filed by the parties and a hearing to resolve the appeal has been scheduled to go before the Nevada State Environmental Commission on 29 and 30 March 2006.

#### ISO 14001

In March 2005, AngloGold Ashanti's Executive Committee (Exco) decided to pursue ISO 14001 certification for all its operating mines by December 2006. This follows a gap analysis undertaken during 2004 which indicated the degree to which current EMSs were aligned with ISO 14001.

The regions which had not previously implemented ISO 14001 are at different stages of implementation. The implementation in South Africa, for example, has been integrated with the region's Enterprise Wide Risk Management system, since environmental management is viewed as yet another risk that a business unit faces. The present auditing system, the legal register system, the performance assessment report process, and the EMP update process

ENVIRONMENT

EN5



are all being incorporated into the new system. Overall, the initiative is on schedule, with good progress being achieved in the areas of systems procedures, the planning section, and the implementation and operation phase. The Geographic Information System (GIS) continued to be developed as a database for all environmental management data from monitoring and management actions, represented spatially for the three geographic areas. The GIS is being incorporated into the main EMS.

The following operations are currently ISO 14001 certified:

**Country**

**Operation**

**Date achieved**

**Certified by**

**Valid until**

**Argentina**

Cerro Vanguardia

July 2002

National Quality

May 2006

Assurance

(NQA) – USA

**Brazil**

AngloGold

March 2004

National Quality

May 2007

Ashanti Mineração

Assurance

(NQA) – USA

Serra Grande

March 2004

National Quality

March 2007

Assurance

(NQA) – USA

**Ghana**

Bibiani

February 2003

DLIQ Certification

Feb 2006

Services

Iduapriem

January 2004

DLIQ Certification

Jan 2007

Services

**Tanzania**

Geita

July 2001

DLIQ Certification

July 2007

Services

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, by providing the appropriate level of information necessary to advise the executive and the board of the nature and occurrence of important incidents and developments and management's response.

In line with this protocol, a major environmental incident report must be made within 24 hours to the corporate office. A summarised report of incidents and major developments within each region is presented at the Safety, Health and Sustainable Development Board Committee meeting.

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 ENVIRONMENT

EN6

About ISO 14001

**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:** ISO 14001

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.

impact on the surrounding environment; or any event, action or occurrence which is contrary to the AngloGold Ashanti business principles'. The definition was reviewed by the board committee and is presented below.

A major incident is one which:

(1)

could affect the company's reputation, or

(2)

results in a cost to the company exceeding \$100,000 including fines, compensation, clean-up, loss of production, anticipated litigation costs, etc.

Subject to meeting the above criteria, examples of issues of direct interest include, but are not limited to:

- matters which, by law, must be reported to government agencies;
- matters which, by law, are subject to fines and/or penalties;
- environmental impacts which are by their very nature either extensive or likely to have long-term effects;
- cyanide-related incidents;
- tailings dam failures;
- spillage or leakages with impact beyond the company's designated containment areas – of tailings materials, hydrocarbons, acids and other chemicals;
- emissions beyond permitted levels e.g. atmospheric and effluent releases;
- dust emissions which may impact on the company's reputation; and
- wildlife mortalities and land clearing activities which may impact on the company's reputation.

24 incidents were reported to the board during the year, which is a substantial increase on the number (16) reported the previous year. This increased level of reporting is as a result of: the increase in the size of the group and the fact that environmental performance is now reported for the Ghana and Guinea operations; and improved environmental performance, monitoring and reporting. Industry experience has demonstrated that as reporting systems continue to improve, particularly with the implementation of ISO14001 certified environmental management systems, further increases in the number of reported incidents are not unexpected. The significance of incidents is that they are recognized and that management actions are taken to reduce, or eliminate, further occurrences.

ENVIRONMENT

EN7

## ENVIRONMENT

EN8

### **Operation**

#### **Nature of incident**

#### **Action taken**

#### **Argentina**

##### **Cerro**

An anomalously high value for HCN gas

This was promptly corrected with no impact on people or the

##### **Vanguardia**

was detected in the Cyanosorb plant.

environment.

#### **Australia**

##### **Sunrise Dam**

No major incidents

#### **Brazil**

##### **AngloGold**

At Queiroz Plant, a high incidence of

Monitoring determined that there was no adverse effect on flora

##### **Ashanti**

copper was detected in effluents from the

and fauna. At year end, with the conclusion of tailings

##### **Mineração**

treatment of old tailings deposited in the

retreatment, water quality has returned to permitted levels.

Nova Lima area.

#### **Ghana**

##### **Obuasi**

A tailings spillage from Sansu tailings dam

On detection, the damaged portion of the dam, which was due

resulted in approximately 4,000,000 m

3

to artisanal miners activities, was repaired. Security around the

of water entering the Nyam River.

dam was also stepped up to prevent future damage to the

dam walls.

The Kokoteasua tailings retreatment retention

The sumps have been cleaned and stormwater drainage control

sumps overflowed resulting in the flooding of

has been improved. The school and houses downstream were

a school and a number of residences

cleaned and appropriate compensation was administered.

downstream of this facility.

On 19 February 2005 two birds died after

The arsenic store has been covered with a high density

drinking from a pool of arsenic contaminated

polyethylene liner.

water at the new arsenic storage yard.

#### **Mali**

##### **Morila**

12 bird (egrets) fatalities were recorded on the

The most probable cause of death is cyanide poisoning after TSF on 29 March 2005. consumption of contaminated water. Controls were tightened up.

**Sadiola**

A significant incident was recorded when The water was contained in a trench on the lease and then a spring, consisting of tailings water, was pumped back to the Tailings Storage Facility (TSF). The local detected outside the mine lease area. government authorities were fully informed, visited site and were Cyanide levels, at 0ppm CN

Free and

involved in the development of the remedial action plan.

0.4ppm CN

WAD

, were considered to pose no danger to humans or animals.

The TSF pipeline developed a leak Although the leak was small, the plant was immediately shut outside the plant fence. down to allow for repairs. A small quantity of tailings slurry ran

under the road and mixed with a pond of rainwater next to the road, but it was all contained. Traditional leaders as well as the local government representatives were informed about the incident. Although the spill was relatively small, the incident was classified as Category 1 because it occurred outside of the mine fence, in an area that is accessible to the public and livestock.

The two samples analysed had weak acid dissociable (WAD) cyanide levels of 5 and 9mg/l, below regulatory limits.

Four bird fatalities (grey herons) were Autopsies concluded that the cause of death was sodium recorded on the TSF on 23 March 2005.

toxicosis. Sodium concentrations were above 1600mg/l. Sodium metabisulphate is used to detoxify cyanide. Controls have been put in place to manage the detoxification process.

**Operation**

**Nature of incident**

**Action taken**

**ENVIRONMENT**

EN9

**Yatela**

About 76,000 m

3

of water that had been

The dam basin was subsequently lined with clay and pumped from the excess pond disappeared is now holding water.

through sink holes at the base of the newly built Zero Discharge Dam. Water from the excess pond was known to contain high levels of chromium but analytical results indicated no groundwater contamination with chromium.

Two birds (a dove and a sparrow hawk) died Contaminated water originated from a leaking irrigation pipe.

after drinking cyanide containing water in Repairs were carried out, the trench flushed and more a solution trench between the heap leach patrols instituted to deter birds from approaching the area. pad and process ponds on 4 April 2005.

**South Africa**

**Ergo**

Some 1,000 tonnes of slurry flowed down a About 500 tonnes of material were contained. Mitigatory dirt road, after a hole developed in a slurry action included repairs to the pipeline and the clean-up of pipeline from the Reclamation West pump the spilled material.

station. About 500 tonnes of material flowed into the storm water system and was discharged into the Natal Spruit (stream).

The incoming C stream slurry pipeline Pumping operations ceased at Ergo at the end created a slime spillage in an urban area. of October 2005.

On 13 February 2005 a pipeline failure in the Remedial clean-up measures were implemented. Reclamation West to the Ergo Metallurgical plant line resulted in ±3500 m

3

of slurry flowing down road into municipal storm water system.

Ergo E-stream slurry line failure resulted Remedial clean-up measures were implemented. in approximately 25 m

3

overflow from a containment paddock into the Elsburgspruit tributary on 16 February 2005.

On 13 April 2005 some slurry flowed into the back gardens of four houses in Spyker Rd (Rynsoord) following the overtopping of a containment structure and subsequent flooding of the stormwater trench with process water.

**Vaal River**

Unusually high rainfall of 239 mm fell in the Management measures have included an upgrade of pumping catchment area between 26 December 2004 and 5 February 2005. The dam water flow to the nearby West TSF complex. capacity subsequently proved to be insufficient to accommodate the resultant run-off and operational return water.

The estimated discharge was 90,000 m

3

of water and 270 tonnes of salts which affected land below the dam. A similar overflow was experienced between 16 March and 15 April.

The final water pollution control

A capital application to modify process water management in dam overflowed.

this area is in place to address this issue.

## ENVIRONMENT

EN10

### **Operation**

#### **Nature of incident**

#### **Action taken**

#### **Vaal River**

High concentrations of sulphur dioxide

Improved monitoring systems have been installed to allow

were recorded at the monitoring station

immediate process corrective action.

adjacent to the Vaal River acid plant.

Significant amounts of dust were generated

Dust suppression using water cannons continues to be used.

on several occasions from the sulphur pay dam

The removal and reprocessing of this dam will ultimately solve

at Vaal River, resulting in several complaints.

this problem.

Contaminated storm water from the

Improved stormwater management measures have been

West Complex TSF entered the Schoonspruit

implemented.

between 20 and 21 January 2005.

#### **West Wits**

An unauthorised discharge of process water

The finalisation of the clean/dirty water separation project in

10,149 m

3

occurred from the North boundary

February will ensure that there is no repeat occurrence.

dam into the Wonderboom Spruit between 21

and 23 January 2005.

Overflow of the North Boundary of dirty water

Management measures included the separation of clean and

from the dam owing to insufficient capacity.

dirty water flows within the catchment area and the initiation

of a R5.7 million legacy project to remedy the situation. (*See*

*Report to Society 2004 for case study on legacy projects*).

#### **Exploration**

About 15 tonnes of sodium cyanide, 6 tonnes

An urgent three-phase plan is being implemented: first, guards

of copper sulphate and 10 tonnes of other

were placed around the facility to prevent public access to the

chemicals were discovered in containers

containers. A clean-up programme was completed by the end of

at the old plant site in the Kimin lease

December 2005, and in the ensuing phases appropriate

area at Mongbwalu.

containers were used for storage and transport away from site.

#### **USA**

#### **CC&V**

No major incidents



## ENVIRONMENT

### EN11

In addition, the Safety, Health and Sustainable Development board committee is informed of major developments and their anticipated impact on the company. The subjects that are to be reported on include matters such as:

- legislative and/or regulatory developments dealing with environmental matters that will have or, if passed or likely to be passed into law or adopted, would have a major impact upon AngloGold Ashanti business;
- identification of and/or updates on threatened or pending legal action against the company involving an environmental matter;
- environmental initiatives, or programmes, developed or proposed by non-governmental organisations (NGOs) and targeted at the company or the broader mining industry;
- complaints or demands dealing with environmental matters that are brought by a local community or government entity against the company; and
- any other environmental issue that operations feel is of significance to its region.

### Risk management

Risk management forms an integral part of AngloGold Ashanti's environmental management systems. Each operation undertakes its own risk assessment in respect of environmental issues and these risks are then managed at an operational level. A number of high level risks were identified during 2005 and considered at a corporate level. These include increasing activity by NGOs such as Oxfam and Earthworks, in various anti-gold mining campaigns, for example, the 'No Dirty Gold Campaign'. Following media reports on AngloGold Ashanti in the DRC, the company featured on that campaign's website.

The use of cyanide in the mining industry is an ongoing debate, particularly in North America (*see case study on page EN38: Using cyanide responsibly at CC&V*), where environmental activist groups are continuing their efforts to ban the use of cyanide or other toxic/acidic ore processing reagents, heap leaching or surface mining. AngloGold Ashanti was party to the development of the International Cyanide Management Code and was one of the first signatories announced in November 2005. (*See box on page EN12*).

Water management and the prevention of pollution, in particular groundwater seepage, are important global environmental concerns. The need for an integrated regional approach to water management was highlighted in South Africa recently when the Department of Minerals and Energy (DME) issued a directive to mining companies in relation to water pumping costs. (*See case study on page EN33: Mine closure stretches environmental legislation.*)

Mine closure issues, ranging from planning to financial provisions and potential liabilities are significant in all regions of operation. All AngloGold Ashanti operations have mine closure plans in place that are regularly updated. The total expected liability is detailed on page EN14.

### The Council for Responsible

#### Jewellery Practices

The Council for Responsible Jewellery

Practices was founded in May 2005

with 14 members from a cross-section

of the diamond and gold jewellery

supply chain, from mine to retail.

Council members are committed to promoting responsible business practices in a transparent and accountable manner at all levels of the industry. They are committed to maintaining consumer confidence in diamond and gold jewellery products and the trust of all interested stakeholders in the industry.

Council members believe that a coordinated worldwide approach to addressing ethical, social and environmental challenges will drive continuous improvement throughout the jewellery industry to the benefit of stakeholders everywhere. This, in turn, will maintain and promote consumer confidence in the industry.

The council will enable the industry to work together to improve standards and practices, and avoid duplication of effort.

For further information see:  
[www.responsiblejewellery.com](http://www.responsiblejewellery.com)

## ENVIRONMENT

### EN12

Information released by the International Cyanide Management Institute

3 November 2005

Initial signatories announced to International Cyanide Management Code

The initial signatories to the International Cyanide Management Code for the Manufacture, Transport and Use of Cyanide in the Production of Gold were announced today by the International Cyanide Management Institute (ICMI). The code is a

voluntary industry programme for companies that use cyanide in the production of gold. The initial 14 signatories include nine gold mining companies and five cyanide manufacturing and transport companies, covering more than 80 facilities worldwide and representing approximately 36% of the gold presently being mined in the world.

The code's principles and standards of practice commit signatories to manage cyanide in a responsible manner. The code covers nine key areas: cyanide production, the transport of cyanide to mine sites, the handling and storage of reagent cyanide, on-site use and management of cyanide, the decommissioning of facilities, worker safety, emergency responses, training, and communication with the public.

The code's implementation guide describes the procedures necessary for the safe management of cyanide and identifies the practices to be followed in implementing each of the code's principles and standards.

In becoming a signatory, a company commits to following the code's principles and implementing its standards of practice, and to having verification audits of its individual operations conducted by independent third-party auditors within three years of its initial application, and every three years thereafter. The purpose of the verification audit is to evaluate an operation to determine whether its cyanide management is in line with the code's principles and standards of practice, or in the case of cyanide producers and transporters, the principles and practices identified in their respective verification protocols. Operations will be certified if in compliance with the code, and will be de-certified if the ICMI determines that they no longer comply with the code.

The initial signatory companies are:

AngloGold Ashanti Limited

Kingsgate Consolidated Limited

Australian Gold Reagents Pty Ltd

Kinross Gold Corporation

Barrick Gold Corporation

Newmont Mining Corporation

CYANCO

Orica Australia Pty Ltd

CyPlus Corporation

Pan Australian Resources Limited

E.I. DuPont de Nemours and Company

Placer Dome Inc.

Gold Fields Limited

Rio Tinto

A detailed list of the operations covered by these signatory companies' applications, along with the full text of the code and its implementation and administrative documents, are available at [www.cyanidecode.org](http://www.cyanidecode.org).

ENVIRONMENT

EN13

***The company will ensure that financial resources are available to meet its reclamation and environmental obligations***

In all the jurisdictions in which the group operates, the company is required to conduct closure and rehabilitation activities in order to return the land to a productive state post-mining. Additionally, these same jurisdictions require the company 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 mined land to that which existed prior to mining or to a pre-determined, use post-mining. Closure plans are devised prior to the commencement of operation and are updated regularly to take into account life-of-mine projections. Although the final cost of closure cannot be fully determined ahead of closure, provision is made during the mine's economic operation. Total estimated environmental liability (rehabilitation and mine closure costs) amounted to \$337.7 million as at 31 December 2005 (2004: \$350.1 million).

In South Africa, the newly enacted MPRDA has emphasised the need for companies to cover all decommissioning, closure and rehabilitation financial liabilities at all times during the operational phases of the mines. The shortfall between the presently declared environmental liabilities and the present balance in the Trust Fund, designed to cover these liabilities, is R305 million. Negotiations have taken place over a period of time with the government over this issue, and it has recently been agreed with the DME that a joint task team will address the issue by revisiting an original agreement formulated three years ago. This agreement described certain environmental and financial criteria that must be achieved by a mining company if the company wanted to use the Trust Fund mechanism solely for funding up to the closure date of the mine. The DME finalised a guideline document for the estimating of closure costs at the beginning of the year. The document was revised with input from the mining industry. Nevertheless, adoption of this guideline has not significantly increased the estimated cost of closure.

The new act and regulations place particular emphasis on the design, construction, operation and closure of tailings storage facilities and waste rock dumps. Approval from the government departments for the detailed closure plans for the Daggafontein and Brakpan tailings storage facilities was obtained during the year, a significant first for the gold mining industry in South Africa. The Brakpan complex facility is the largest gold tailings facility in the world.

ENVIRONMENT

EN14

Total environmental liability (restoration and decommissioning) are detailed below:

**Total environmental liability 2005/2004**

**Country**

**Total**

**Total\*\***

**Comments**

**estimated**

**estimated**

**liability**

**liability**

**2005**

**2004**

**(\$ million)**

**(\$ million)**

Argentina

8.8

The reduced costs are attributable to rehabilitation work carried out in 2005, exchange rate

38.9

variations and adjustments made to the attributable portions of the company shareholdings.

Brazil

12.5

The reduced costs are attributable to rehabilitation works carried out in 2005, exchange rate variations and adjustments made to the attributable portions of the company shareholdings.

Australia

32.7

38.3

Ghana

47.1

The upward revision of the Obuasi closure cost is a result of ongoing negotiations with the Ghanaian

39.5

EPA regarding the rehabilitation programme and the mines' closure plans.

Guinea

8.5

Adjustments are a result of the plant expansion and a revision of the closure plan incorporating a more conservative approach to closure cost estimation.

Mali

13.4

At Yatela, the increase accommodates closure and rehabilitation of several new leach pads.

At Sadiola, the decrease is a result of a revised estimate, excluding retrenchment costs and

rehabilitation carried out as a result of ongoing efforts.

45.3

At Morila, the increase is due to a revised closure plan which affects the slopes of the pit walls.

Namibia

3.0

Tanzania

44.1

At Geita, the increase is due to a revision of the closure plan, including quantity survey, which resulted in more accurate estimation of costs.

South Africa

145.3

133.2

Changes in South African legislation have resulted in increased liability estimates and provisions being put in place.

USA

22.3

55

**Total**

**337.7**

**350.2**

\*Note: The total environmental liability has decreased year-on-year. The current figures relate directly to the audited financial statements, which represent the current environmental liability, whereas the 2004 figures includes estimates related to projected future liability. Changes have also arisen as a result of the closure of operations.

## ENVIRONMENT

### EN15

***The company will ensure that its employees and contractors are aware of this policy as well as their relevant responsibilities***

The training of employees regarding environmental policies and procedures is an integral part of the ISO 14001 system in place at those operations that are ISO 14001 certified. Many of the operations that are not yet ISO 14001-compliant have in place sound training procedures for employees and contractors.

Environmental awareness training is generally most effectively included in site induction programmes. Other media used at an operational level include noticeboards, briefings, employee and contractor handbooks and the intranet.

***We will conduct audits to evaluate the effectiveness of our environmental management systems***

Both internal and external audits were conducted during the year. Most commonly, these were associated with the ISO 14001 certification and maintenance requirements. The table on page EN6 indicates the dates of the current ISO certification audits.

As a signatory to the Australian Minerals Industry Code for Environmental Management (Code 2000), the Australia region is committed to annual site audits in terms of the code. In February 2005, RISKMIN (certified auditing company) audited Sunrise Dam against its Corporate Environmental Standards. The result of this audit indicated a 71% level of compliance. These Environmental Standards are being used to develop the ISO 14001 system.

***We are committed to communicating and consulting with interested and affected parties on environmental aspects of our activities***

Communication and consultation with interested and affected parties on environmental aspects of AngloGold Ashanti activities is done through a range of mechanisms. Much of the interaction with community members is dealt with under the community section of this report. Of particular relevance to environmental reporting is the public consultation and disclosure programme currently being undertaken at Sadiola and Yatela in Mali. See case study in the Report to Society 2004.

A list of the stakeholders with whom the company engaged, both formally and informally, may be found on the website. This list is not exhaustive. It provides an indication of the range of bodies with which the company interacts on matters related to the environment.

In South America, for example, a toll-free number is available to community members to lodge complaints, which are then investigated.

***We will work to continually improve our environmental performance.***

The company's primary environmental concerns are:

- the use and management of cyanide,

- mine rehabilitation and closure,

Touching the community -  
environmental interaction by

CC&V

Community and agency outreach and education regarding the operation are routinely undertaken by Cripple Creek Victor (CC&V) in the United States through site tours, formal and informal presentations, meetings, fact sheets, brochures, and other written materials which address a particular subject.

For example, prior to the release of the annual Toxic Release Inventory (TRI) information by the EPA for CC&V, briefings were given in co-operation with the Colorado Mining Association (CMA) to the Colorado Department of Natural Resources and the Colorado Department of Public Health and Environment. A presentation has been developed and is updated annually in the event that the need for these briefings arises on a more frequent basis.

Briefings of elected and appointed officials are conducted when needed to answer questions and provide information on the CC&V operations. Presentations are made to other interested parties (such as the Colorado Cattlemen's and Cattlewomen's Associations, Fremont County Cattlemen's Association) upon request or in response to particular issues.



## ENVIRONMENT

### EN16

- water use and management,

- the use of other resources (such as energy) and the minimisation of waste,

- biodiversity issues, and

- climate change.

Environmental and human rights NGOs have an important role to play in monitoring and reporting on the environmental (and human rights) conduct of companies, including AngloGold Ashanti. The company will continue to engage with these organisations in seeking solutions to identified problems, both directly with the NGOs and through our association with organisations such as the ICMM and the CRJP.

#### **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. This is particularly so for North American operations. The CMA has taken the lead in legally challenging the anti-mining ban in Summit County (not a county where AngloGold Ashanti conducts mining or exploration activities) and AngloGold Ashanti is represented on the steering committee. (*See case study on page EN38: Using cyanide responsibly at CC&V.*)

AngloGold Ashanti has been actively involved in the development of the International Cyanide Management Code and has adopted the published protocols and standards of practice for cyanide management. The code, which is available at [www.cyanidecode.org](http://www.cyanidecode.org), is a voluntary industry initiative developed under the auspices of the United Nations Environment Programme (UNEP) and the International Council on Mining and Metals (ICMM), was launched in May 2002.

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 became a signatory to the code in 2005.

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 auditing.

- In January, Sunrise Dam in Australia was audited against 31 code categories and was found to be compliant with 29 categories and substantially compliant with two categories.

## ENVIRONMENT

EN17

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In October 2004, CC&V was audited internally against 31 categories of the Code and was found to be fully compliant.

Cyanide usage by AngloGold Ashanti operations during 2005 amounted to 31,939,528 kg. Note that in 2004, cyanide usage by the former Ashanti operations (in Ghana and Guinea) was excluded.

The following table reports cyanide usage by operation in 2005.

**Cyanide use (kg)****Country****2005****2004**

Argentina

560,000

Brazil\*\*

1,037,000

Australia

1,671,551

1,535,842

Ghana

5,954,000

\*

Guinea

3,354,000

\*

Mali\*\*

6,873,000

Namibia

814,441

10,157,000

Tanzania

2,497,400

South Africa\*\*\*

7,182,330

16,851,000

USA

1,995,806

2,189,254

**Total****31,939,528****32,211,096\***

\* The former Ashanti operations in Ghana and Guinea did not report for the year 2004.

\*\* Total cyanide usage by operations and not attributable usage. Note that the company reports attributable production, that is, that portion of production, that is attributable to the company as a percentage of ownership.

\*\*\* The significant decrease in cyanide usage at the South Africa operations is as a result of the closure of Ergo.

1,478,000

## ENVIRONMENT

### EN18

#### Cyanide management in Australia

AngloGold Ashanti Australia has taken a leading role in the gold industry in Australia by engaging in discussions with the National Industrial Chemicals Notification and Assessment Scheme (NICNAS) and its review of the Priority Existing Chemical (PEC) assessment process for sodium cyanide. Monitoring data provided by 10 leading gold mining companies, together with site visits and further discussions with industry representatives including the Australian Gold Council and the Minerals Council of Australia will assist NICNAS in fully understanding the management of sodium cyanide by the Australian gold mining industry.

This review has focussed on fauna mortalities associated with exposure to elevated CN

### WAD

(weak acid dissociable cyanide) levels in tailings discharges as a potential environmental risk. Fauna mortalities associated with exposure to elevated CN WAD levels in tailings discharges have been recognised as a potential environmental risk of the Boddington Gold Mine expansion. Historic evidence of fauna mortalities at the mine, particularly in relation to avian fauna (Fairy Martins), suggests that the potential risks require careful management.

Similar risks of fauna mortalities associated with exposure to elevated CN WAD levels in tailings discharges at Sunrise Dam have been addressed by managing CN WAD discharges to the lowest levels practicable. The design of the tailings facility incorporates the release of thickened tailings from a central, raised discharge point so as to limit the extent of surface 'ponding', thus reducing the facility's attractiveness to wildlife.

The hyper-saline composition of the discharge solution may further discourage fauna from using ponded water and this, together with other strategies to reduce/eliminate the impact on the local fauna, is being investigated in collaboration with the Australian Centre for Minerals Extension & Research (ACMER) as part of an international study (including the Sadiola mine site in West Africa. *(See case study on page EN30: Protecting birdlife at Sadiola and Yatela).*

In addition to addressing the potential risks to wildlife associated with cyanide, Sunrise Dam has addressed the impact of fauna mortalities associated with tailings entrapment by building an electrified fence around the tailings facility to prevent access by the local fauna.

## ENVIRONMENT

### EN19

#### Mine rehabilitation and closure

The disturbance of land remains one of the most visible impacts of mining operations, particularly opencast mining with the creation of pits, surface infrastructure, and rock and tailings storage facilities. EIAs conducted prior to the commencement of mining have as their aim the identification and minimisation of these and other impacts. Mitigating measures identified are then incorporated within the operation's EMS and the operation is then bound to undertake these as mining progresses. Where possible, rehabilitation of disturbed areas is carried out concurrently with mining operations so as to minimise the amount of disturbance at any one time. Rehabilitation standards are usually regulated by the relevant national and regional authorities.

As new operations are developed and commissioned, older mines cease operation and are closed. In an environmental sense, true closure may often only be achieved long after mining has ceased and involves extensive planning and close collaboration with the regulatory authorities to obviate any unwanted environmental consequences and satisfy regulatory requirements.

A number of closures are currently in progress:

- Closure of the Alamatoula pit at Yatela in Mali is currently under way. (*See case study on page EN28: Planning and implementing closure at Alamatoula, Yatela.*)

- The closure programme for the Big Springs operation in the United States continued with costs of about \$80,000 incurred in 2005. These costs covered implementation of the long-term passive water management programs at the mine and mill and water quality and biological monitoring. The Big Springs operation, which ceased milling in 1994, has completed all of its major reclamation activities, has maintained and monitored the performance of the closure measures and is additionally in the process of seeking bond release.

- With the official cessation of gold production on 30 March 2005, Ergo moved into full closure mode. As from that date, all activities conducted at Ergo were aligned with achieving closure certificates in terms of section 43 of the MPRDA. Approval from the relevant government departments for the detailed closure plans for the Daggafontein and Brakpan tailings storage facilities were obtained in 2005.

- The Mina Velha decommissioning process in Brazil continued in 2005. The clean-up project for the whole area, which includes dismantling/re-construction of a storm water drainage system, is under way. An expert archaeological team has been hired to follow up the project considering that some very old items of equipment were found during excavation activities. (*See Report to Society 2003 case study: Beyond the life of mine – model decommissioning plan at Mina Velha.*)

## ENVIRONMENT

### EN20

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Also in Brazil, as part of the Old Tailings Deposits (OTD) Agreement, two sites have been rehabilitated – Morro do Galo and Galo. The next site scheduled to be rehabilitated is Resende in May 2006. It is expected that this programme will have been completed by August 2006 at an estimated cost of \$500,000.

- 

Decommissioning of the Engenho d'Água Mine is underway although the rehabilitation programme was concluded in December 2004. A final report is being prepared for submission to the Mining Resources Department (DNPM).

Environmental closure continues at Ergo

The world's largest tailings retreatment operation, Ergo, was closed in 2005 after nearly 30 years of operation. While many closure activities have been undertaken during recent years, the environmental closure activities have now begun in earnest. The main activities undertaken during the year were:

- 

continued hydraulic and mechanical removal of material at some reclamation sites, either via the Brakpan plant to the Brakpan tailings storage facility (TSF), or consolidated on nearby grit dumps. This is required either in terms of contractual obligations with landowners or to reduce the number of long-term liabilities associated with residue deposits;

- 

flushing and cleaning of Brakpan plant;

- 

marketing of redundant assets;

- 

slope reshaping at Brakpan TSF;

- 

slope 'armouring' at Daggafontein TSF; and

- 

investigating alternative methods for radiation screening and decontamination of pipelines in order to maximise their resale value (i.e. so that they can be sold as pipes rather than as scrap).

Achieving closure of tailings dams remains a significant financial and technical challenge. Other challenges going forward are the:

- 

maximisation of asset values;

- 

radiation clearance of serviceable pipelines;

- 

recovery of usable materials;

- 

residual and latent impacts related to groundwater pollution and soil pollution at reclamation sites; and

- 

extent of rehabilitation of partially reclaimed old tailings dams, and in relation to unused mining rights on old tailings dams.

## ENVIRONMENT

### EN21

#### Resource use and waste generation

AngloGold Ashanti is committed to reducing the use of, and improving the efficient use of, scarce environmental resources such as energy, water, timber and other materials. Apart from the environmental advantages of reducing the use of such raw materials, the group can also potentially achieve significant cost savings.

Environmental targets are set by the individual operating mines or business units as they apply their own EMSs which reflect the priorities unique to them. Information on resource use and waste generation is collected and recorded at site level.

#### **Water usage**

Varying site conditions, mining and treatment processes, and the availability of water dictate to a large degree the use of water and the level of efficiency achieved.

Examples of programmes/initiatives in place at an operational level:

- A water Management Guide was developed in the Australia region to ensure that the interaction of mining and exploration activities with hydrological aspects of the environment does not result in over-use, unplanned wastage or adverse environmental or community impacts on water resources.

- CC&V uses a probabilistic water balance model (developed with the assistance of Golder Associates) to guide storage capacity sizing, account for meteorological events and evaporative losses, manage solution movements through the heap leach facility, and to assess current and future water needs (inputs) to the project. This model provides for predictions of volumes of solution in inventory over time as impacted by seasonal factors and changes in operating parameters.

In 2004, CC&V instituted a new water conservation measure that involves the burial of the drip irrigation lines on the surface of the heap leach facility. Recycling of water contained with the heap leach facility is a fundamental element of the facility design, construction and operation. In South Africa, water management is of particular concern. Four mining companies operate in the Klerksdorp, Orkney, Stilfontein, Hartebeestfontein (KOSH) area, namely, Buffelsfontein gold mine, formerly owned by DRDGOLD, Harmony Gold Mining Company Limited, Stilfontein Gold Mining Company Limited and AngloGold Ashanti. All of these companies operate upstream from AngloGold Ashanti's mining operations and, in the past, these mines have been obliged to continue pumping underground water, even once their mining operations have ceased. When Buffelsfontein was placed into provisional liquidation on 22 March 2005, there was some uncertainty as to whether or not the pumping operations would continue at Stilfontein and Buffelsfontein. DRDGOLD has denied having any obligation regarding a contribution towards the pumping of underground water in the area.

## ENVIRONMENT

## EN22

As a result of this uncertainty, AngloGold Ashanti launched an urgent interdict on 12 April 2005 against DRDGOLD Limited, Buffelsfontein Gold Mines Limited, Stilfontein Gold Mining Company Limited, Harmony Gold Mining Company Limited, Hartebeestfontein Gold Mining Company Limited, the minister of minerals and energy, the minister of water affairs and forestry, and the minister of environmental affairs and tourism. AngloGold Ashanti applied to court for an order directing the mining companies to continue pumping and extracting underground water at their mine shafts and for the ministers to issue directives to the mining companies to continue with pumping at their mines, to take the necessary measures to prevent further pollution or degradation of the KOSH area, and to make the area safe.

As a result, the minister of water affairs and forestry issued directives that pumping should continue, and for AngloGold Ashanti, DRDGOLD, Harmony and Stilfontein to contribute equally to the costs. AngloGold Ashanti, DRDGOLD and Harmony have, under protest, complied with the directives but Stilfontein has refused to comply and is facing court action from the state in this regard. (*See case study on page EN33: Mine closure stretches environmental legislation.*)

The DME and the Department of Water Affairs and Forestry (DWAF) have recommended that companies involved in mining areas such as Klerksdorp and Carletonville, collectively design a regional closure plan for these geographic areas, in addition to the normal mine closure plans.

Total water usage by AngloGold Ashanti amounted to 78,458,736 m

3

in 2005.

**Total water usage (m**

**3**

**per annum)**

**Country**

**2005**

**2004**

Argentina

1,200,000

Brazil\*\*

3,827,904

Australia

2,989,962

3,025,041

Ghana

15,670,000

\*

Guinea

3,717,191

\*

Mali\*\*

17,093,115

Namibia

1,031,554

32,440,460

Tanzania

4,268,816

South Africa\*\*\*

27,086,783

49,629,937

USA

1,573,411

1,638,830

**Total**

**78,458,736**

**90,363,232**

*\* The former Ashanti operations in Ghana and Guinea did not report for the year 2004.*

*\*\* Total water usage by operations and not attributable usage. Note that the company reports attributable production, that is, that portion of production, that is attributable to the company as a percentage of ownership.*

*\*\*\* The significant decrease in water usage at the South Africa operations is as a result of the closure of Ergo.*

**Energy usage**

Energy usage is both a substantial factor in environmental management globally, and is a major cost driver, particularly in underground mining. In its efforts to conserve energy, AngloGold Ashanti is focused on ensuring the efficient use of energy and on developing and implementing renewable energy sources.

During 2004, AngloGold Ashanti together with Anglo American plc completed a technology strategy project in respect of an energy platform which has as its objective the reduction of 3,628,164



## ENVIRONMENT

## EN23

the group's energy intensity year-on-year. The target is to save 1 % per annum over the next 10 years, with the compounded total about 15%.

AngloGold Ashanti has registered a 6.7 % reduction in electrical energy consumption from 2004 to 2005. This included a 60% reduction at Ergo (closing), 14% reduction at Savuka (right sizing), and an increase of 32% at Moab Khotsong that is coming into production. The other business units had also generally lower energy use. During the year, the Sunrise Dam mine implemented a solar power pumping system to manage and control the water levels on the surface of the tailings dam, as well as a control system to use wind generated power for the purpose of ground water level control.

Total energy use by AngloGold Ashanti operations in 2005 was 29,213,073 GJ.

**Total energy usage (GJ)****Country****2005****2004**

Argentina

725,832

Brazil\*\*

Australia

2,149,981

2,294,075

Ghana

3,142,796

\*

Guinea

4,057,888

\*

Mali\*\*

1,530,354

Namibia

227,524

7,453,150

Tanzania

1,896,088

South Africa

14,880,141

17,099,157

USA

1,328,301

1,241,179

**Total****29,213,073****31,203,528**

\* The former Ashanti operations in Ghana and Guinea did not report for the year 2004.

\*\* Total energy usage by operations and not attributable usage. Note that the company reports attributable production, that is, that portion of production, that is attributable to the company as a percentage of ownership.

\*\*\* The significant decrease in energy usage at the South Africa operations is as a result of the closure of Ergo.

Biodiversity

The need for preserving biodiversity and the ongoing threats to habitat continue to be the subject of global debate. AngloGold Ashanti, through its participation in the ICMM's Biodiversity Taskforce, is engaged with the IUCN (World Conservation Union) in a dialogue on mining and biodiversity.

3,115,907

## ENVIRONMENT

### EN24

In South Africa, a first-phase biodiversity assessment (desktop study) was completed for the Vaal River and West Wits operations.

No formally defined protected areas or sensitive areas exist in the Vaal River or West Wits operations. However, Ergo, which is in the process of closing is situated in close proximity to the Blesbokspruit, a Ramsar-listed wetland system. The Vaal River operations are situated adjacent to the Vaal River which is the country's most important river system, hosting a number of significant riverine wetlands as well as fauna and flora species.

The South African operations are all situated within the highveld grassland biome which is considered to be one of the most threatened regions in South Africa, with 60 to 80% irreversibly transformed, mainly by agriculture and residential development, and only 2% formally conserved. A number of preliminary Biodiversity Management Units (BMUs), which are areas with homogeneous biodiversity (for vegetation, terrestrial and aquatic fauna), have been identified.

The next phase, commencing 2006, will identify specific objectives, programmes and targets for the management of biodiversity (compilation of a Biodiversity Management Action Plan). In Brazil, most of AngloGold Ashanti operations are situated in biodiversity rich areas such as the Atlantic Forest and Cerrado (Cuiabá Mine, Lamego and Córrego do Sítio). 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 1000 ha of land within the Natural Property Private Resource (NPPR) 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 who have been contracted to contribute to management plans and provide inventories of biodiversity in these areas. There is large number of species that inhabit these areas. Some species have been classified as endangered, while others are classified as vulnerable or at lower risk.

### Climate change

The Kyoto Protocol, an international and legally binding agreement to reduce greenhouse gas emissions worldwide, came into force on 16 February 2005. The Kyoto Protocol requires the 126 countries that have signed the agreement to reduce their emissions of greenhouse gases to 5.2% below 1990 levels in an effort to combat climate change. It had to be ratified by 55 industrial nations, representing 55% of the world's emissions. Russia ratified the

## ENVIRONMENT

### EN25

convention at the end of 2004. The United States and Australia have refused to ratify the convention. South Africa has acceded to the convention.

In Western Australia, the government has announced the creation of a Greenhouse Task Force to advise the government on viable strategies to manage greenhouse emissions from the stationary energy sector. The EPA has released a Guidance Note on Minimising Greenhouse Gases which specifically addressed the minimisation of greenhouse emissions from significant new or expanding operations.

The State Government is also in the process of developing a State Greenhouse Strategy which will set the wider policy context for greenhouse gas management. Carbon dioxide is the major greenhouse gas in Australia and climate change will have significant impacts in Australia.

*The company will participate in debate on environmental matters at international, national and local levels.*

AngloGold Ashanti is committed to participating in debate on environmental matters at international, national and local levels. Some of the contributions the group has made internationally include membership of and active participation in the ICMM and the Global Reporting Initiative (GRI) as organisational stakeholders.

As part of its environmental strategy, AngloGold Ashanti actively participates in law-making processes in the countries in which it operates. This is often facilitated by participation in mining associations (for example, the Chamber of Mines of South Africa and the Minerals Council of Australia).

#### 5. Case studies

Case studies that illustrate the performance of the company in the environmental sphere may be found on the pages that follow. Follow-ups on case studies presented in the Report to Society 2004 may be found on the website.

Awards/recognition:

#### **Brazil**

5 star NOSA rating confirmed for the Queiroz Plant, Cuiabá Mine and Rio de Peixe hydro-electric system

#### **Geita**

Certificate of Merit for Environmental Management in the Tanzanian government's President's Award for Environmental Excellence.

ENVIRONMENT –  
CASE STUDY GHANA

5.1 Water recycling at Bibiani

EN26

At Bibiani mine, as at all AngloGold Ashanti mines, water conservation and the prevention of polluted discharges into the environment are important aspects of water management. The mine is located close to the River Mensin and its tributaries, the Mpokwampa and Amponsah streams. At a slightly greater distance lies the river Tano, one of Ghana's major rivers into which the River Mensin flows. A number of communities are located within the mining lease area, and also beyond its boundary. They rely mainly on streams and shallow wells for their domestic water supply.

At the mine's tailings dam, the repository for slurry after the gold extraction process, all of the mine's water is recycled as part of the mine's zero effluent discharge philosophy, which means that process water is contained in a closed system and that there is no seepage or spillage of water into the environment. This water management programme has been in place since the mine was re-started as an open-pit mine in 1998, prior to which it was an underground operation for many decades.

At Bibiani, water is used in the milling and chemical extraction process in the treatment of approximately 2.5 million tons of ore annually. The ore is crushed and milled prior to leaching by cyanidation. The gold is then absorbed (collected) out of solution onto activated carbon and the residual solution is recycled to the process plant as process water.

Bibiani's water supply is obtained from a number of sources:

- the mine's tailings dam;
- levees (raised embankments for water storage) – the mine has five levees which store rainfall, underground water and, on a temporary basis, water from Lake Amponsah, until the water is pumped to the process plant;
- dewatering from the mine's underground project; and
- Lake Amponsah (water from the lake is used only when other sources are inadequate).

Bibiani's total water consumption for 2005 was estimated at 3.5 million m

3

, almost 76% of which was recycled water. This meant a saving of 2.3 million m

3

in fresh water abstraction.

The water from the tailings dam, which forms the bulk of the water source, is recycled for re-use at the process plant. Waste from the treatment process forms slurry which is pumped to the tailings dam or tailings storage facility (TSF). The quality of the water is then improved through a decanting process which consists of both a particulate and a liquid phase: metal pollutants like iron and manganese settle on the bottom of the dam while cyanide residue in the water, is naturally degraded through exposure to the sun. This water is then pumped to the process water pond (a surge facility) before it is required for processing.

Water from the levees is pumped directly to the process water pond. Water levee levels are strictly monitored, particularly after a minor discharge from an overflow in 2003, when heavy rainfall caused one levee to collapse, forcing water into the next levee which consequently also collapsed, resulting in flooding of the environment. Immediate remediation measures were taken, including water sampling inside and outside the concession area to determine the level of local water body contamination as a result of silting; fish caught in the flood waters were removed to the dam; all regulatory bodies were informed; and the two affected levees were reconstructed: freeboard has been increased and spillways located in competent ground.

To ensure that no flooding occurs at the suspended underground project, a care and maintenance programme has been implemented to ensure that excess water is routed to the process plant where it supplements process water supplies. A comprehensive programme is in place to prevent spillages at the tailings dam itself. The programme

includes grassing of the embankment, securing the tailings discharge joints to avoid breakage, inspections, audits and regular patrols; and the establishment of an Emergency Response Management Programme.

Excess water is used to fill up the water bowsers, or tankers, which sprinkle water regularly on haulage roads to minimise dust emissions.

Should an environmental issue present, communities have recourse to the mine through the human resource department which is charged with community relations. Complaints are investigated and the necessary remedial action taken. A possible indication of the success of Bibiani's environmental management programme is that no complaints were received in 2005. Bibiani's environmental department has recently requested to be represented on the district assembly, a community body which also deals with issues and grievances.

ENVIRONMENT –  
CASE STUDY MALI

5.2 Tailings rehabilitation at Morila

EN27

In preparation for mine closure in 2010, Morila mine in Mali is conducting technical studies at its tailings storage facility (TSF) and waste rock dump to establish the most efficient and cost-effective rehabilitation measures at these two sites.

The pilot study, which is being carried out by Morila's on-site environmental team, is investigating whether mine-specific factors might have an impact on generally accepted best practice closure plans. Because operating and climatic conditions vary from operation to operation and from country to country, the trials may prove that there is no 'one-size-fits-all' model. For example, generally accepted best practice might specify that 300 millimetres of topsoil is needed for effective revegetation of a non-specific waste rock dump, whereas technical studies might indicate that at Morila the volume of topsoil needed could be reduced drastically, if mixed with non-acid forming waste rock. This would obviously have significant cost advantages.

A number of simulated tests are being undertaken at both the TSF and waste rock dump, both of which will eventually be rehabilitated with rock and/or soil and, in the case of the waste rock dump, revegetated with indigenous trees. Tests are being conducted at the TSF to determine the chemical characteristics of the various tailings types, and their potential to produce acidic leachate, also known as acid rock drainage. This leachate can potentially contaminate ground and surface water.

The results of the test will inform the type and amount of cover required to cap the TSF. Using two-metre high columns, the experiment simulates the effect of rainfall and in-situ water on layers of tailings materials, to analyse the best cover type, its thickness and composition, as well as what quantity will be required to prevent significant leaching.

The final cover for the waste rock dump, where non-gold-bearing ore is discarded, as well as slopes of the TSF, requires the addition of some organic matter to stimulate vegetation growth. Analysis is being conducted on what ratio of rock and soil combinations provide the best stability and minimal erosion. Other expected outcomes from the technical studies are that restoration measures at both the TSF and waste rock dump should prove to be sustainable over a long period of time. It is expected that the amount of topsoil cover will be minimised, through the additional use of waste rock, which is in plentiful supply. This is also expected to minimise erosion which compromises slope stability. The studies will also identify the most suitable local plant species for the restoration of vegetation.

The technical studies commenced at the beginning of 2005 and are expected to continue for two years, after which they will be subject to an external independent review for the purposes of validation and verification.

Yatela mine in Mali has commenced with the implementation of its closure plan at Alamatoula pit, one of two pits at the operation. Production from the pit ceased in February 2005 and the pit and associated waste rock dump are now in the decommissioning and rehabilitation phase. At the main Yatela complex, mining will end sometime in mid-2007 and active heap leaching will be completed by mid-2008, and the rinsing of the leach pads scheduled for the fourth quarter of the same year. Rehabilitation is expected to be completed by 2009, with the lease anticipated to be relinquished in 2013.

Closure plans were first drawn up in 2002 and updated again in 2005, prior to production ceasing at Alamatoula. The estimate for the total cost of closing Yatela mine is currently \$11.7 million.

Since large-scale mining is a fairly recent phenomenon in Mali, the existing legislation regarding mine closure is silent on a number of issues and the closure of Yatela has, therefore, presented an opportunity to bring together all stakeholders to discuss all aspects of closure, including environmental, social and economic impacts. A mine closure committee was formed comprising government representatives from the departments of mines and environment, Yatela mine, and the local community, which numbers 17 villages within the immediate environs of the Yatela and Sadiola mines. Among other things, the committee will facilitate a co-ordinated approach to mine closure through consultation and communication between various departments and levels of government, and with local communities and other affected parties.

One of the major environmental challenges faced is the decommissioning of the pit. A possible solution arrived at following discussions at a recent stakeholder workshop (November 2005) envisages the likely conversion of the pit into a lake to be used for fish farming. An experimental fish farm is currently being run at an old quarry site at Yatela mine (See Report to Society 2004). The leach pads, used in the gold extraction process, are to be thoroughly cleaned and rinsed. Local vegetation will be encouraged to grow on the waste rock dumps and leach pads. Discussions will be held with the government, through the mine closure committee, on the possible alternative uses for the houses, offices, roads and other infrastructure. Mine closure inevitably affects surrounding communities owing to a greater or lesser reliance on the mines for their livelihood. While jobs will be lost due to mine closure, it is anticipated that some employees may be redeployed to the nearby Sadiola mine while others may benefit from opportunities at other new mines which are being developed in Mali. In addition, as reported last year, an Integrated Development Action Plan (IDAP) has been instituted to work towards ensuring sustainable livelihoods for communities after closure. (See Report to Society 2004 and update in this report). The IDAP for the Sadiola commune, which comprises both the Sadiola and Yatela communities, was set up to promote socio-economic development within beneficiary communities. One of its objectives is to lessen the communities' reliance on mines after closure by offering a sustainable source of income. Comprising representatives from the communities, mine, government departments and non-governmental organisations (NGOs), the IDAP Association is discussing alternative livelihood projects which are now due to commence in 2006. Projects which have been recommended include bee-keeping, agriculture and cattle-fattening. While it was hoped to begin with implementation during the course of 2005, it took longer than anticipated to get buy-in from all stakeholders regarding the process of setting up and staffing the association and rolling out the proposed projects. This is an inherent dilemma in such a multi-stakeholder process.

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5.3 Planning and implementing closure at Alamatoula, Yatela



ENVIRONMENT –  
CASE STUDY MALI

**5.3 Planning and implementing closure  
at Alamatoula, Yatela cont.**

EN29

Post-closure monitoring is planned to continue for five years after the closure of mining operations. This will include the monitoring of ground water, surface water, dust and rehabilitated areas. A community liaison officer will be employed to maintain contact between the mine and the local community and annual environmental reports will be submitted to government to facilitate the final approval for termination of monitoring activities and relinquishment of the mining lease.

The Yatela mine closure is being viewed as a pilot project which may provide the Malian government with a blueprint for future mine closures to be followed by all large-scale mining companies operating in the country. As a result, it has attracted the attention of other mines operating in Mali. Representatives from Morila (owned by AngloGold Ashanti and Randgold Resources Ltd), Loulo (owned jointly by Randgold Resources Ltd and the Malian government) and Syama (owned jointly by Randgold Resources Ltd, the Malian government and International Finance Corporation), attended a one-day workshop on the 28 November 2005 to discuss mine closure policy.

In Mali, where the long dry season lasts for about nine months of the year, wildlife is attracted to what little water there is available. This often includes man-made water ponds associated with mining. At the Yatela and Sadiola mines, located in the Kayes region of the country, a number of operational facilities fall into this category, including the process ponds, tailings storage facility (TSF) and associated return water dam (RWD), all of which contain toxic residue both from the heap-leach gold extraction process at Yatela and the conventional process at Sadiola.

A study to investigate wildlife deaths associated with cyanide-bearing tailings dams and heap-leach operations was conducted by Graham Johnson, Environmental Manager at Sadiola and Yatela, and David Donato of Donato Environmental Services, in conjunction with the Australian Centre for Mining Extension and Research. At Yatela mine, it was established soon after production started that large numbers of birds were dying after ingesting cyanide residue from the process ponds, the top of the heap-leach pads, the solution trenches and other areas within the plant site. Site trials were then conducted to ascertain the most effective measure to deter birds from visiting these locations. They included permanent patrol personnel on heap-leach pads and around process ponds; shade cloth to cover ponding of cyanide solution on top of the heap-leach; spikes to pierce the heap material where ponding occurs; construction of fresh water bird ponds; suspended and floating netting over the process ponds and noise deterrents in the form of propane guns. The open-water process ponds proved the most challenging area to control and, eventually, the use of HPDE (high density polyethylene) bird balls to cover exposed water and to prevent birds from landing on the water, proved to be the most effective measure. The mitigation measures have resulted in a significant drop in bird deaths from 554 in 2001 to just two in both 2004 and in 2005. (*See Report to Society 2004 case study: The use of 'bird balls' at Yatela gold mine.*)

Sadiola mine, which began operating in 1997, experienced no bird fatalities in the first four years because only oxide ore was being processed. Consequently cyanide concentrations were relatively low and underwent natural degradation in the tailings decant pond. However, as supplies of oxide ore became depleted, the mine started processing deeper soft-sulphide ores which necessitated changes to the conventional metallurgical process, including the addition of higher cyanide concentrate levels. WAD (weak acid dissociable) cyanide levels increased to more than 200 milligrammes per litre (mg/l), well over the recently established International Cyanide Code limit, which recommends a maximum of 50 mg/l to protect birds, other wildlife and livestock. In a nine-week period between 1 March and 10 May 2002, 197 birds died at the silt trap, the return water dam and the tailings decant pond. Cyanide concentrations were immediately reduced by temporarily halting the sulphide ore treatment before installing a hydrogen peroxide plant at the tailings decant pond for initial cyanide destruction, and finally construction of a permanent cyanide destruction system.

However, despite these measures, in April of the following year 77 bird fatalities occurred at the TSF silt dam and RWD and 17 during December of that year. Toxicological tests conducted at Onderstepoort Veterinary Institute in South Africa were inconclusive. However, when a further 107 fatalities were recorded in May 2004, after ruling out natural causes such as extreme heat, starvation or disease, surprising evidence pointed to sodium ion toxicosis. Sodium levels in the brain tissue of two bird species were found to be 2,218 and 2,255 parts per million (ppm) respectively, above the 1,900 ppm threshold for sodium toxicosis.

ENVIRONMENT –

CASE STUDY MALI

5.4 Protecting birdlife at Sadiola and Yatela

EN30

ENVIRONMENT –  
CASE STUDY MALI

**5.4 Protecting bird life at Sadiola and Yatela cont.**

EN31

Sources of sodium are sodium cyanide which is used in the leach circuit and sodium metabisulphite used in the cyanide destruction process. Dissolved sodium concentrations at the RWD were found to be elevated in relation to previous years; during the three-month period when it was estimated the birds died, levels ranged from approximately 800 mg/l to 1,400 mg/l.

Five birds that died of sodium toxicosis on two separate days in March and June 2005 were found to have sodium levels in a range of 1,958 ppm to 2,407 ppm. Average sodium concentrations in water were found to be 1,650 mg/l and 1,000 mg/l respectively.

It is suggested that, unlike birds that live in saline environments and have developed a nasal salt gland for excretion, terrestrial birds are poorly equipped to deal with excess sodium – especially where they do not have access to fresh water after ingesting saline water. At Yatela it was postulated that the grasshopper buzzard, heron species and egret species – the bird types which succumbed to sodium toxicity – have a toxic threshold of between 800 and 1,000 mg/l; whereas other species – for example, the spur-winged lapwing plover – might have higher tolerance levels. This apparent tolerance may be due to inherent physiological differences and/or species-specific behaviour that limits their exposure to sodium, for example, accessing freshwater ponds instead of the process ponds.

Sadiola staff have adopted 800 mg/l as a conservative target for regulating sodium levels in process waters. Mitigation measures include:

- reducing the attractiveness of habitat by:
  - removing dead trees standing in the ponds;
  - removing a 75-metre-wide strip of vegetation around ponds; and
  - placing tailings over exposed areas of natural ground inside the TSF;
- bypassing of the TSF silt trap pond;
- permanent bird hazing patrollers around ponds to deter birds from alighting on the water;
- propane cannons and electronic distress calls; and
- construction of 30 freshwater ponds

A wildlife monitoring programme has been instituted, and pond inspections are carried out regularly, to assess the performance of mitigation measures and to provide for the early detection of future incidents. It has already been noted that the number of bird species frequenting the process ponds has decreased from 50 to 15 and the frequency of visits has also reduced.

Further mitigation measures are currently being considered, primarily aimed at reducing the surface area of exposed process solutions.

The Sadiola Hill Gold Mine is located in the Kayes region of Mali, West Africa, where there are two distinct seasons: a short wet one from June to early September and a longer hot and dry season from October to May. The region is subject to dust 'pollution' from the Harmattan, a dry dusty wind that blows along the north-west coast of Africa and which can reduce visibility to less than 50 metres. This can be exacerbated by construction and mining activities such as those at Sadiola and Yatela.

Dust was a significant issue during the construction of the mines. Emissions continue to emanate from the mine pits and the waste rock dumps, but it is dust caused by traffic between the mines – situated about 30 kilometres apart – that is of greatest concern to neighbouring communities.

The national road between Sadiola and Yatela mines is a dirt road which passes through several rural villages. Trucks use the road to deliver raw materials, buses transport employees to and from work, and supervisor vehicles shuttle between the mines. Secondary traffic comprises private cars, trucks and taxis, all of which use the same road on a regular basis. This assortment of traffic stirs up significant quantities of dust which form clouds of very fine dust particles which, particularly bad during the dry season, are both a health and a safety hazard. Respirable dust (particles of less than 10 microns – equivalent to about one seventh of a human hair) pose the greatest health risk because the particles can be easily inhaled.

The two villages most affected by dust emissions – Kourketo and Sadiola with a population of about 14,000 – are located on the route between the Sadiola and Yatela mines. Residents' complaints have been addressed both through the community Stakeholder Committee which liaises with the mine on behalf of the community, and directly to the community development manager at the mine.

Several measures are being implemented to minimise dust levels in and around the mines. They include:

- road watering – a contracted water bowser is used to spray sections of the road between Sadiola village and the tarred mine road, as well as roads inside Neteko village. During the dry season, approximately 96,000 litres of water are used per day for dust suppression;

- haul road watering – pit water from the dewatering programme is used to suppress dust on the access and haul roads inside the mining area;

- application of binding agents in the form of molasses and lignosulphonate – in 2004, both molasses and lignosulphonate were applied in trials at Sadiola and Kourketo villages respectively.

Lignosulphonate has proven to be more efficient than molasses, which tends to get washed away quickly; and

- traffic relocation – a new road is being constructed to divert mine traffic off the national road and on to a new private road that is situated away from neighbouring villages.

At the last two stakeholder workshops, communities voiced their appreciation of the mine's efforts to manage dust emissions at the operations and in their communities. They also expressed a desire that the entire road between Kayes and Sadiola be tarred. This, however, would be the responsibility of national government.

ENVIRONMENT –

CASE STUDY MALI

5.5 Emphasis on dust monitoring and management at Sadiola

EN32

Continuous dust monitoring

Both the fallout and respirable dust are monitored to evaluate the impact of mining on air quality in the Sadiola district.

The dust fallout is monitored by means of dust buckets,

which collect dust generated either by mining activities or any other movement, within the radius of the dust buckets. The dust buckets are collected monthly and the particle samples processed in the SEMOS (La Societe d'Exploitation des Mines d'Or de Sadiola) assay laboratory. The respirable dust is measured by a PM10 machine. In an effort to achieve greater dust monitoring accuracy, new dust monitoring devices were installed on site by December 2005 – a set of each in the Sadiola area and another set (as a control) in Medine village which is unaffected by the dust to measure background dust levels.

ENVIRONMENT –

CASE STUDY SOUTH AFRICA

5.6 Mine closure stretches environmental legislation

EN33

AngloGold Ashanti is an active participant in the development of a water management strategy in the Klerksdorp, Orkney, Stilfontein and Hartebeesfontein (KOSH) area, after it found itself, along with other mining companies, in the middle of uncharted legal territory.

This followed a dispute over responsibility for pumping of underground water after DRDGOLD placed its North West Operations (NWO), comprising Hartebeesfontein and Buffelsfontein mines, into provisional liquidation on 22 March 2005. Prior to this, dewatering of mines in the area was conducted by each mining company at their own mine shafts – DRDGOLD Limited, Harmony Gold Mining Company and AngloGold Ashanti – and Stilfontein Gold Mining Company, which, though closed, contracted the dewatering at its Margaret shaft to Hartebeesfontein.

Pumping is necessary to prevent the flow of underground water from mines at a higher location within the mining area to lower-lying mines and to keep the mines at the higher location dry for their own operating purposes. The designs of higher lying and shallower mines, like Hartebeesfontein, Buffelsfontein and Margaret, took account of the challenges posed by large volumes of water, unlike the deeper shafts owned by AngloGold Ashanti and Harmony, which do not encounter such volumes. Indeed Margaret shaft pumps a total of 37 megalitres a day (MI/d), the equivalent of 740 swimming pools, while five other shafts in the area pump much lesser amounts each – 20.50 MI/d in total. Once DRDGOLD abrogated its responsibilities to continue pumping natural underground water, the ensuing debate highlighted a crucial area, namely, on whose shoulders the pumping responsibility should lie when one mine closes down before another. The South African statutory law, in the opinion of AngloGold Ashanti, is clear in this regard, the mine in whose area the underground water occurs has the obligation to manage such water.

When DRDGOLD left responsibility for pumping with its liquidators, mines operated by AngloGold Ashanti and Harmony, lying as they do on the down dip of DRDGOLD's North West Operations, were at risk of flooding with a number of possible impacts: cessation of operations, loss of a valuable resource, and resultant job losses affecting the social and economic fabric of the area.

AngloGold Ashanti's immediate response, on 13 April 2005, was to launch an urgent interim interdict to request the court to order DRDGOLD to continue to dewater at its operations, in terms of legislation contained in the National Water Act, the National Environmental Act, the Mine Health and Safety Act and the Mineral and Petroleum Resources Development Act, which says that each mining company is responsible for its own environmental impacts and safety and that it may not pass pollution and safety problems on to another mining company – in other words “the polluter pays” principle. Mining companies, in any event, are compelled to make financial provision and fulfil certain environmental obligations before obtaining a closure certificate from the Department of Minerals and Energy (DME). AngloGold Ashanti also asked the court to direct the state to fulfill its statutory duties.

As a result of the launching of the urgent interdict, the Department of Water and Forestry Affairs (DWAF), in the meantime, issued a directive to mining companies to formulate a proposal on how to handle the KOSH water issue. AngloGold Ashanti submitted a document suggesting a way forward. The proposal suggests that over the next 18 years (covering the life of mines in the area), water should continue to be pumped to surface at Stilfontein's Margaret shaft before being piped to the local water service provider,

ENVIRONMENT –  
CASE STUDY SOUTH AFRICA

**5.6 Mine closure stretches environmental legislation**

*cont.*

EN34

Midvaal Water Company or other water services provider where it is to be blended with Vaal River water, treated and used for domestic, industrial and mining purposes.

AngloGold Ashanti has also suggested that a water company (with the mining companies and government as members), similar to Midvaal, be formed to manage the current crisis now and into the future. This should create a revenue stream to pay for pumping costs over the next 18 years and will make more widespread use of the water being pumped at Margaret shaft, now being discharged to the surface environmental and water resources. On the question of sustainability, as raised by government, the proposal further advises continued pumping for a 10-year period following mine closure, until voids fill up. It is also envisaged that, since the quality of water may not be accurately established at this time, a pre-treatment plant be erected at Margaret shaft before water is transferred to Midvaal Water Company. With regard to water pollution, a monitoring measure is currently under investigation by DWAF, which is considering installing a Water Discharge Charge system, whereby companies will be charged for volumes and contaminants discharged into the natural watercourse.

At a two-day workshop held in October 2005, all mining companies and stakeholders agreed on the establishment of a water company, which will ultimately benefit the community, mining companies and government. Foreseeable challenges, besides raising the R60 million needed to set up the company, are how DWAF and the DME will legally appropriate Margaret shaft from Stilfontein in view of the fact that the company has no directors – they resigned en masse earlier in the year when they faced contempt of court proceedings for failing to comply with the DWAF directives; and the speed with which DWAF will be able to furnish a water licence permit for the new company.

While AngloGold Ashanti is confident that the new water company will get off the ground in the foreseeable future, it would like to see government intervention in certain areas before a crisis on the scale of the KOSH area presents itself. Chief of these is ensuring that closure strategies are in place long before all mining operations cease, and that these strategies adopt a holistic view of the needs of affected areas.

ENVIRONMENT –

CASE STUDY SOUTH AFRICA

5.7 Dust management at Vaal River

EN35

The dust management programme implemented at the Vaal River operations in South Africa in 2005 has been relatively effective. The problems experienced here and, in particular, the concerns of the local community, were reported in the Report to Society 2004.

Since that time the western extension tailings storage facility has continued to grow, increasing in height from 32 m to 41.5 m. Tailings deposition has also increased from 22 million t to 24,7 t. To accommodate the increased tailings material, the height of the dam has had to be increased. During the process of a routine pipe lift, which was necessary for cycloning operations to proceed smoothly, the stabilised surface on a portion of the eastern wall was disturbed. This has resulted in a temporary increase in dust levels, which are expected to continue until cycloning operations resume at the beginning of 2006.

Dust emissions from the dried-out sulphur dam, located on the northern side of the Potchefstroom/Orkney road, have also increased significantly. The dam is currently in the process of being reclaimed, which in the longer term, will lead to a reduction in dust emissions. In the meantime, a short-term strategy has been implemented for dust suppression, including:

- installation of sprayers – the initial system proved to be unsuccessful and consequently a micro-jet system is being investigated which should provide a much finer droplet, improving the agglomeration of airborne particles;
- installation of bulk chemical storage tanks for dust suppressant chemicals which will reduce the lag time when urgent applications are required; and
- spraying of ligno-sulphonate – a synthetic, non-toxic, eco-friendly binding agent has been applied over the dam surface to bind dust particles. Approximately 90% of the surface has been covered and the rest is scheduled for completion in early January 2006.

The dust monitoring programme, which comprises 17 dust fall-out buckets, has continued during 2005 with the latest results indicating compliance with legislation.

Although complaints regarding high dust emissions were lodged with the North West Department of Minerals and Energy (DME) during October 2005, AngloGold Ashanti was not singled out by the complainants. Nevertheless, following a meeting with all stakeholders, the DME constituted a formal dust committee comprising local authority and mine representatives, which will meet regularly to discuss dust issues and remediation measures.



ENVIRONMENT –

CASE STUDY SOUTH AFRICA

5.8 Hydrogeology in the South Africa region

EN36

Hydrogeology – the study of the interaction of groundwater with surface water bodies, soil and rock formations and waste rock bodies – forms part of AngloGold Ashanti’s integrated water management plan as prescribed by South African legislation.

Hydrogeology falls under the Water Management section of the South African Environmental Management Department. A number of hydrogeology projects have been undertaken over the past four years. They include isotope analyses to determine the origin and speciation of water bodies; studies to predict the influx of water into gold mines within the KOSH (Klerksdorp, Orkney, Stilfontein and Hartebeesfontein) area and to quantify the future influx of water into the Stilfontein area in the event of mine closure; and an assessment of the impact of dewatering of mines on neighbouring groundwater users, both in terms of quantity and water quality.

The main objectives of hydrogeology in the South Africa region are to establish the following:

- identification of pollution sources and potential pollution sources (e.g. tailings dams, dirty water separation dams, storm water dams);
- risk assessment and classification of pollution sources;
- mitigating the paths of pollution sources to prevent their ingress into unpolluted water;
- identification of receivers of pollution (e.g. rivers and other natural water sources) and mitigation options; and
- impacts of mine dewatering.

Data obtained from the integrated ground and surface water monitoring network has enabled the compilation of a number of formal monitoring reports in the South Africa region. This has allowed for the construction of a detailed groundwater model and predictive simulations to identify potential groundwater risk. Groundwater contaminant flow transport models were constructed to quantify possible pollution impacts over a period of, for example, 20 years. The transport models were ranked according to their salt load allocation (the higher the salt load, the more polluted the water) and the distance over which the pollution travels.

From an identification of groundwater risk, AngloGold Ashanti has been able to pinpoint potential problem areas, and to implement mitigation strategies. These include:

- responsible management of explosives which contain a high nitrate composition and therefore the potential to pollute groundwater;
- implementation of production boreholes to intercept groundwater pollution plumes and thus reduce the contaminant flow into unpolluted water sources;
- rehabilitation of soils and continuous monitoring of dam water level overflows to prevent seepage;
- maximisation of the re-use of water;
- installation of under-drains to intercept polluted water in shallow groundwater tables;
- regular assessment of evaporation dams, to check salt levels, and of clean water dams, to prevent the ingress of potential pollution sources;

- lining of dirty water dams to prevent seepage; and

- rehabilitation of pyrite stockpiling areas, which are a potential pollution source.

These measures are intended to substantially reduce the risk of groundwater pollution, ensuring company compliance with national water management policy, while at the same time minimising AngloGold Ashanti's potential liability.

Management of water resources

Responsible management of water resources is crucial for economic development and social and environmental well-being. It is against this need that government formulated national policy through the Water Policy (1997) and Water Act (1998), "to manage the quantity, quality and reliability of the nation's water resources to achieve optimum, long-term, environmentally sustainable social and economic benefit for society from their use".

ENVIRONMENT –

CASE STUDY SOUTH AFRICA

5.9 Complying with stringent new air quality

legislation in South Africa

EN37

South Africa's new National Environmental Management: Air Quality Act 39 of 2004, which repeals the Air Pollution Prevention Act of 1965, came into effect on 11 September 2005 with exclusions of certain sections such as the licensing of listed activities. (Until these sections are included, the relevant sections of the Air Pollution Prevention Act will remain in force.)

The new act introduces a system based on ambient air quality standards and corresponding emission limits to achieve them. The act prescribes air quality standards at national level for ozone, nitrogen dioxide, sulphur dioxide, lead, particulate matter and total suspended solids. Linked to the new Air Quality Bill are two standards set by the South African National Standards (SANS), namely SANS 69 which defines the basic principles of a strategy for ambient air quality management in South Africa, and SANS 1929 which gives limit values for common pollutants.

In order to ensure compliance with new legislation, AngloGold Ashanti established an Air Quality Impact Assessment and Development of Air Quality Management Plan Framework in August 2004. The starting point was the compilation by a task team of an emissions inventory at the company's Vaal River and West Wits operations to examine all air pollutants, including sulphur dioxide (SO

2

), lead (Pb), PM10 (particulate matter smaller than 10 microns which is a health risk), and total suspended solids. The task team, comprising the company's South African environmental departments and business units, in conjunction with an external consultant, prioritised emissions, after which management and monitoring plans were put in place.

Running almost concurrently with the above Air Quality Impact Assessment was an identification and compliance assessment by an external consultant, Airshed, of 'scheduled processes' – those which require permission to operate. Following application, provisional registration certificates were granted in 2005 for two new scheduled processes under the new legislation – Vaal River's East Gold Acid Float (EGAF) plant, for SO

2

emitted in the gold extraction process, and for the assay laboratories at Vaal River and West Wits where lead is used in the analysis of gold samples. The provisional registration was granted for both scheduling processes, with the proviso that compliance is proven within a year. Unlike the previous legislation which imposed certain limits on emissions, the new act legislates in terms of ambient concentrations measured in 10-minute averages, hourly averages and yearly averages.

Management plans are in place to meet these stringent limits during the course of 2006. In the meantime, a management and monitoring programme of harmful emissions was embarked upon in June 2005 to analyse stack emissions from the acid plant and ambient air quality monitoring of PM10, and total suspended solids from dust fall-out. Monitoring equipment was installed at a cost of approximately R600,000. This includes meteorological stations at West Vaal and Vaal River; ambient monitoring stations for SO

2

and PM10 to measure airborne pollutants; and monitoring equipment at Vaal River's acid plant and both operations' assay laboratories.

Modifications had been planned to the calcine stripping tower at a cost of around R2 million, to increase the stripping efficiency of SO

2

in effluent, thereby significantly reducing fugitive emissions. Once completed at the end of 2006, the plant will be re-evaluated to assess the extent of reduction of emissions. Although SO

2

emissions also emanate from the smelt house, furnace and electro-winning process, they are negligible. An analysis of lead oxide emissions from the assay labs shows that emissions are within World Health Organization (WHO) standards. The emissions inventory will be updated annually or when processes change.

ENVIRONMENT –  
CASE STUDY USA

5.10 Using cyanide responsibly at CC&V

EN38

The use of cyanide for the recovery of gold has become an increasingly contentious issue following, on the one hand, a number of high-profile and negative cyanide-related environmental incidents in recent years, and, on the other, increasingly vocal and visible non-governmental organisations (NGOs), such as Greenpeace and Oxfam, calling for the banning of cyanide use.

Cyanide is used around the world to recover low concentrations of gold that could otherwise not be extracted, from its host rock through a leaching step. (See box on the Understanding the Valley Leach Facility at CC&V). Unlike the frequent public contention that the mining industry is a major user of cyanide, globally this industry accounts for only 20% of consumption a year. Approximately 1.4 million tonnes of hydrogen cyanide are produced annually worldwide. The remaining 80% is used in industrial applications including the production of plastics, adhesives, fire retardants, cosmetics, pharmaceuticals, food processing and as an anti-caking additive for table and road salts. (Source: [www.cyanidecode.org](http://www.cyanidecode.org)) AngloGold Ashanti is acutely aware of the potential impact of cyanide on both people and the environment and the importance of the correct management of cyanide. The company was actively involved in the development of the International Cyanide Management Code. AngloGold Ashanti was one of the first signatories to the code in 2005. By being involved in code activities, AngloGold Ashanti maintains its awareness of best industry practice. The Cresson Project will be reviewed by a third-party expert to determine certification under the code within the next three years (as allowed in terms of the code).

Yet the use of cyanide remains an issue of high-profile debate, particularly in North America. The responsible use of cyanide is critical to the viability of many North American operations, CC&V included. The cyanide issue came to the fore in North America in 1992, when major problems were discovered at the Summitville Mine in Colorado, the same state in which CC&V is located. The Summitville Mine was a surface mining operation for gold and silver that used heap leaching with cyanide ore-processing reagents. The site had been permitted (or licensed) in the 1980s in an area of south-western Colorado at a high altitude known for deep snow accumulation. A liner for the leach pad ripped during construction and was never repaired, allowing water containing dilute cyanide and certain metals to leak from the heap-leach pad into an adjoining stream. In response, the company installed a water treatment plant to be used to neutralise the cyanide in the heap and related ponds. In 1992, the Colorado Department of Public Health and Environment (CDPHE) imposed new discharge limits on the operation. The inability to meet these lower standards, in conjunction with other factors led to the abandonment of the site in December 1992. Owing to the magnitude of the problems that remained, and the potential for additional issues related to uncontrolled flows from the site, the State of Colorado requested assistance from the US Environmental Protection Agency (EPA). The adjoining streams historically had naturally occurring low pH and high metal content as evidenced by such names as Alum Creek and Bitter Creek. While the initial cyanide contamination garnered the headlines, it was the release of certain metals through acid rock drainage that posed the biggest long-term issue. The EPA declared the mine a Superfund site, allowing use of the Superfund itself for site clean-up.

## 5.10 Using cyanide responsibly at CC&V

*cont.*

EN39

### ENVIRONMENT – CASE STUDY USA

In 1993, the state, environmental NGOs, and the mining industry co-operated through the development and later enactment of new legislation and regulations designed to significantly strengthen the mining and reclamation requirements with the goal of avoiding a reoccurrence of Summitville. The revised laws are amongst the strongest mining and reclamation laws in the United States. Shortly after enactment, CC&V voluntarily sought re-licensing of those portions of the operations associated with the Valley Leach Facility (VLF) under the new, more stringent requirements and its Cresson Mine became the first heap-leach gold mine licenced in Colorado under the new law.

CC&V remains committed to the responsible use of cyanide and uses the latest containment technologies to assure that cyanide solution does not escape and the zero discharge status of the gold recovery operations is maintained. The VLF and Adsorption, Desorption and Recovery (ADR) facility are the primary zero discharge facilities involving complete containment of dilute cyanide solutions. The VLF features a double- and, where solution is collected in the internal ponding structures, a triple-lined design. Solution collection and detection systems are also included in the design. The ADR was similarly designed with solution collection and detection systems.

In addition to these sophisticated design features, a quality control and quality assurance (QA/QC) programme was instituted to achieve compliance with the stringent 1993 legal requirements. A third party expert consultant was used to rigorously monitor and test materials during construction of the VLF and other solution containing facilities such as the ADR. Prior to activation, all of the monitoring and testing results were compiled and submitted with a certification statement by a registered professional engineer to the Colorado Division of Minerals and Geology (DMG) for review and approval. DMG also conducted frequent inspections throughout the construction process. Only upon acceptance by DMG of the certification reports, could dilute cyanide containing solution be used.

Intensive monitoring conducted since the facility's activation has verified the zero discharge status of the VLF and other facilities. Various prescribed monitoring of critical elements of the VLF and associated facilities as well as down-gradient water quality sampling are conducted at regular intervals. In addition, ground water monitoring wells have been installed around the Cresson Project and are routinely monitored. VLF and ground water monitoring results are submitted to the DMG. Surface water monitoring results are provided to CDPHE monthly. Based upon the results from this monitoring, there is no evidence of leakage or loss of containment from the VLF or associated facilities.

Another potential concern related to facilities such as the VLF is the atmospheric emission of hydrogen cyanide (HCN). CC&V minimises the HCN releases by maintaining the pH of the solution at high levels and the burial of the drip lines used to wet the ore. To address these concerns and others raised by local residents, the Agency for Toxic Substances and Disease Registry (ATSDR) completed a Public Health Assessment of the Cresson Project in 2000. This agency is affiliated with the Centers for Disease Control or CDC. The summary of the completed study states:

“The Agency for Toxic Substances and Disease Registry has concluded that the ambient air emissions associated with Cripple Creek and Victor Mining Company do not pose a threat to human health. The cancer incidence and birth defects in the Victor and Cripple Creek area are not elevated when compared

ENVIRONMENT –  
CASE STUDY USA

**5.10 Using cyanide responsibly at CC&V**

*cont.*

EN40

to those in similar areas. The local drinking water has not been impacted by mining activities. The dust and metals levels in Victor and Cripple Creek do not [represent] a threat to public health. Current hydrogen cyanide levels on-site and in nearby residential areas are not at levels of health concern.”

CC&V believes that its record shows that the Cresson mine represents the state-of-the-art in cyanide solution facility design, construction quality assurance and operation. We continue to strive to improve operations, where possible.

Understanding the Valley Leach Facility at CC&V

At CC&V's Cresson mine, gold is removed from the crushed ore through the same basic process used all over the world. Naturally occurring minerals, including gold and silver, that are exposed on the broken faces of the crushed ore, are dissolved using a dilute sodium cyanide solution. This is called the leaching process. At the Cresson mine, leaching is undertaken out of doors in a valley leach facility (VLF), a valley area with clay and plastic liners upon which the crushed ore is placed for the removal process. The bottom and sides of the VLF are made up of impermeable double and triple liner systems. The crushed ore is placed in layers of about 11 metres and a dilute solution of sodium cyanide (about 100 parts per million) is applied to each successive layer using agricultural-type drip irrigation tubes. As the solution soaks through the ore, it dissolves the gold and silver on the surface of the ore. The so-called 'pregnant' solution is then captured in specifically designed internal ponding structures at the lowest point of the VLF, and pumped into the recovery facility.

There are no external ponds where the solution is held prior to processing; rather the solution is kept in the facility within the pore space of the ore, much as ground water is held in porous bedrock. The VLF therefore has a large excess capacity to cater for significant precipitation events such as rain or snow. A sophisticated and comprehensive water monitoring system is in place to maintain the water balance as the VLF is a zero discharge facility.

Once it leaves the VLF the pregnant solution enters the Adsorption, Desorption and Recovery (ADR) facility where the solution is pumped through steel tanks containing activated carbon (roasted coconut shell) granules which attract (or adsorb) the dissolved gold-cyanide complex. The barren process solution from which the gold has been removed is recirculated to the VLF to start the leaching cycle all over again.

Meanwhile the gold is removed from the carbon, before refining.

Through this process about 70% of the gold is removed. This is because the cyanide process dissolves only that gold or silver which remains on the surface of the rock. To recover all the metals the rock would need to be crushed so finely that the process solution would not flow through it.

The ore on the VLF is not removed once the gold has been recovered from its surface. Rather, new ore is stacked on top of the leached rock.

## ENVIRONMENT

### EN41

#### 5.11 Big Springs reclamation continues

Following the cessation of mining operations AngloGold Ashanti (Nevada) Corporation (AGANC) continues with environmental closure activities at Big Springs in north-eastern Nevada approximately 60 miles north of the town of Elko and 30 miles south of the Idaho border. The mine area is situated within the Independence Mountains on public lands inside the Humboldt-Toiyabee National Forest, which is administered by the US Forest Service (USFS). Elevations range from 7,200 to 9,200 feet above mean sea level (amsl) with average annual rainfall of 25 to 30 inches. Heavy snowfalls and severe winter conditions resulted in the mine operating on a seasonal basis, typically from March/April to October/November. Big Springs had a relatively short operating life from mid-1987 to mid-1993. The roaster system was shut down in 1994.

During the mine's life, gold ore was extracted from 12 relatively small surface mining areas scattered around the site using conventional loader-truck methods. Ground water encountered during mining required dewatering in the northern portion of the mine area. The headwaters of the North Fork of Humboldt River were crossed to access one of the rock storage areas. Ore was crushed at the mine and then transported on highway-legal trucks on a gravel road to the mill site located four miles east of the mine, out of the mountainous terrain, and at a considerably lower elevation, which allowed for year-round milling and leaching operations.

Environmental mitigation measures at Big Springs started early, during the construction phase, when the dirt road along the North Fork of Humboldt River was replaced with a gravel road higher up the hill side outside the riparian corridor to reduce the impact on the resident threatened fish species, the Lahontan cutthroat trout. Other mitigation measures to protect the trout were: the construction of a five-mile fence to protect the riparian corridor (the narrow strips of land along the banks of the river) along the North Fork of the Humboldt River from livestock; structural improvements to the channel; riparian plantings, and numerous sediment control measures. By 1992, these collective mitigation measures contributed to the 'good' classification of the north fork of the Humboldt River and were recognised in the US Fish and Wildlife Service (USFWS) 1995 Recovery Plan for the cutthroat trout. This classification remains today, as chronicled in a report published by the Nevada Department of Wildlife in December 2004.

In 1992, certain constituent concentrations appeared to be increasing in the North Fork of the Humboldt River and its tributaries within and near the mine areas. This change in water quality was attributed to above normal rainfall after a prolonged drought. As a precautionary measure, a third party expert consulting firm was retained to determine if the changes were exclusively attributable to the flushing of dissolved salts that had accumulated during the drought years. Rigorous water quality sampling and geochemical testing was conducted to better understand the natural processes that might be contributing to the change. Considerable time, effort, and expense were involved, but it was determined that cover systems for the rock storage areas and a series of diversion channels to capture surface run-off were warranted.

Cover system and diversion installation started in 1995 as part of mine closure and reclamation and continued on a seasonal basis to the end of 1997. Improvements and repairs to the diversions continued through 2000. Since that time, little work has been required to operate and maintain these systems.



### **5.11 Big Springs reclamation continues**

*cont.*

ENVIRONMENT –  
CASE STUDY USA  
EN42

Simultaneous with this reclamation work, seven of the 12 surface mines were partially backfilled. Three of the surface mines had been backfilled during active mining operations. The partially backfilled surface mines were covered with soil and revegetated. The two remaining surface mines contain water, one of which supports a fish population.

In August and September 2005, the company conducted field reviews of the mine areas with government agency representatives. During these site visits, a good cover of vegetation was observed on all of the reclaimed areas. Similarly, the three large sedimentation ponds and fill across the north fork of the river were no longer apparent after being removed and creatively contoured to blend with the surrounding terrain. Likewise, the haul road on the steepest terrain was determined to have been successfully recontoured and stabilised with vegetation.

Water quality improvements have also been observed at selected locations since the covers and diversions were completed and the planted vegetation started to develop. Finally, ongoing aquatic studies involving fish and aquatic insects have demonstrated that no long-term adverse effects have resulted from the mining activities.

AngloGold Ashanti will continue to work with the agencies to monitor water quality and evaluate the effectiveness of the mine area reclamation and closure strategies. The company is implementing a new permit that calls for continued monitoring, reporting, and evaluation of water quality within and near the mine area for the next five years. The valuable experience in reclamation gained at Big Springs will stand the AngloGold Ashanti team in good stead for future planned closures.

ENVIRONMENT

6. Objectives for 2006

EN43

- Achieve ISO14001 certification at all operating mines by the end of December 2006.
- Develop a series of environmental guidelines to direct and continue to improve environmental performance across the company.
- Establish targets for a reduction in water use, energy consumption and carbon emissions.
- Continue to improve environmental data gathering systems in accordance with GRI reporting requirements.
- Formally integrate biodiversity considerations in the environmental management programmes of the company.
- Participate in the ICMM's mine closure project and review the company's processes on the basis of emerging good practice.
- Maintain the environmental incident reporting system.

1. Introduction

C1

2. Business principle

C1

3. Key indicators

C2

4. Review 2005

C3

5. Case studies

C19

5.1 Making a difference

– Wongatha Wonganarra Aboriginal Corporation C20

5.2 Capacity building at Ayanfuri mine C21

5.3 Hand-in-Hand programme provides alternative livelihoods at Iduapriem in Ghana C23

5.4 The AngloGold Ashanti Fund and Trust

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5.7 CC&V an integral part of its community C31

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COMMUNITY

contents

Community

We strive to form partnerships with host communities, sharing their environments, traditions and values.

We want communities to be better off for AngloGold Ashanti having been there. We are committed to working in an environmentally friendly way.

OUR VALUES:

AngloGold Ashanti's community practices are guided by the group's business principle, AngloGold Ashanti in the community (see below).

Although it was the intention to audit the corporate social investment expenditure this year, it has not been possible to do so as there are insufficient systems in place at an operational level. It remains the company's intention to provide assurance of this expenditure in the future and, in time, to provide assurance on the other key indicators.

Once again the company has reported in accordance with the Global Reporting Initiative (GRI) guidelines (*see page 14 for the GRI index*).

## 2. Business principle

AngloGold Ashanti and the community

•

AngloGold Ashanti's aim is to have a **positive impact on the people, cultures and communities** in which it operates. Accordingly, AngloGold Ashanti will be respectful of local and indigenous people, their values, traditions, culture and the environment.

•

We will strive to ensure that surrounding **communities are informed** timeously of, and where possible, are involved in developments which affect them, throughout the lifecycle of our operations.

•

We will undertake **social investment initiatives** in the areas of need where we can make a practical and meaningful contribution. In particular, we will contribute to those areas of education and health care which are relevant to our business activities, and those most likely to be sustainable once our operations have come to a conclusion in that community.

•

The company will encourage its employees to make themselves available for **participatory and leadership roles in the community**.

•

We will seek to acquire and use **land in a way which promotes the broadest possible consensus** among interested people. Where involuntary resettlement is unavoidable, we will abide by appropriate guidelines for resettlement, where they exist, and in any event will work with the local communities to develop workable plans for any resettlement which may be necessary.

•

We will strive to **contribute to the sustainable economic development of host communities** through procurement activities; the contribution of redundant assets to the community; assistance in the establishment and growth of small- to medium-sized sustainable enterprises; and the outsourcing of goods and services from local vendors where appropriate.

## COMMUNITY

### 1. Introduction

C1

- A community and social development management system is being developed and rolled out at all operations, following the launch of the socio-economic toolbox in 2004. The management system, which will take a further 18 to 24 months to fully develop and implement, deals with the practical implementation of the business principle at an operational level.

- AngloGold Ashanti achieved the conversion of its mineral rights into 'new order' rights in line with the South African Mineral and Petroleum Resources Development Act (MPRDA) of 2002. A key component conversion application process was the development of Social and Labour Plans for the South African operations, based on the requirements of the Department of Minerals and Energy's (DME) Mining Charter Scorecard.

- AngloGold Ashanti adopted the International Finance Corporation's (IFC) Resettlement Policies, Guidelines and Standards in September 2004 and all new resettlements undertaken will be conducted in accordance with these. No new involuntary resettlements were undertaken in 2005.

- AngloGold Ashanti has contributed to the sustainable economic development of host communities in a number of ways:

- Enterprise development. Links are being sought to more closely tie procurement spend to local economic development at all operations, with a particular focus on the African assets. In the South Africa region the Small and Medium Enterprise Development Initiative (SMEDI) continues to identify people with ability and potential, and enters into a partnership with them to provide education, training and funding with the long-term aim of creating sustainable business. The raising of venture capital is managed through Masakhisane, which was established in 1998, the year of AngloGold's formation, with an initial capital of R10 million (then worth approximately \$1.6 million). During 2005, SMEDI was involved in setting up 14 small businesses, with an average annual turnover at year-end of R45 million. To date, jobs have been created for 1,205 people. Similar initiatives such as the alternative livelihoods programmes are being developed or are in place at all operations in less economically developed countries, such as Ghana, Guinea, Tanzania and Mali.
- A group strategy to deal with the management of artisanal mining is being put in place specifically drawing on the lessons learnt from Geita.

#### COMMUNITY

#### 3. Key indicators

C2

COMMUNITY

4. Review 2005

C3

A number of targets were set in relation to the community-related activities of the group in the Report to Society 2004.

**Community**

**Objectives for 2005**

**Performance in 2005**

Further implementation and monitoring of social

Ongoing development and roll out of Community and Social Development development initiatives in line with business

Management System.

principles.

Development of common basis for reporting

System put in place and being refined.

in line with principles.

Addressing the issues arising from small scale

Comprehensive review of issues and multi-stakeholder pilot project put in and artisanal mining including human rights

place to manage this issue. Involvement and a seat taken on the Strategic concerns. Management Advisory Group of the World Bank's Community and Small Scale Mining (CASM) Group. Company security arrangements in process of being aligned to the Voluntary Principles on Security and Human Rights.

Increasing emphasis on economic development

Alternative livelihood programmes are being developed or are in place at all activities (including setting of targets).

operations in less economically developed countries. Targets linking

procurement to local economic development and black economic

empowerment (BEE) is in place in South Africa. Targets to be developed and rolled out for the rest of Africa in 2006/2007.

Ensuring community and stakeholder engagement

While all operations have an engagement strategy a decision has been taken processes are in place at all the operations.

to adopt group-wide management guidelines and systems to ensure a common understanding of the company's approach across the group.

Capacity-building, support and the development

Comprehensive Community and Social Development Management Systems are of practical tools for practitioners at site level.

in the process of being rolled out.

## Structure and governance

Community-related matters are addressed at Board level, under the auspices of the safety, health and sustainable development committee which has within its remit the evaluation of social, economic, environmental and health impacts of the company's operations on local communities. The committee comprises four non-executive directors – Bill Nairn (chairman), Dr James Motlatsi, Dr Sam Jonah and Simon Thompson – as well as two executive directors – Bobby Godsell (CEO) and Neville Nicolau (COO Africa).

In South Africa, community and social development is managed under the auspices of the Sustainable Development Unit which was set up during the year. The company's South African corporate social investment programme is overseen by the AngloGold Ashanti Fund and Trust. The fund is managed by Tshikululu Social Investments (TSI), a non-profit organisation, which manages a number of other company funds. The fund is directed by a Board of Trustees which in turn is supported by local area committees at the operations, which are close to and can be responsive to the more immediate needs of the community. Outside of South Africa, community issues are managed as an integral part of operations, frequently with dedicated community relations and social development personnel in place, and often in association with non-governmental organisations (NGOs).

The discussion that follows reports on the company's community-related performance in line with the company's business principles (in orange below).

***AngloGold Ashanti's aim is to have a positive impact on the people, cultures and communities in which it operates. Accordingly, AngloGold Ashanti will be respectful of local and indigenous people, their values, traditions, culture and the environment***

Exploration and mining activities frequently occur in remote areas or regions where there is very little other economic activity and, because of this, their relative impact is often heightened. These impacts need to be considered at the exploration stage, right through to operation and eventual closure. A range of potential impacts and mitigating measures are identified during the Environmental Impact Assessment (EIA), and mitigating measures are then incorporated into the Environmental Management Plans (EMPs) over the operation's life-of-mine.

In addition to the guidance provided by the company's values and business principles, the group's relationships with communities are often guided by operation or region-specific community policies.

COMMUNITY

C4

For example, many legal requirements exist in relation to minimum standards for exploration and mining activities in Australia and are reflected in standard operating practices. Sunrise Dam's Community Policy was reviewed in 2005 and a new Community and Stakeholder Engagement Procedure was put in place whereby all community projects and requests are evaluated by a small group of managers and recommendations are made to the management team.

## COMMUNITY

### C5

#### Engagement with communities in Australia

AngloGold Ashanti's community policy is embodied within the region's Health, Safety, Environment and Community Policy. This policy states that long-term relationships and partnerships will be fostered with the communities in which it operates, through mutual understanding, co-operation and respect. The company's social investment initiatives aim to deliver meaningful and lasting benefits to employees, the community and key stakeholders.

Many legal requirements exist that dictate minimum standards for exploration and mining activities and these are reflected in standard operating practices. A number of programmes and practices are in place, namely:

- Cross-cultural training for all new employees and contractors as part of the induction process.
- Project and/or area specific induction for field and mine site staff highlighting safety, environmental and community aspects related to operational or exploration activity.
- Field staff are trained to recognise aboriginal archaeological sites, flora, fauna and geomorphological features that may be of cultural significance.
- Ethnographic and anthropological consultations are conducted with indigenous people prior to the commencement of significant exploration or mining activities to mitigate any damage to sites of special significance.
- Compliance with voluntary codes of practice for the exploration industry.
- Assessment of local communities' capabilities to identify opportunities for the supply of services.



The United States too, is a highly regulated environment where the legal regime covers, among others, indigenous people, archaeological and cultural resources. Permitting procedures for any new developments or expansions are thus rigorous.

The South African socio-political landscape is governed by a range of legislation; the most critical to the mining sector is the Mineral and Petroleum Resources Development Act (MPRDA) which requires that all mining operations submit and adhere to a Social and Labour Plan as a prerequisite to the granting of new order mining rights. AngloGold Ashanti was granted these conversions in respect of all of its operations in August 2005. (*See case study on page E10: AngloGold Ashanti granted new order mining rights.*)

Elsewhere in Africa, region-specific policies are in place. In Ghana, for example, guidelines for community relations have been set by the local Environmental Protection Agency (EPA) and the Mines Inspectors' Department. Close contact is maintained with the chiefs and traditional authorities, including paying homage - particularly to the Asantehene, the king of the Asante - at significant events. Similarly, respectful relationships are maintained with the District Heads in Ghana and Tanzania and the Prefecture in Siguiri and Mali.

***We will strive to ensure that surrounding communities are informed timeously of, and where possible, are involved in developments which affect them, throughout the lifecycle of our operations***

The necessity for, and the process of, informing communities timeously of any developments and maintaining their involvement throughout the operational life cycle are enshrined in the law of many of the countries in which the group operates. This communication becomes especially important as operations, or portions of operations, reach the end of their economic lives.

At Bibiani in Ghana, for example, the mine engages regularly with the local District Assembly Committee and has taken steps to inform community members about its activities through the local radio station and at periodic community engagement meetings. Based on current estimates, the mine is due to close in 2007.

At Siguiri in Guinea, stakeholder engagement takes place at many levels, from local community members (whose main concerns relate to environmental issues and job creation) to the Prefecture and various district committees, to the Representatives of Elders, to national government. Community social investment issues are dealt with by the Prefectural Council for the Development of Siguiri (PCDS), which is overseen by an international NGO, the Centre Canadien d'étude et de co-opération internationale (CECI).

Stakeholder identification and engagement is formalised under the National Environmental Policy Act in the United States when public lands or federal permits or approvals are involved. Other community outreach processes include local land use planning and state permit hearing processes. The life-of-mine plans are well documented and communicated to stakeholders on a regular basis.

## COMMUNITY

### C6

Community relations  
policy – Obuasi

The Obuasi community relations  
policy takes cognisance of the  
group's business principles and  
includes:

- forging and enhancing strong  
partnerships between the com-  
pany and its stakeholders,  
including AngloGold Ashanti  
employees, their families and

dependants and the immediate communities and society in general;

- 

undertaking social investment initiatives in the communities and other areas where we the company can make short- and long-term meaningful contributions in the socio-economic lives of the people;

- 

regular and continuous consultation and engagement to achieve peaceful and harmonious co-existence with the communities, governmental agencies and the civil society in general; and

- 

promoting capacity-building and alternative livelihood programmes/provision of assistance in education, agriculture, health and sanitation.

In South Africa, community involvement and interaction with local, regional and national authorities is extensive and ongoing and forms an integral part of the company's Social and Labour Plans and other commitments made in terms of the MPRDA. Regular interaction occurs with community stakeholders through local chambers of business, the AngloGold Ashanti Fund local area committees and various community and charity forums. An area of focus during the year has been the incorporation of mine villages into local townships and the opportunities for development presented by the FIFA 2010 (football) bid. Issues that cannot be resolved at the established committee level are elevated to the mayoral committee for resolution.

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 and Argentina. Apart from a call centre for the registration of community complaints and requests, communities are kept informed about operational developments, particularly life-of-mine plans, through frequent meetings and bulletins. In Brazil, 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.

At Cerro Vanguardia in Argentina, the company engages regularly with local authorities, several social and sporting organisations, schools and universities. Local communities are kept informed through periodic meetings. The company participates in forums promoted by the local towns, such as local development agencies. A communication plan addressing mine closure issues has been developed and will be implemented in the future.

Extensive stakeholder engagement structures exist at operations in Mali, Tanzania and Namibia. A joint Public Consultation and Disclosure Plan (PCDP) was developed for the Sadiola and Yatela mines in Mali and has proved to be a useful tool in engaging with stakeholders. An all-inclusive stakeholder committee is the main vehicle for stakeholder consultation and grievance resolution. The committee includes both traditional village leaders, as well as local and national government officials.

Navachab recently re-examined its stakeholder engagement processes. An interested and affected parties' meeting is held on an annual basis, with a mine tour, presentations and an opportunity for discussion provided. Issues discussed include environmental impact issues, sustainable development and mine closure. The mine also plays an active role and has representation on a number of local committees and the town council.

In Ghana, monthly meetings are held with consultative committees generally comprising the traditional chiefs or head of the community, community elders, a female community leader, a youth representative, representatives from NGOs and representatives from the district

#### COMMUNITY

##### C7

Communicating with the community at Obuasi

Interactions with communities within the Obuasi Mine Concession are managed through regularly scheduled monthly consultative meetings. The process involves the formation of consultative committees comprising 10 'opinion leaders' from the local community, namely the chief, two of his

traditional stool elders, the youth organiser and secretary, two women representatives and three representatives of the local government administration (the assembly member of the electoral area and the unit committee chairman and secretary from the local community).

There are two ways of communicating with government, through the Ghana Chamber of Mines or direct engagement with governmental departments. In the case of the latter, the company regularly meets with the office of the Minister of Mines, Science and Environment; the Environmental Protection Agency; the Minerals Commission; the Land Valuation Board; and other local government agencies.

There are agreed mechanisms in place for the resolution of disputes.

authority. At Iduapriem a Stakeholders Advisory Group is currently being set up to moderate between the mine and communities on issues of conflict which have not been resolved at the Community Committee level.

In Australia, AngloGold Ashanti has developed formal communication strategies for managing and consulting with key stakeholders. Sunrise Dam is an active member of the Laverton shire and regularly hosts shire council meetings at the mine site. For aboriginal lands, annual community meetings are held to discuss current and planned mining activities and an annual report is presented to the community. Sunrise Dam also participates in annual state-wide Mine Open Days, which provide the opportunity for local and regional communities to visit the operations.

At the Boddington project, stakeholder engagement and community consultation has continued through monthly update newsletters, establishment of a free call line, expansion plan updates on the website and community information workshops in anticipation of the recommencement of operations at some stage in the future.

*We will undertake social investment initiatives in the areas of need where we can make a practical and meaningful contribution. In particular, we will contribute to those areas of education and health care which are relevant to our business activities and those most likely to be sustainable once our operations have come to a conclusion in that community*

In total, the group spent \$8,752,407 on corporate social investment expenditure in 2005. Corporate social investment expenditure is defined as the voluntary investment of funds in the broader community, through programmes, which span a range of development and maintenance activities seeking to complement the work of government, non-government (NGO) and community-based organisations (CBOs), where the target beneficiaries are external to the company. Corporate social investment specifically excludes those activities which the company is legally obliged to undertake or where the purpose is exclusively commercial with no significant public/social good, such as purely marketing, employee benefits or public relations activities

In Australia, a Community and Stakeholder Engagement Procedure has been developed to evaluate all community projects and requests for assistance. A range of projects were supported during the year including the development and publication of the 30-year history of the Wongatha Wonganarra Aboriginal Corporation. The history of this organisation has been recorded in a book entitled Willing People, and was launched by the Minister for Indigenous Affairs in August 2005. *(See case study on page C20: Making a difference – Wongatha Wonganarra Aboriginal Corporation.)* A long-time supporter of the Royal Flying Doctor initiative, the company is sponsoring the publication of the Royal Flying Doctor Service Safety and Survival Handbook.

The group's social investment initiatives in southern Africa are primarily undertaken by the AngloGold Ashanti Fund. In 2005, more than R18 million was distributed to a wide range of COMMUNITY

C8

**Corporate social investment expenditure 2005 (\$)**

**Argentina**

Cerro Vanguardia

267,000

Total

267,000

**Australia**

Sunrise Dam

88,000

Total

88,000

**Brazil**

Serra Grande

137,000

AngloGold Ashanti Mineração

617,000

Total

754,000

**Ghana**

Iduapriem

357,535

Bibiani

96,506

Obuasi

266,206

Corporate office - Ghana

25,070

Total

745,317

**Guinea**

Siguiri

552,021

Total

552,021

**Mali**

Sadiola and Yatela

627,079

Morila

241,533

Total

868,612

**Namibia**

Navachab

470,000

Total

470,000

**South Africa**

AngloGold Ashanti Fund

3,963,000

and other corporate donations

Donations by operations

187,254

Total

4,150,254

**Tanzania**

Geita

680,336

Total

680,336

**USA**

CC&V  
172,000  
Total  
172,000

**Total:**  
**8,752,407**

*\* The figure for Siguirí includes the amount paid to the Prefectural Council for the Development of Siguirí as part of a legally binding 0.4% revenue sharing agreement.*

projects. The fund is managed by Tshikululu Social Investments (TSI), which is a specialist corporate donor support agency. The trustees of the fund consider proposals against a set of criteria, including the sector (education, health, arts and culture) into which a particular project falls, the location of the beneficiaries and the sustainability of the venture. The fund concentrates on education (60% in 2005) when support has great potential to make a real difference to the lives of individuals and their communities. Other areas to which the fund gives priority are those of welfare and development, HIV/AIDS, health and skills training and the development of business opportunities. Another guiding principle is to focus on the areas where the company has operations and the regions from which it draws large numbers of employees (and where the families of many of those employees live). (*See case study on page C25: The AngloGold Ashanti Fund and Trust – contributing to sustainable projects in Southern Africa.*)

Corporate social investment takes place at two levels in the United States. At the CC&V level, there are two funds for social investment – the first is administered by the Community Affairs Manager through the Community Affairs Committee, which makes recommendations on donation requests. The second is related to larger, community-related projects, aimed at creating sustainable projects for the future. Decisions on funding are made by the Community Affairs Manager, with the direction of the Vice President and senior management. At the second, Denver office level, the regional funds for social investment are directed at areas beyond the local area surrounding CC&V in Colorado. Donations are aimed at supporting institutions and causes aimed at creating a social and political atmosphere that will allow the company to operate within Colorado.

In Brazil and Argentina, social investment initiatives are undertaken in communities surrounding current and past operations. The main areas of involvement are education, community development, health care, socio-economic development, sports and environment.

A socio-economic review of the area surrounding Morila mine undertaken by a local NGO ASERNI (Association d'Etude et de Mise en Valeurs des Ressources Naturelles et des Institutions) formed the basis for the establishment of a development foundation at the Morila mine in Mali, with a founding donation of \$500,000 from Morila in 2002. The foundation will manage long-term sustainable development projects aimed at preparing communities for mine closure.

At Sadiola and Yatela in Mali, social investment is channelled through the programme implemented as a result of the Integrated Development Action Plan (IDAP). The funds set aside as part of this process are managed by an association which is independent of the company and includes representation from the stakeholder committee, the company and the IFC. The company has budgeted \$508,000 to fund the association and its projects over a three-year period.

Social investment initiatives in Namibia continue to focus on education, the development of agricultural projects and local economic development initiatives.

In Ghana and Guinea, social investment decisions are based on both need and the impact of the operation on the community (*see pages C14 and C15*).

COMMUNITY

C9



***The company will encourage its employees to make themselves available for participatory and leadership roles in community activities***

A long-standing volunteer programme exists at CC&V in the USA, where employees are encouraged to be involved in the community through volunteer service. Employees are rewarded with one hour of paid time off for each three hours volunteered for community groups, and one hour off for each two hours volunteered for governmental positions, such as the City Council and Planning Commission. CC&V volunteers participate in activities ranging from Little League football coaching to assisting in local nursing homes, from volunteers to the fire departments to blood donation drives. Since inception CC&V employees have donated 2,500 hours of time per annum. In addition, company management at CC&V and the Denver office serve as volunteers on the boards of a number of regional or state-wide institutions and trade organisations.

In June 2005, Geita mine in Tanzania once again undertook the Geita Gold Mine Kilimanjaro Challenge Climb Against HIV/AIDS, with employees, suppliers, contractors and others climbing the highest mountain in Africa to raise funds for and create awareness of people with HIV/AIDS. The Geita orphanage was one of the primary beneficiaries.

In South Africa, a 'give-as-you-earn' and matched volunteerism programme – called Hearts of Gold – was initiated at the corporate office in 2004. About 60 employees participated in the programme in 2005, with close on R250,000 having been distributed as a result. (*See Report to Society 2004.*)

In Brazil, employees are encouraged to participate in the programme of volunteer work known as 'Holding Hands'. (*See Report to Society 2004.*) Currently several activities are in place including: computer and chess classes for needy children; English and literature classes for adults; and campaigns for the needy. Close on 100 hours in volunteer time was donated during the year.

The Australia region has policies and practices that encourage employees to participate in leadership roles in their local communities. This remains a challenge though owing to the fly-in, fly-out employment arrangements. Nonetheless, employees actively supported Red Nose Day, Shave for a Cure (Leukaemia Foundation), the Princess Margaret Hospital, the Royal Flying Doctor Service and the Red Cross Blood Bank on a state-wide basis. Local support continued to focus on the Laverton Fire and Emergencies Services Group, the Lake Carey Catchment Management Group, Asian Rhino project and the Perth Zoo.

Management and employees at the Ghanaian operations serve on a wide range of boards and advisory bodies, including the Kumasi Polytechnic, the Presidential Advisory Commission on Health, the Board of Governors of the University of Mines and Technology at Tarkwa and various other schools, churches/mosques, youth organisations and sporting clubs. At Iduapriem, an outreach team is being formed for interested employees to voluntarily teach mathematics, general science and civic education in schools in the communities, most of which lack qualified teachers.

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*We will seek to acquire and use land in a way which promotes the broadest possible consensus among interested people. Where involuntary resettlement is unavoidable, we will abide by appropriate guidelines for resettlement, where they exist, and in any event will work with the local communities to develop workable plans for any resettlement which may be necessary*

In 2004, the board committee on safety, health and sustainable development ratified the International Finance Corporation's (IFC) Resettlement Policies, Guidelines and Standards on Involuntary Resettlement for all resettlements undertaken in future. The policy is intended for all managed operations, including joint ventures, and will be reviewed as necessary.

While no new involuntary resettlements have taken place in Ghana in the past two years, the Obuasi mine has paid (to date) more than €700 million (approximately \$78,000) for the properties, farmland and crops affected in Obuasi and surrounding communities. The mine pays monetary compensation based on guidelines provided by the Ministry of Mines and the Land Valuation Board.

At Iduapriem, most of the farmers due for compensation for loss of cropland due to the extension of a rock dump have been paid, except the 35-member Concerned Farmers Association. The matter is before the courts for settlement at the instance of the farmers. Local consultants have been employed to streamline and expedite the payment of compensation at the mine. A Stakeholders Advisory Committee, headed by an independent chairperson, has been established. Finding a resolution to these issues is a core focus of management and the process is being overseen by the IFC who are a joint venture partner at the mine.

Resettlement has been carried out in three communities around AngloGold Ashanti Mineração in Brazil over the past three years with the aim of moving those families living around tailings dams or those within perceived risk areas. As this process commenced prior to the company adopting the IFC policy, the process is being managed in terms of Brazilian legislation.

Negotiations take place with residents in terms of the following procedure:

- three separate real estate evaluations are undertaken to determine the market value of the property;
- financing of plots of land at reasonable prices and assistance in purchasing building materials so that the residents can build new houses; or
- donation of plots at locations agreed with the residents, with the company undertaking the construction of the house.

Families living in areas adjacent to the tailings dam at Mina D'Água have been resettled. The resettlement of 22 families who lived in the area below the tailings dam at Galo has largely been completed, with only one family who, regardless of the risks involved, are reluctant to move. Negotiations continue in an effort to find an appropriate alternative. A total of 23 families living in risk areas sold by the company at least 50 years ago (at Vista Alegre) are being resettled. Indemnification of the company or donation of plots and construction of houses at a single location has been negotiated with the families. There are still three families to be reallocated.

*We will strive to contribute to the sustainable economic development of host communities through procurement activities; the contribution of redundant assets to the community; assistance in the establishment and growth of small- to medium-sized sustainable enterprises; and the outsourcing of goods and services from local vendors where appropriate*

A fundamental philosophy of the group is that its operations and activities should contribute toward the long-term sustainable development of host communities. This is particularly challenging for sometimes short-lived mining operations or exploration projects, particularly  
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when there is a short window of opportunity to make an impact. A number of ways in which this can be achieved, however, are:

- support through local procurement activities;
- the contribution of redundant assets to the community;
- assistance with the establishment and development of small- to medium-sized sustainable enterprises; and
- the outsourcing of the provision of goods and services to local vendors where appropriate. Cerro Vanguardia in Argentina contributes to the development of the nearby town of San Julian through the creation and support of a Local Development Agency. In Brazil, the company supports a Dressmakers' Co-operative (*see Report to Society 2004*) and the manufacture of brooms from recycled materials (*see box below*) amongst other initiatives. The local Development Agency, founded in 1995, continued to attract development to the Nova Lima area. (*See Report to Society 2004.*) Preference is being given to recruiting people living in the Sabará, Nova Lima, Raposos and Crixás regions and other towns adjacent to operations. Contractors have also been instructed to make use of local labour during the mine and plant expansion phase.

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Use of recycled material in sustainable development initiatives

Handicraft and broom manufacturing co-operatives implemented in the town of Raposos, in the state of Minas Gerais in Brazil, 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 co-operative of retired community members and local entrepreneurs, the local authorities of Raposos and AngloGold Ashanti, through the use of resources made available by fiscal incentives.

These co-operatives produce a number of handicraft items such as embroidery, woodwork, ceramics and porcelain. Local craftsmen also supply material for broomsticks and bases. Plastic bottles for soft drinks, usually set aside as litter, are recycled to make bristles for the brooms. Brooms are sold in neighbouring towns close to company mining operations. 450 brooms were produced in 2005.

“We expected the broom factory to be principally staffed by former company employees, now retired,” says Marivan Santos, an AngloGold Ashanti social worker, “but a number of wives and children of these former employees have also joined, making a very special contribution to the project.”

There are 60 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,” explains Marcelo Lopes, Development Manager.

AngloGold Ashanti has made available one of its unused company buildings (currently being renovated) for the project.

“My main focus is to market the brooms”, comments retiree João Batista do Nascimento, Sales Manager for the Broom Producing Co-operative. “Our principal markets to date have been companies working on road repairs and asphaltting, and the local authorities,” he says, “but we continue making contact with other possible customers elsewhere requiring brooms in greater quantities.”

In South Africa, AngloGold Ashanti has played a role in stimulating economic growth by developing small business enterprises. The Small and Medium Enterprise Development Initiative (SMEDI) identifies people, mainly historically disadvantaged South Africans who have ability or potential, and enters into a partnership with them to provide education, capacity-building and funding with the long-term aim of creating self-sustaining businesses. The raising of venture capital is provided through Masakhisane, which was set up with initial capital of \$1 million in 1998 (about \$1:R7 at the time). Particular efforts have been made to promote the company's black economic empowerment (BEE) expenditure targets and as a result, the company's BEE expenditure in 2005 rose to about R1 billion.

In 2005, SMEDI assisted 14 new businesses, investing some R462,500. 60 new jobs were created. SMEDI's total portfolio includes 35 active small and medium enterprises (SMEs) with investments totalling R1.35 million from Masakhisane. In total, 311 people are employed at these businesses. Since its establishment 1,205 jobs have been created.

In Australia, the company has continued to provide opportunities to local indigenous communities to provide services and encourages contractors to do the same. A Supply Day initiative was launched in 2004 and was continued in 2005. This initiative targets local indigenous communities with the objective of providing a forum to identify opportunities to tender on supplies and services. The company also works closely with Indigenous People in Mining, an industry and government network that fosters opportunities for aboriginal people within the mining industry.

At Obuasi in Ghana, about 12% of the company's material requirements are sourced from local businesses. Transportation of mine material is handled by local private companies, as is the transportation of workers to and from work. Foodstuff and drinks procured for employees' club houses and canteens are sourced from locals. *(See box on page C15: Local economic development in Ghana and Guinea.)*

A total of 32 polytechnic and technical school graduates (40% locals) were admitted to the Obuasi apprenticeship programme. Most of them are undergoing a one-year practical training programme in plumbing, welding, electrical, mechanical and electronic engineering. The four-year old programme has benefited more than 200 people, most of whom come from the communities around Obuasi Municipality. Practical training is given to the beneficiaries. In addition, the mine provides free accommodation and allowances to beneficiaries while in training. To date about \$54,000 has been spent on the programme which is over and above the social investment figure of \$266,206. As part of its social programme to assist in the development of education in the Obuasi Municipality, the Obuasi mine also donated 12 computers and accessories to the Len Clay School (valued at approximately \$4,500).

The 'Hand-in-Hand' Programme at Iduapriem *(see case study on page C23: Hand-in-Hand programme provides alternative livelihoods at Iduapriem in Ghana)* is geared towards the enhancement of economic and social conditions of the communities through capacity-building, the provision of micro-credit finance and the establishment of economic activities such as agriculture, animal husbandry and other small scale economic activities. More than

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Local economic development in Ghana and Guinea

Local economic development and the development of alternative livelihoods is a key focus of the company's corporate social responsibility programme in West Africa.

A range of possibilities is being evaluated. For example, management at the regional level are looking at the possibility of cultivating oil palm, rubber and jethropha (bio-diesel plant) on a commercial scale to generate employment in surrounding communities.

Bibiani mine is developing a 50 hectare oil palm plantation and local communities are being encouraged to join this scheme. The mine continues to support the three bakeries it helped set up. The profits from the bakeries are used to repay the company for the ovens and other materials provided by the company so that other members of the community can benefit from the scheme in the future. 17 farmers were assisted in developing 55 acres of maize on land acquired by the company. In addition, vegetables are grown year-round because of the irrigation facilities provided by the company. Harvested vegetables are sold to the company's canteen. Other materials needed by the company's operations are sourced from local vendors to help develop local industries.

To provide alternative livelihood jobs for young men and women, the Bibiani mine has continued to finance two community farms it established five years ago at a cost of \$21,710. In 2005, inputs from the mine included irrigation and credit facilities. An estimated 300 youths have benefited from this community job creation initiative. Crops cultivated on such farms include pawpaw, lettuce, passion fruits, okra, tomatoes and maize.

Iduapriem's 'Hand-in-Hand' programme (*See case study on page C23: Hand-in-Hand programme provides alternative livelihoods at Iduapriem in Ghana*) involves:

- the formation and training of business groups;
- entrepreneurial skills training;
- the provision of micro-credit using a revolving micro-credit scheme;
- agriculture/animal husbandry and livestock training; and
- technical skills training in food processing and value adding technologies.

A total of 356 participants have been trained in economic empowerment activities during 2005.

The specific projects involved fish farming; animal rearing (pigs, poultry, goats and sheep); vegetable growing; food gardening; soap and pomade making; and oil palm farming. Of the 503 people trained in credit management, 317 have been given loans valued at €171,400,000.

The company has also sub-contracted the transportation of mining consumables and employees to and from work to local transporters. About 7% of all the mine's material requirements come from local suppliers.

350 people have benefited from the programme, at a cost to the company of \$268,000. More than 100 people are involved in supplying hardware, stationery, wood products, and services during the year, at a cost to the company of approximately \$290,000.

The CC&V mine in the USA is not situated in a 'developing region' and, therefore, the company's economic support is aimed at supporting existing local businesses. The mine is located in the vicinity of two towns: Cripple Creek and Victor. The town of Cripple Creek has a vibrant economy based on gambling and is not dependent on CC&V. The town of Victor, on the other hand, requires the support of the mine which is provided in a number of ways: including purchase of water from mining operations; leasing property and office space; support for the local Lowell Thomas Museum, and the like.

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Local economic development in Ghana and Guinea

*cont.*

The Siguiri mine is encouraging the cultivation of cassava and cashews to stimulate the local economy. As part of Siguiri's support for urban renewal and development in the region over and above the social investment figure of \$55,204 the company further funded two infrastructural projects. The company funded the maintenance of the Siguiri Airstrip at a cost of \$35,000. The airstrip is the only air transport facility in the district and it serves scores of business people, miners and politicians who visit the district. The reconstruction of the 22 km road from Siguiri to Koron, which started early March this year, was completed in August. Financed by the mine at a total cost of \$345,000, the road is one of the major commercial highways in the Siguiri District. Used by the people in the district as well as Siguiri and other businesses in the area and beyond, the road enables commuters to travel comfortably for shorter periods of time. The new road has also drastically reduced vehicle accidents.

The Siguiri district now has its first private radio station, through a \$120,000 funding from the mine which was commissioned in April 2005. More than 300,000 people listen to the broadcast programmes as the radio station's transmission goes beyond the district. The emphasis of Radio Locale's programmes is principally on health and sanitation, road safety, agriculture, small business, folk literature/music and Islamic evangelisation. The minority Christian population uses the radio on Sundays. Special educational programmes in French are run during the day for students. Siguiri has also been using the radio to inform the communities of its corporate social responsibility, community relations and recruitment.

Civil work on the expansion and modernisation of the Siguiri Sports Stadium is progressing. The mine is financing the project through its contribution to the Siguiri Development Committee and, to date, \$100,000 has been made available.

A five-man outreach team headed by the company's Medical Officer is conducting a comprehensive anti-cholera education programme targeting the 350,000 people, including employees, resident in the catchment area. (*See case study on page RH18: Anti-cholera campaign at Siguiri benefits the communities.*)

Using the land for  
business opportunities

outside of mining

Sunrise Dam is currently supporting a flora data mapping initiative in conjunction with the Centre for Excellence at Multi University. The study will be based on local indigenous knowledge of traditional land uses (particularly of plants) for the Sunrise Dam lease area and surrounds. While the primary purpose of the study is to contribute to the Sunrise Dam closure plan, the secondary purpose will be to promote the concept of indigenous data mapping for the broader region. This information

would then be useful for local residents to assist in the promotion of aboriginal knowledge on, for example, the use of plants in healing. Possible spin-off projects that have been identified from the initial plant usage project include the development of a local cottage industry in producing aboriginal healing lotions.

Another venture currently being supported by Sunrise Dam is the Wongatha Wonganarra Aboriginal Corporation riding venture. Once the location has been finalised, the mine has undertaken to assist with stables and fencing.



### **Artisanal mining**

The issue of artisanal mining poses substantial challenges for mines operating in areas with long traditions of artisanal mining. This includes most mines in Ghana, Guinea and Tanzania. AngloGold Ashanti has begun working closely with a number of other stakeholders in addressing how best to find a balance between its own commercial interest in its mining concessions and the small-scale miner's claims. (*See case study on page C28: Understanding and working with artisanal miners in Africa.*) Artisanal mining remains a safety, health and environmental concern (to employees and artisanal miners) that needs to be managed.

Furthermore, the company's security arrangements are under ongoing review to ensure that human rights considerations are fully factored into all dealings with the artisanal miners and all parties concerned. Again, in this area, stakeholders have to ensure respect for the law while simultaneously making certain that human rights are not transgressed.

At Siguiri in Guinea, the threat of artisanal miners encroaching on mine property is high, particularly as mining has advanced to within close proximity of traditional artisanal mining areas.

A policy is in place with regard to the treatment of artisanal miners by security personnel. Specifically, any illegal miners detained by security personnel must be handed over to the local authorities as soon as practically possible to allow for the legal process to take its course. Also, the mine communicates with artisanal miners and community members with regard to safety and health. Despite this, an artisanal miner was fatally injured on mine property during the year when a pit wall he was illegally working in collapsed.

At Obuasi too, the issue of unlawful artisanal mining on company property has become a significant issue. These miners have become a substantial problem for the company and while the company is making ongoing attempts to engage with the artisanal miners to stay out of the lease area, while at the same time protecting its property, clashes between the artisanal miners and the company resulting in injuries to both groups have occurred and remain of concern to the company.

There have been instances of artisanal mines encroaching on the company's lease areas at Morila in Mali and Geita in Tanzania. In both countries the situation is better resolved with the assistance of the relevant government departments and other stakeholders.

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#### **Allegations of human rights abuses in Ghana**

AngloGold Ashanti's operations in Ghana have been on the receiving end of allegations of human rights abuses by two NGOs, the Third World Network and the Wassa Association of Communities Affected by Mining (WACAM). The Third World Network focuses on issues pertaining to development and the so-called third world, whereas WACAM seeks to protect the rights of 'marginalised mining communities' and is a partner in the 'no dirty gold' campaign in the USA, aimed at alerting jewellery consumers to human rights and environmental abuses by some mines.

Both NGOs have strong links with the local media and influential community leaders. The allegations of human rights abuses have generally been related to the treatment of ‘galamseymers’ or artisanal miners operating illegally within AngloGold Ashanti’s concession area, as well as water pollution, waste management, health hazards, compensation and security operations.

#### Artisanal mining

Also during the year under review, the illegal activities of ‘galamseymers’ at Obuasi, Ghana flared when mining operators cut the electric cables that feed the pumps running tailings slurry from the Kokoteasua Dam Pump Station to the Pompora Tailings Treatment plant, in the midst of a heavy rain storm. The pumps seized, causing the sumps to become silted up and large amounts of tailings material escaped into the external environment. The surrounding downstream communities of Kokoteasua, Abompekrom and Nkamprom were affected by the spillage. AngloGold Ashanti deployed the necessary staff and resources to clean up the spillage and assess damage, with the intention of paying compensation to affected communities.

On 21 May 2005 tensions between the mine and galamseymers again increased when a group of 21 military personnel and police assisted the management of Obuasi in destroying 15 to 20 illegal pits constructed by ‘galamseymers’ around the Ellis and West shafts. This followed an ultimatum which was given to the ‘galamseymers’ by the company several weeks before this event to cease their illegal activities.

A further incident occurred on 21 June 2005 when it was alleged that Awudu Mohammed, a ‘galamsey’ suspect was shot by AngloGold Ashanti security staff. A comprehensive internal investigation was undertaken and the company has maintained its original contention that Awudu Mohammed was injured by falling on spikes on a security gate when he tried to avoid arrest.

AngloGold Ashanti recognises that NGOs such as the Third World Network and WACAM have a significant role to play in communities such as that of Obuasi. The company is committed to engaging with these NGOs and all other stakeholders on such issues to deal with problems and concerns directly.

#### Environmental pollution

Other allegations made against the company by international NGOs have accused Obuasi of “degrading the land, poisoning fruit and contaminating water bodies with cyanide, zinc and mercury.” A strategic environmental review of the Obuasi mine has been carried out by a team of internal environmental specialists drawn from the United States, Australia and Ghana. The purpose of the exercise was to review environmental conditions at the operations, identify current environmental risks, prioritise these risks, develop short-term action plans and make recommendations for an improved environmental management programme. The review has identified a series of remedial actions to address problem areas.

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Awards/recognition:

### **Australia**

Recognition from Ruggies Recycling for support of Princess Margaret Hospital and Royal Flying Doctor Service through donations made to the recycling programme.

Nominations for the 2005 Prime Minister's Business Partnership Awards in the division of longevity and community impact.

Recognition from the Minister of Indigenous Affairs for its support in the development and publication of Willing People. (*See case study on page C20: Making a difference – Wongantha Wonganarra Aboriginal Corporation.*)

### **Brazil**

Serra Grande was voted as Best Mining Company – Economic Daily Newspaper 'Valor 1000'.

AngloGold Ashanti Mineração was included in the 100 Best Companies selected by 'Minérios e Minerales' a magazine specialising in mining.

AngloGold Ashanti Mineração received a Citizenship Award from the 'Mercado Comum' Institution.

AngloGold Ashanti Mineração: 'ISTO É' magazine – first place in the Innovation category, and second place in General Classification in a national survey.

AngloGold Ashanti Mineração: Entrepreneur Leaders Forum awarded by the financial newspaper Gazeta Mercantil.

The prestigious Baron Eschwege medal of merit was given by the Minas Gerais State Governor to AngloGold Ashanti COO International, Roberto Carvalho Silva.

### **Ghana**

The President of Zambia, who visited Obuasi this year with four of his ministers and the Vice President of Ghana, commended the professionalism of the mine's employees and corporate social responsibility projects.

The Ghana Ministry of Agriculture have commended Iduapriem's efforts at improving the socio-economic lives of the people.

The President and Chief Executive of Opportunities Industrialization International/USA also commended Iduapriem's social investment for 'being long-term' focused.

### **Guinea**

Cellule Nationale Pour La Promotion Des Actions Du Général Lansana Conté awarded to Siguiri in recognition of the operation's efforts towards the President's promotion of agriculture in the country.

The Ministers of Mines, Finance, Interior and Information have all commended SAG for its community relations projects and the government has proposed its adoption as a benchmark for other mining companies.

### **South Africa**

Nomination in annual business awards ceremony of the Westvaal Business Chamber.

### **USA**

The Southern Teller County Focus Group (STCFG), which CC&V helped found, received an award from the Colorado Preservation Society for historical preservation initiatives. CC&V and the STCFG were awarded the Wirth Chair Community Award in recognition of sustainable community development projects and STCFG received two land reclamation awards from the State of Colorado for its activities in surrounding areas.

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#### Exploration in Colombia

In 1999, AngloGold Ashanti began exploration activities in Colombia and put together a team to carry out greenfields exploration activities in 2003. This decision was consistent with the company's principle that it will only conduct business where this can be done with integrity. Despite the region's instability in the past, it was then and remains our view that the Colombian government has established a reasonable and sufficient level of control to allow us to continue exploration activities there. Having formulated targets and with ongoing fieldwork, AngloGold Ashanti undertook a major staking programme between 2002 and 2004. This has given AngloGold Ashanti a definite lead in this country.

"Colombia will be attractive for investors," President Alvaro Uribe was quoted as saying at a mining industry conference in Medellin in November 2005. "Colombia is ready to be a major mining country." It is hoped that with economic development and increased investment in the country, further political stability will prevail.

Presently AngloGold Ashanti have eight drill-ready projects that have been established and will be drilled before the end of 2006. During 2005 one target was drill-tested and yielded negative results. A considerable number of other projects are currently being investigated. AngloGold Ashanti's aim in Colombia is to achieve one AngloGold Ashanti-type discovery with sufficient inferred resources by the end of 2008.

In various areas of Colombia targeted by the exploration team, a panoply of community programmes have been developed, with a particular emphasis on health, nutrition, education, capacity-building and training, as well as culture and recreation. Occasionally the company has also supported local infrastructure improvements and co-ordinated reforestation efforts. The company has encouraged local communities to actively audit its activities from the point of view of environmental and social impacts. In Quinchia, workshops have been established to offer training in gardening, small-scale agriculture and fishery with particular emphasis on alternative crops and potentially higher levels of nourishment of the local population. These projects have been coordinated with the local mining company Explogutierrez.

A unique initiative, known as Mining Olympic Games, was co-ordinated with the assistance and support of the Municipality of Quinchia, local mining co-operatives, educational institutes and residents with Explogutierrez, the local hospital and the municipal department of sports. Various competitive events took place, ranging from construction and drilling to health and safety. The winners, many of whom are engaged in artisanal mining on a regular basis, received professional mining and safety equipment.

#### 5. Case studies

The case studies on the following pages illustrate the safety and community performance and challenges of the group in 2005. Follow-ups on the case studies presented in the Report to Society 2004 may be found on the website.

AngloGold Ashanti Australia's Sunrise Dam Gold Mine's stakeholder and community engagement programme has in the past year led to the publication of an account of an indigenous aboriginal community from Laverton, a town situated some 50 km from Sunrise Dam Gold Mine. Laverton's population numbers some 600 people. The publication, entitled 'Willing People', traces the trials and tribulations faced by the aboriginal people of this region, particularly in the 1960s and 1970s, and records the establishment of the Wongatha Wonganarra Aboriginal Corporation (WWAC). In 1974 The Wongatha Wonganarra Aboriginal Corporation was formed with the objective of facilitating the social and economic development of these aboriginal people in the Laverton region and a transient population of some 1,500 people who travel up to 600 km to reach the centre.

The project of recording the WWAC story was born out of an alliance between Curtin University of Western Australia, the student volunteers from Tulane University of New Orleans from the USA, Placer Dome's Granny Smith Gold Mine and Sunrise Dam Gold Mine. Each organisation became a partner in the production of the book by working together and contributing resources both financially and in kind.

The WWAC has provided not only employment, but significant training opportunities across a range of sectors (housing management, construction, business and office management, mining, seed collection, sports and environmental health). The WWAC is strongly represented on local and regional forums dealing with a variety of issues including health, education, family violence and youth affairs.

'Willing People' provides for this community a platform which records the sometimes painful history of the founders of WWAC. Through their memories the book provides an acknowledgement of this past, the strong sense of community characteristic of this community both in the past and the present, and a fresh perspective on the future.

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CASE STUDY AUSTRALIA

5.1 Making a difference

– Wongatha Wonganarra Aboriginal Corporation

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Ayanfuri, part of the greater Obuasi complex in Ghana, is the subject of the country's first decommissioning plan following the pit's closure in September 2001. Prior to this, there was no national legislation in Ghana governing mine closure, which in certain instances resulted in foreign-owned miners leaving the country and abrogating their environmental and social responsibilities.

Ashanti Goldfields Company Limited, prior to the business combination with AngloGold in April 2004, was approached by the country's Environmental Protection Agency (EPA) to submit a formal decommissioning plan, which would serve as a possible blueprint for future closures. While much preparatory work was done to address issues like public safety, site stability, revegetation, provision of social infrastructure and sustainable livelihood support, it was not until AngloGold Ashanti was formed that the decommissioning plan finally got underway in July 2004. A six-year closure plan was proposed by the decommissioning team (based at the neighbouring Obuasi mine), comprising three years for the implementation of the decommissioning plan, followed by a three-year monitoring period, until a final closure certificate is finally issued by the EPA in 2010.

Consistent with the principle that communities should benefit from mining operations once they have ceased, an important element of AngloGold Ashanti's decommissioning plan was the establishment of a sustainable livelihood intervention programme for the communities in and around Ayanfuri mine. Seven communities were affected – the largest being Ayanfuri with a population of approximately 2,500; and Gyaman, Fobinso, Abnabna, Dadieso, Ntwintina and Nkonya with a combined total of 4,500 inhabitants. Consultation took place with the traditional chiefs or head of the community elders, female community leaders, youth representatives, representatives from NGOs, and representatives of each village to inform them of the decommissioning process and the implementation of income-generating activities for sustainable development following Ayanfuri's closure. This was an important exercise in rebuilding community trust since, up until that point, the perception was that the mine had abandoned them. They charged that, while the mine had assisted in building infrastructure, little effort had gone into capacity building.

Much of the mine's rehabilitated land was found to be suitable for sustainable livelihood support projects, including mined-out pits containing water which could be used for aquaculture. Reclaimed land could be used for crop production, grazing and forestry. Sites owned by individuals were also earmarked as areas for sustainable projects.

A number of organisations were invited to take part in discussions around setting up sustainable enterprises. The Minister of Food and Agriculture gave input with regard to farming; the Fisheries Department, which was approached to give expert guidance on aquaculture projects, showed an interest in using the proposed Ayanfuri ponds as a training site; and the Centre for Biodiversity Utilisation and Development (CBUD), from the Institute of Renewable Natural Resources at the Kwame Nkrumah University of Science and Technology, offered suggestions on a range of sustainable livelihood projects which it could assist in establishing.

Funded by the Royal Netherlands Embassy in Accra, the CBUD aims to stimulate and promote sustainable development through the use of natural resources, paying equal attention to conservation. Some of the projects it has proposed for future development include duck, rabbit and pig farming; honey production; aquaculture; and seedling nurseries. However, as requested by AngloGold Ashanti, the initial

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CASE STUDY GHANA

5.2 Capacity-building at Ayanfuri mine

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ventures were limited to training in snail and indigenous leafy vegetable farming; and grasscutter rearing (grasscutters are small rodents which are both a delicacy and a source of protein in Ghana and other African countries). The total CBUD budget for capacity building and start-up costs in these ventures was €804,100,000 (\$84,660).

Of the approximately 5,000 people who applied to take part in the projects, 1,000 were selected to take part in concurrent training in snail and vegetable farming and 100 for grasscutter rearing which has high start-up costs. Criteria for acceptance were that participants originate from the Ayanfuri enclave and, to ensure the security of ventures, that they own a piece of land next to their home. Participants who did not own land could request the community chief to make land available for individual projects. In order to empower as many people as possible, participants were expected to take part in skills transfer on completion of the programme. The one-year programme was split into three milestone stages:

- intensive six-month on-the-job training and capacity-building by a team of 19 CBUD trainers, who were seconded to residences on the mine (a CBUD office was established at Ayanfuri for the benefit of the community);

- appraisal of participants to assess those whose businesses had become viable enough to warrant micro-credit from the mine's €640,000,000 (\$67,368) micro-credit budget (banks do not offer credit to first-time applicants), as well as training in managerial, business, marketing and organisational skills; and

- demonstrated business expansion.

Training was carried out in groups, and those who reached the micro-credit milestone formed co-operatives, while at the same time retaining individual ownership of ventures. Of the 1,000 participants who originally started training in snail and vegetable farming, 300 successfully completed the milestones, to the point that they no longer required CBUD assistance, while the remainder continued with coaching. One hundred people trained in grasscutter rearing, of whom 30 have become fully self-sustaining. While the programme has been fairly successful to date, it has not been without its challenges. These have included meeting the 2010 closure plan deadline, which the EPA has indicated is too ambitious; aligning community support with the mine's objectives; creating organised markets for products (currently produce reverts to the CBUD when markets cannot be found); and preparing for business expansion well ahead of the CBUD's scope of one year.

In terms of the decommissioning plan, AngloGold Ashanti's period of financial responsibility ended at the end of the year-long training programme in July 2005, after which funding was made available from CBUD donors to ensure the sustainability of current projects and to embark on new ones. However the decommissioning team continues to receive monthly progress reports on the projects. Although neighbouring Obuasi mine has a projected life-of-mine of 30 years, AngloGold Ashanti has given assurances that a programme of skills transfer will be extended to the eight communities in and around the mine, to ensure that sustainable livelihood programmes are firmly in place long before mine closure. Discussions have already commenced with the CBUD to this end.

COMMUNITY –

CASE STUDY GHANA

## **5.2 Capacity-building at Ayanfuri mine**

*cont.*

C22

At AngloGold Ashanti's Iduapriem mine in Ghana, a central focus of sustainable development activities is the 'Hand-in-Hand' programme, an alternative livelihoods initiative aimed at uplifting the economic and social fabric of communities both during operations and after they cease.

The programme was established at the beginning of 2005 through a partnership between AngloGold Ashanti, Opportunities Industrialization Center International (OICI), a US-based NGO that fosters economic self-reliance through human resource development in Africa, Poland and the Philippines. OICI has provided development assistance programmes for disadvantaged communities in Ghana for the past 35 years. Besides the initial funding of approximately \$268,000 to the programme (representing about 80% of the mine's total social investment budget), AngloGold Ashanti has also provided a field office for the OICI programme manager and five supporting officers, who are running the programme, the objectives of which are to:

- build the livelihood capacity of households;
- develop human capacity in health, nutrition and education;
- augment income-generating activities for the disadvantaged; and
- boost community resilience and participation.

The initial three-year 'Hand-in-Hand' programme aims to assist as many people as possible in the eight communities, which are located in the vicinity of the mine – Adisakrom, Adieyie (Mile 8), Mile 7, Techiman, Nkwantakrom, Wangarakrom, Teberebie and Abompuniso. The youth, who comprise 25% of the 7,500-strong population, are being specifically encouraged to take part in the programme which offers alternative employment opportunities to artisanal mining, a centuries-old traditional form of employment, which is often both dangerous and illegal.

Building capacity and promoting economic activity are the two main pillars of the 'Hand-in-Hand' programme. Under capacity-building falls:

- entrepreneurial skills training;
- micro-credit management training;
- animal husbandry and livestock training;
- technical skills training in food processing and value-adding technologies;
- training in water, sanitation and personal hygiene;
- training in participatory decision-making and problem-solving; and
- teacher-training for Early Childhood Development Centres (ECDCs).

Almost 700 people have benefited from the capacity-building programme since the start of the programme which was launched at Adieyie in January 2005.

Ninety people have learnt the art of soap- and pomade-making as part of enterprise development. Over 500 have been trained in lending and credit management. \$36,000 of the annual budget was placed in a revolving fund and loaned to 18 groups, comprising 317 participants, for creating new businesses or expanding existing ones.

COMMUNITY –

CASE STUDY GHANA

5.3 Hand-in-Hand programme provides alternative livelihoods at Iduapriem in Ghana



C23

The Yehia Moa group consists of 15 members, comprising 10 men and five women. They received livestock for pig rearing and/or credit to embark on a number of farming activities. Besides receiving training in the various pursuits, they have also undertaken courses in the likes of account keeping and conflict management. The group is looking forward to receiving more loans to expand their businesses further.

The Biakoye Farmers' Association consists of 20 members comprising 16 men and four women. They too received livestock for pig farming and credit which was ploughed into cassava and cocoa farming. The group also learned how to invest the money from their profits as part of their financial training.

COMMUNITY –  
CASE STUDY GHANA

**5.3 Hand-in-Hand programme provides alternative livelihoods at Iduapriem in Ghana**

*cont.*

C24

Seventy four people have participated in water management and environmental sanitation courses, which provide training in hygiene and pump sanitation maintenance, as well as learning how to repair hand pump machines. Subsequent to these training modules, water and sanitation (WATSAN) committees were formed in all eight of the Iduapriem communities.

In an effort to improve the academic standards in the communities' schools, 12 people have undergone ECDC teacher training, and teaching aids have been provided to nursery schools. A scholarship scheme has also been established for students in junior secondary and senior secondary schools.

The promotion of economic activity has focused largely on agricultural pursuits including pig, poultry and fish farming; vegetable and food crop production; goat and sheep rearing; and oil palm farming.

Assistance was afforded to the 199 beneficiaries of the programme in the form of livestock; cassava sticks; oil palm and vegetable seedlings; spraying machines; and agro-chemicals.

Although not part of the 'Hand-in-Hand' programme, to enhance local procurement, Iduapriem mine has contracted a local company to transport mining consumables and employees to and from the mine. Seven percent of its material requirements are sourced locally. A five percent increase in local procurement was recorded in 2004.

As a holistic programme, 'Hand-in-Hand' also endeavours to foster a community spirit by encouraging participation amongst its members. To this end, social welfare clubs, equipped with sports and games equipment, have been established in each community.

While AngloGold Ashanti believes that the 'Hand-in-Hand' programme is working well, a number of challenges have surfaced along the way. For example, a misunderstanding arose over micro-credit management which resulted in over-subscription of the micro-credits and difficulty in recovering loans from some of the participating groups. In another instance one sheep farmer misunderstood the concept of sheep-rearing and instead slaughtered a sheep to bring in income. Because subsistence farming is the most popular economic activity, some vegetable producers are still trying to find a better market for their produce. Recognition of how well the programme is proceeding overall, is that it received two commendations in 2005 for the mine's efforts to uplift surrounding communities; one from the District Director of Agriculture, who visited Iduapriem mine at the beginning of 2005; and the other from the NGO WACAM (Wassa Communities Affected by Mining) when it visited the mine in July 2005. (WACAM aims to improve the socio-economic lives of communities mainly in the Obuasi, Tarkwa, Yamfo and Bogoso areas.)

Kojo Bour is a palm wine tapper. From his earnings, he has invested ₵800,000 (\$89) in constructing a second fish pond. He constructed his first fish pond with a loan of ₵500,000 (\$56). Bour's aim is to construct 10 fish ponds so that he can retire from palm wine tapping and take up fish farming.

Steven Tebie is one of 25 people who belong to the Pig Farmers' Association. He received pigs, a goat, a ram for livestock rearing, and credit to

cultivate cassava. Tebie is now farming more than two acres of land and, with his profits, has invested in two more goats and another ram. His wife Dorcas has purchased three more goats in addition to the two she was given.

COMMUNITY –  
CASE STUDY SOUTH AFRICA  
C25

The group's social investment initiatives (including the labour-sending areas) are managed by the AngloGold Ashanti Fund. The fund is directed by a Board of Trustees chaired by the AngloGold Ashanti Managing Secretary, and is managed by Tshikululu Social Investments, a non-profit management company which is a specialist corporate donor support agency.

The trustees of the fund consider many proposals each year. Certain criteria are used to assist in making decisions: key among these are the sector into which a particular project falls, the location of the beneficiaries and the sustainability of the venture. The fund focuses on funding education, health, arts and culture projects.

In 2005 some R18 million was distributed to a wide range of projects.

Since its establishment more than seven years\* ago, the fund has concentrated on education, believing that support given here has the most potential to make a real difference to the lives of individuals and their communities. In 2005, 60% of the funding available went to education. Other fields to which the fund gives priority are those of welfare and development, HIV/AIDS, health and skills training/job creation and last year's spending reflects this (see chart below). (\*Prior to the establishment of AngloGold in 1998 the operations that make up AngloGold had made significant contributions every year to the Anglo American and De Beers Chairman's Fund.)

Another guiding principle is to focus on the areas where the company has operations and the regions from which it draws large numbers of employees (and where the families of many of those employees live). With three mines near Carletonville and four near Klerksdorp, projects in the provinces of Gauteng (49%) and North West (19%) were significant beneficiaries. Employees who do not reside near AngloGold Ashanti operations come primarily from the Eastern Cape and northern KwaZulu-Natal in South Africa, and from Lesotho and Mozambique beyond the borders of the country, and so most of the remaining funding (32%) was distributed in these areas.

Regarding the issue of sustainability, the trustees have to ensure that the project will be sustainable and benefit the recipients and their communities in the long term. The level of community participation and ownership is a crucial factor in ensuring this (as is the degree of involvement by the relevant public sector bodies).

Two major projects of the past year serve to illustrate these criteria. These are the second phase of building at the Boiteko School for the Severely Handicapped in Khutsong near Carletonville and Inyatelo Public School in Kanana near Klerksdorp.

The AngloGold Ashanti Fund first became involved in Boiteko – a Sotho word meaning 'we are trying very hard' – in 1999. The school was already in existence but housed in the backyard of a municipal property.

The fund was approached by the school's governing body with a request for support to build proper premises. An amount of R1.8 million was granted for phase one of the project during which eight classrooms, ablution facilities, a kitchen/workshop and a multi-purpose hall were built. The official opening took place in mid-2000.

#### 5.4 The AngloGold Ashanti Fund and Trust

– contributing to sustainable projects in southern Africa

It was recognised at the time that more accommodation would be necessary. The school has an enrolment of 180 severely mentally handicapped and 20 profoundly handicapped children and young adults. They range in age from three to 21. People who are severely handicapped require the assistance of others for every aspect of their daily lives. Their physical activities are greatly compromised as is their capacity for being educated. Those who are profoundly handicapped have a mental age of under a year; they are unable to talk; and they cannot benefit from any formal education.

In 2003, the fund approved the second phase of the building programme which provided for another block of eight classrooms, ablution facilities and a therapy centre for occupational therapy and physiotherapy. The fund made a grant of R2.65 million – to cover this phase and a third phase – and the Gauteng Department of Education contributed R1 million.

In the first phase, the Gauteng Department of Education had been fully consulted and had facilitated the provision of land for the school. The second phase, which was completed in 2005, marked the start of a real partnership between the fund and the department.

The manager of the fund, Sipho Mahlangu, is convinced that this type of constructive private-public partnership ensures the viability of a project. Given that Boiteko is a special needs school, government participation goes beyond the Department of Education. It includes the Department of Health which takes responsibility for the provision of a social worker, an occupational therapist and a physiotherapist, and the Department of Social Services which administers the children's welfare grants.

The fund, together with the school governing body, has worked particularly closely with all three departments in the planning of phase three which is the building of a centre for the profoundly handicapped. From the time that the fund was first approached in 1999 it was decided that this group needed particular attention. It is possible, with the right equipment, aid and sufficient staff, to teach such children some measure of independence such as teaching them to move and to feed themselves.

Since a centre for the profoundly handicapped has never been built before in South Africa, the planning has been an intensive process in which the three departments have been involved with the fund. The Department of Education has contributed a further R500,000 towards this centre and building will start in early 2006.

With its support for the three building phases and a grant of some R95,000 for the training of caregivers, the AngloGold Ashanti Fund has made an investment of R5.4 million in Boiteko. This makes it one of the fund's biggest projects to date.

As with Boiteko, AngloGold Ashanti has a long association with the Inyatelo Public School which was established in 1983 by a group of mineworkers who wanted to ensure that Xhosa-speaking children in the Kanana area had access to education in their mother tongue. What was then the company's Vaal Reefs mine (now known as the Vaal River operations) made premises available and gave assistance when the primary school (from Grades 0 to 7) moved to a larger and better equipped building in 1990.

The building can accommodate 840 children but in the past decade there had been a significant increase in enrolments and Inyatelo now has 1,400 learners. This left the school's governing body with no option

#### **5.4 The AngloGold Ashanti Fund and Trust**

**– contributing to sustainable projects in southern Africa~~ont~~.**

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COMMUNITY –  
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C27

but to implement a system of ‘platooning’ which splits the children into two groups with the first attending classes until late morning and the second starting at midday. Platooning is, however, a satisfactory arrangement since it has an effect on the spirit and unity of a school.

At Inyatelo it also placed a considerable burden on the 40 teachers who have to do double duty. More seriously, it has made the children who start their schooling in the afternoon vulnerable since they are left on their own at home when their parents leave for work.

The school turned to the AngloGold Ashanti Fund for assistance and a grant of R2.5 million was made for an upgrading that includes the construction of 11 classrooms, office space and an ablution block. The contractors moved on site in August 2005 and the project was scheduled for completion by February 2006.

The chairperson of the governing body, Anderson Mogadla, now retired from AngloGold Ashanti, left the Eastern Cape 40 years ago and made Kanana his home. He was involved in the establishment of Inyatelo – the first Xhosa-medium school to be built in the area – and sums up its importance to his family by saying it made it possible for all his children and grandchildren to receive their education in their mother tongue. Although the North West Education Department is not providing any financial assistance for the expansion of Inyatelo, representatives sit on the steering committee and there has been ongoing consultation. For the project to be successful, however, it is important that there is a substantial increase in the number of teachers and discussions are being held with the department in this regard.

Sipho Mahlangu explains that the AngloGold Ashanti Fund is changing its focus from supporting many small projects (some with amounts around the R50,000 mark) to concentrating on larger ventures that will have a more significant impact on the regions in which they are located. Inyatelo and Boiteko illustrate this trend as well as the increasing importance being attached to initiatives that are located in areas close to AngloGold Ashanti operations where many employees and their families live. Finally, they illustrate the fund’s concern to work with government to secure the long-term future of projects.

**5.4 The AngloGold Ashanti Fund and Trust**

**– contributing to sustainable projects in southern Africa *cont.***

AngloGold Ashanti Fund (%)

Provincial giving by value of grants

Total R18 million

49

1

18

3

5

19

5

Gauteng

KwaZulu-Natal

North West

Outside Africa

Western Cape

Eastern Cape

Free State

AngloGold Ashanti Fund (%)

Sectoral giving by value of grants

Total R18 million

60

3

12

1

10

7

Education

Health

HIV/AIDS

Social Services

Skills training and job creation

Welfare and development

Local area committee

5

2

Arts and culture

Mining companies working in Africa are having to find innovative strategies to effectively manage the presence of artisanal and small-scale miners operating on or near the company's operations and exploration sites on the continent. Artisanal, or small-scale, informal mining has, in many cases, been practised for centuries, and has become an important and traditional source of subsistence livelihood for many communities. (Free gold is frequently found in alluvial and shallow orebodies and is relatively easy to extract, refine, transport and sell.) Because of the nature of their operations – small-scale, competitive and often unregulated – these miners operate in dangerous environments, frequently using unsafe methods of tunnelling, mining, and indeed processing, which are often detrimental to the health and the environment of their surrounding communities.

Through AngloGold Ashanti's presence in Tanzania, Mali, Ghana and Guinea the company has become familiar with artisanal and small-scale mining.

For many communities artisanal mining has become a traditional way of life. The presence of large-scale mining companies is frequently met with community resistance, as these traditional miners perceive their livelihoods to be threatened by formal operations. On the other hand, mining operations and personnel are at risk from illegal miners encroaching onto the lease areas. Third-party fatalities through unsafe mining practices are also a concern, along with an increase in unlawful behaviour as new arrivals are lured by word of mouth to apparently gold-rich sites.

Because artisanal and small-scale mining is difficult to regulate, governments are turning to large mining companies to assist in managing, structuring and/or reducing the industry, through sustainable development, business and employment opportunities.

AngloGold Ashanti has developed an inclusive and holistic approach that facilitates legal and responsible artisanal mining around its own operations in support of the company's view that communities should be better off as a result of the company having being there.

Problems associated with artisanal mining recently came to the fore at Geita mine in Tanzania in April 2005 when approximately 7,000 gold seekers invaded the area after word spread that a large nugget of gold had been found by artisanal miners. While the majority of the miners left on their own accord after appeals were made from management to vacate the lease area, the police had to be summoned to remove those who resisted.

Geita is now the site of a pilot project to tackle artisanal mining, developed following a request to the mine by Tanzanian President Benjamin Mkapa to assist in managing the phenomenon. A workshop, attended by 95 artisanal miners, was held in April 2005 as a result. A joint initiative between the mine and the UK's Department for International Development (DFID) – whose interest is aligned with the United Nations' Millennium Development Goals of alleviating extreme poverty, reducing child labour and combating HIV/AIDS – the participatory workshop addressed itself to all issues associated with artisanal mining. During discussions it emerged that the miners wanted more information on topics like access to small business loans, technology, safe working conditions and better mining techniques.

A trade fair (informed by discussions held at the workshop) took place, on 28 July 2005 at Nyarugusu Village, some 32 km from Geita town. The fair was aimed at providing greater information on the topics raised at the workshop. A number of local and international participants were present, including the National Microfinance COMMUNITY –

#### CASE STUDY TANZANIA

##### 5.5 Understanding and working with artisanal miners in Africa

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Bank (NMB) providing advice on opening accounts and requesting investment loans; the Vocational Education Training Authority (VETA) which explained how to become competent in artisanal mining and even qualify for a national diploma in the practice; the Small Industries Development Organization (SIDO) advising on alternative means of employment and the dangers of using mercury in gold extraction; and the International Labour Organization (ILO) which spoke out against child labour and unsafe working conditions. Also represented were other large mining companies operating in the area, who realise the necessity to act as a group, as well as the Mwanza Regional Miners Association (MWAREMA) and the Tanzanian Women Miners' Association (TAWOMA). In order to transcend language, educational and cultural barriers, concepts and messages were conveyed through industrial theatre, later converted into pictorial form for reinforcement. Says Charles Loots, AngloGold Ashanti's Local Economic Development Manager, "We realised we had to adopt a multi-stakeholder approach and include as many parties as possible. Also essential to successfully tackling the problem was buy-in from local and national government."

Loots adds that one possible solution in regularising artisanal mining (though not specific to Geita mine) would be to section off areas within AngloGold Ashanti's lease areas which are not necessarily viable for the company to mine but which may well be mined through artisanal mining. This would meet the objective of legitimizing these operations while at the same time eliminating the disturbance of company operations. It would also facilitate the establishment of constructive dialogue between the company and the artisanal miners.

Follow-up awareness campaigns have been planned and the mine is also looking to establish a working partnership with the United Nations Industrial Development Organisation's (UNIDO) Global Mercury Project (GMP), aimed at reducing mercury pollution by artisanal mining through introducing cleaner technologies. Tanzania is one of six countries participating in the GMP, which has offered to supply equipment to artisanal and small-scale miners in the Geita area.

While each country presents its own set of issues with regard to artisanal mining, AngloGold Ashanti believes that elements of the Geita approach can be transferred to the company's other operations. A strategic plan is currently being drawn up for its Siguiri mine in Guinea where the issue of artisanal mining requires urgent attention. The company has adopted a 'push and pull' approach – protecting the mine's assets while at the same time gearing up to assist miners to become legal entities.

At Ghana's Ayanfuri mine, which is in the process of closure, an alternative livelihood programme is in place to encourage miners to engage in alternative employment opportunities.

AngloGold Ashanti recognises that artisanal and small-scale mining, as a way of life and an important economic tool for many, is a permanent feature in the affected countries of its operations. However, it believes that sound strategies, aimed at improving relations between large-scale operators and the informal sector, and encouraging safe and legal operations, will go a long way towards addressing the social, economic and environmental problems inherent in artisanal and small-scale mining.

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**5.5 Understanding and working with artisanal miners in Africa *cont.***

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AngloGold Ashanti has placed HIV/AIDS high on its list of community initiatives at its Geita gold mine in Tanzania. Since 2002, the mine has been raising funds for HIV/AIDS through its Mount Kilimanjaro Challenge, an annual climb to the top of the country's highest point, Uhuru Peak. The annual climb was initiated in response to former President Benjamin Mkapa's 1999 call to the entire nation, including the private sector, to commit itself to the fight against HIV/AIDS in the country.

Each year the mine adopts a national theme as its focus for the affectionately named 'Kili climb'. In 2004, the slogan was 'Care for the orphans and the orphanages'. AIDS is responsible for leaving vast numbers of children orphaned. In sub-Saharan Africa, an AVERT (international AIDS charity providing information on HIV/AIDS) 2003 report estimated that Tanzania's orphaned children numbered 980,000, the country with the third largest number of AIDS orphans after Nigeria (1.8 million) and South Africa (1.1 million). It is estimated that of Geita district's population of approximately 758,000, there are about 3,000 orphans, due to the death of one or both parents as a result of AIDS, accident or illness.

The 2005 Kili Climb slogan galvanised 44 climbers to make it to the top, and in doing so, raised 150 million Tanzanian Shillings (\$150,000) for the cause. Funds were distributed among a number of organisations which care for orphans including the African Medical Research Foundation (AMREF), Christian Children's Fund (CCF) Worldwide, the Good Samaritan Mission, Shalom Care House, Family Care Foundation and Geita Orphans. A portion was also allocated to the Regional Administrative Secretary of the Kilimanjaro region, to utilise as they see fit.

Following a decision by the Geita District Authority that all the orphanages be amalgamated into one single orphanage, the Moyo Wa Huruma (Golden Heart) Orphanage Centre, the Geita gold mine allocated \$50,000 from the money raised in 2004 towards the construction and furnishment of a Geita orphanage. Six hectares of land were provided by the Geita District Authority for the construction of the orphanage, which took place between June and December 2005. The newly-completed centre has four dormitories which can house up to 40 children. It is anticipated that recreational facilities will be constructed in the next phase of construction. Children will attend the nearest primary school so that they are well-integrated into the community. A supply of clothing has been donated by mine employees and by the Mchauru Village community.

The orphanage will ultimately be fully managed by the Roman Catholic Diocese of Geita, but a key requirement of both the mine and the Geita District Authority is that the centre be strictly non-denominational and that children be admitted from any religious background, as per national government's orphan selection criteria, which also includes prioritising children who: are under the age of 18; have lost both parents and have no other relatives to care for them; or have lost both parents and are living with relatives who do not have the financial means to care for them.

In the meantime, Geita will assist in the management handover phase, until the Diocese takes over fully at the end of 2006. By this time it is anticipated that the Diocese will have attracted a number of donors to assist in funding the orphanage. However, Geita mine will continue to provide support through monies raised from its annual 'Kili climbs'.

An official launch of the orphanage will take place in the first half of 2006, at which time an intake of 20 children is expected.

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5.6 Caring for orphans and orphanages – a mission for Geita

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CASE STUDY USA  
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The cities of Cripple Creek and Victor in Colorado owe their existence to historical mining operations, and in many ways, this historical relationship has allowed the CC&V mine to remain an integral part of its community.

In the past 11 years, since start-up of current mine operations, AngloGold Ashanti, as manager of the joint venture known as Cripple Creek & Victor Gold Mining Company (CC&V), has played a pivotal role in developing positive and constructive community relationships by raising its visibility amongst the community and becoming a point of contact for community members and leaders. The intention has been to create a relationship of trust between the community and the mine, and a positive climate for mine personnel to discuss with the community matters which may have an impact on the area and its people. CC&V's community affairs department has sought to develop these relationships via two important routes:

- encouraging employees to participate actively in community initiatives;

- encouraging employees to participate on local structures, and interact with other local groups

Through this close interaction CC&V seeks to develop a good sense of community priorities, and to learn how its assistance and support can have an optimal impact.

Management of CC&V has sought to develop a particularly productive relationship with the Southern Teller County Focus Group (STCFG). STCFG is a group of local community leaders and others interested in the continuing development of Southern Teller County, where CC&V's operations are located. STCFG conducted a review to determine how best to achieve its goal of continuing development of Southern Teller County and determined that tourism could have a long-term sustainable impact. In conjunction with CC&V, STCFG is providing a forum for education about historic mining activities, to create economic development opportunities for the region, and to promote the protection of historic areas. In co-operation with the STCFG, six hiking trails have been established around CC&V's active mining operations, which provide access to historic mining sites, along with interpretive signage. The trails have proved to be popular and attract some 10,000 people annually. The STCFG also works together with property owners to gain and administer grants for the assessment and preservation of historic structures.

Through this association, CC&V has sought to play a meaningful role in identifying historically significant structures which are then moved out of the path of mining operations. The Hull City Placer ore sorting house and headframe have been temporarily moved, and will be replaced after the completion of reclamation; the Joe Dandy ore sorting house and headframe have been reinstalled on Globe Hill within view of the city of Cripple Creek.

An important focus area is sustainability after the cessation of mining. "It was a particularly proud moment for me when the AngloGold Ashanti choir from South Africa was invited to contribute the final performance for the inaugural season of the Colorado Festival of World Theatre. The choir proved to be excellent ambassadors for CC&V and for AngloGold Ashanti," comments Jane Mannon, CC&V community affairs manager. Plans are in place to grow and expand the CFWT by including an educational component for the youth.

Other CC&V community projects include sponsorship of little league baseball and soccer. CC&V also encourages its employees to become involved as volunteers in the community, rewarding them by treating volunteer time as paid leave.

5.7 CC&V an integral part of its community

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**5.7 CC&V an integral part of its community cont.**

It is hoped that through these activities and its participation in local chambers of commerce, economic development groups and other community structures, CC&V has successfully become integrated in this community. "By contributing time, resources and funds, we believe we have made some positive strides in developing key groups for a sustainable community," says Jane Mannon.

**Farm to Table Project**

The spirit of volunteerism is thriving at CC&V, where Paul Douglas, mine maintenance supervisor, is working with a project to provide fresh farm produce to those in need. The Farm to Table Project which runs out Salida, Colorado, west of Cripple Creek, was undertaken almost single-handedly by Tony Madone of Salida. On donated land, Tony works the project with the objective of expanding each year. An extensive group of volunteers, such as Paul, assist Tony with his work.

CC&V has been able to support Farm to Table with the donation of fuel, oil, and surplus pick-up trucks. A cash donation helped pay for seed and fertilizer.

The 2005 vegetable crop was distributed to facilities throughout the State of Colorado in such communities as Salida, Buena Vista, Leadville, Westcliffe, Denver, Alamosa, and Montrose.

As the project gains stability, Tony and the other volunteers look forward to expanding the acreage under cultivation and the amount of produce distributed. They have already received requests for produce from Canon City, Woodland Park, and Colorado Springs. CC&V volunteers and support will help these dedicated folks reach their goal of a positive contribution throughout the region.

**Pikes Peak Regional Medical Center Update**

The Pikes Peak Regional Medical Center Association (*see Report to Society 2004*) announced in October, 2005 that funding has been approved for the development and construction of a new hospital in Teller County, Colorado. The United States Department of Agriculture (USDA) Rural Development Facilities Program has granted \$10 million in loan guarantees, for loans from Matrix Capital Bank, and \$4 million in a direct loan to the Association. Groundbreaking for hospital construction is expected in the spring of 2006.

Brim Healthcare, a hospital management firm, has been selected as managing partner for the hospital. Brim has extensive experience in managing small rural hospitals.

CC&V will remain a partner in this project, which will continue to provide a beneficial service for the community long after mining operations have ceased. This development is indicative of the positive developments which can flow from the careful selection of projects and the leveraging of initial strategic donations.

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Further refinement of social and community development performance. A community and social development management system is being rolled out across the global operations and it is anticipated that it will take a further 18 months to two years to fully implement.

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Development of a common auditable base for reporting. It is the intention that social investment spending will be assured for 2006.

•

Addressing issues arising from small scale and artisanal mining, including human rights concerns.

•

Increased emphasis on economic development activities, including setting of targets.

6. Objectives for 2006

GLOSSARY  
OF TERMS

Glossary  
of terms

**Our business is gold. We consistently strive to create value for everyone with a stake in our company, by finding and mining gold and by developing the market for our product.**

OUR VALUES:

**A**

**A\$**

Australian dollars

**ABET:**

Adult Basic Education and Training

**ACMER:**

Australian Centre for Minerals Extension & Research

**ADR:**

adsorption, desorption and recovery

**AGANC:**

AngloGold Ashanti (Nevada) Corp.

**Agency shop agreement:**

exists in South Africa across the non-supervisory bargaining unit within the company. In terms of this, subscriptions are deducted from non-union members and paid directly into a Human and Industrial Relations Fund (HIRF).

**AHS:**

AngloGold Health Service, a wholly-owned subsidiary of AngloGold Ashanti, engaged in the provision of health care services

**AMREF:**

African Medical and Research Foundation - an independent non-profit, non-governmental organisation whose mission it is to improve the health of disadvantaged people in Africa

**AngloGold Ashanti Fund:**

vehicle for social investment initiatives in southern Africa

**ART:**

anti-retroviral therapy - treatment regimen for the treatment of people with HIV/AIDS, with anti-retroviral drugs

**ASM:**

artisanal and small scale mining

**ATSDR:**

Agency for Toxic Substances and Disease Registry

**Aurum:**

Aurum Health Research - an independent section 21 company that undertakes research into HIV/AIDS and TB

**Average number**

average attributable number of both employees and contractors

**of employees:**

employed during the year, where contractors are defined as workers in employment for longer than one year

**B**

**BEE:**

Black Economic Empowerment, referring specifically to the empowerment of Historically Disadvantaged South Africans (HDSAs); initiatives aimed at eliminating the economic legacy of apartheid in South Africa

**By-products:**

any products that arise from the core process of producing gold, including silver, uranium and sulphuric acid

**C**

**CAD:**

computer aided design

**Capital expenditure:**

total capital expenditure on mining assets to both maintain and expand operations

**CASM:**

communities and small scale mining

**CBOs:**

community-based organisations

**CC&V:**

Cripple Creek & Victor

**CDPHE:**

Colorado Department of Public Health and Environment

**CEO:**

chief executive officer

**GLOSSARY OF TERMS AND ACRONYMS**

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**CFO:**

chief financial officer

**CIL:**

carbon-in-leach. Gold recovery process

**CIP:**

carbon-in-pulp. Gold recovery process

**Comminution:**

breaking up of ore to make gold available for treatment

**COO:**

chief operating officer

**CREATE:**

Consortium to Respond Effectively to the AIDS/TB Epidemic

**CRJP:**

Council for Responsible Jewellery Practices

**CSMI:**

Centre for Sustainability in Mining and Industry

**CSIR:**

Council for Scientific and Industrial Research, South Africa

**Cyanide Code:**

International Cyanide Management Code

**D**

**dBa:**

decibels: unit of sound measurement

**DDR:**

Digital Diagnostic Radiography, used for the early detection of TB

**Dick Fisher Global**

An internal AngloGold Ashanti award intended as an

**Safety Award:**

incentive for outstanding safety performance, that recognizes both actual safety performance and well as improvements year-on-year

**DoH:**

Department of Health

**DME:**

Department of Minerals and Energy, South Africa

**DNPM:**

Departamento Nacional de Producao Mineral (National Department of Mineral Production - Brazil)

**DoE:**

Department of Environment (Western Australia)

**DRC:**

Democratic Republic of Congo

**DWAF:**

Department of Water Affairs and Forestry (South Africa)

**E**

**Effective tax rate:**

current and deferred taxation as a percentage of profit on ordinary activities before taxation

**EIA:**

Environmental Impact Assessment

**EITI:**

Extractive Industries Transparency Initiative

**Elution:**

process of re-dissolving gold from activated carbon

**EMP:**

Environmental Management Programme

**EMPR:**

Environmental Management Programme Report

**EMS:**

Environmental Management System

**Entomology:**

scientific study of insects

**GLOSSARY OF TERMS AND ACRONYMS**

2

**Equity:**

shareholders' equity adjusted for other comprehensive income and deferred taxation. Where average equity is referred to, this is calculated by averaging the figures at the beginning and the end of the financial year

**ETC:**

education, training and counselling

**Evapo-transpiration basin:**

facility constructed at closure, which receives water from the reclaimed heap pad or Tailings Storage Facility (TSF)

**Exco:**

executive committee

**F**

**FICA:**

Financial Intelligence Centre Act, introduced in South Africa to eliminate money laundering and fraud at international level

**FIFR:**

Fatal Injury Frequency Rate. The number of fatal injuries per million hours worked

**FNI:**

Front National Integriationniste (rebel militant group in DRC)

**Free cash flow:**

net cash inflow from operating activities less capital expenditure to maintain operations

**Fundamental Human Rights**

**Conventions of the ILO:**

International Labour Standards covered in the Declaration on Fundamental Principles and Rights at Work (adopted by the International Labour Conference at its 86th session, Geneva 1998)

**Convention No. 29:**

Forced Labour, 1930

**Convention No. 87:**

Freedom of Association and Protection of the Right to Organise, 1948

**Convention No. 98:**

Right to Organise and Collective Bargaining, 1949

**Convention No. 100:**

Equal Remuneration, 1951

**Convention No. 105:**

Abolition of Forced Labour, 1957

**Convention No. 111:**

Discrimination (Employment and Occupation), 1958

**Convention No. 138:**

Minimum Age, 1973

**Convention No. 182:**

Worst Forms of Child Labour, 2000

**G**

**GGM:**

Geita Gold Mine

**GIS:**

Geographic Information System

**Global Compact:**

United Nations Global Compact (derived from the Universal Declaration of

Human Rights; the International Labour Organisation's Declaration on Fundamental Principles and Rights at Work; the Rio Declaration on Environment and Development; and the United Nations Convention Against Corruption.)

**Grade:**

the quantity of gold contained within a unit weight of gold-bearing material per ton of ore (oz/t), or grams per metric ton (g/t)

**GRB:**

Geotechnical Review Board

**GLOSSARY OF TERMS AND ACRONYMS**

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**Greenhouse gas emissions:**

gaseous pollutants released into the atmosphere through the burning of fossil fuels and through other avenues, that amplify the greenhouse effect.

The greenhouse effect is widely accepted as the cause of global climate change. Gases include CO

2

, CH

4

, N

2

O, HFCs, PFCs, SF

6

, and other CO

2

equivalents

**GRI:**

Global Reporting Initiative. A multi-stakeholder process and independent institution whose mission is to develop and disseminate globally applicable sustainability reporting guidelines

**H**

**HAART:**

Highly active anti-retroviral therapy. A cocktail of three or more drugs which in combination are strong enough to reduce viral loads to very low levels

**HCBC:**

home- and community-based care

**HDSAs:**

Historically Disadvantaged South Africans. This term refers to any persons or communities disadvantaged by unfair discrimination before the new South African Constitution came into effect. Includes those from the Southern African Customs Union and Mozambique.

**Heap leach pad:**

heap-leach facility in which gold-bearing ore is stacked. A high pH cyanide-based solution is sprayed or dripped over the heap leach dissolving the precious metals as it drains through the stack

**HIRAs:**

Hazard Identification and Risk Assessments

**HIV:**

human immunodeficiency virus

**Holding Hands:**

volunteer programme in South Africa

**HPDs:**

hearing protection devices

**HRW:**

Human Rights Watch

**HSE:**

health, safety and environment

**HSRC:**

Human Sciences Research Council

**I**

**ITNs:**

insecticide treated/impregnated bed nets

**IAPs:**

interested and affected parties

**ICEM:**

International Federation of Chemical, Energy, Mine and General Workers' unions

**ICME:**

International Council on Metals and the Environment, the forerunner of ICMM

**ICMI:**

International Cyanide Management Institute

**ICMM:**

International Council on Mining and Metals

**IDAP:**

Integrated Development Action Plan

**IDP:**

Integrated Development Plan

**IDRM:**

Integrated Damage Rheology Model

**IEC:**

information, education, communication

**IFC:**

International Finance Corporation

GLOSSARY OF TERMS AND ACRONYMS

**ILO:**

International Labour Organization, a UN agency for the promotion of social justice and human and labour rights

**IMDP:**

Intermediate Management Development Programme

**IMIU:**

International Mining Industry Underwriters

**Interest cover:**

EBITDA divided by finance costs

**International Cyanide:**

Industry standard for cyanide management. Developed under

**Management Code:**

the auspices of UNEP

**IRMS:**

Integrated Risk Management System

**ISO:**

International Standards Organization, a voluntary not-for-profit network of national standards institutes from 146 countries.

**ISO 14001:**

ISO standard relating to environmental management systems.

**ISO 14001 certification:**

certification based on regular auditing by an accredited external body

**ISOS:**

international (SOS), an international medical assistance and outsourced healthcare company

**ISSI:**

subsidiary of AngloGold Ashanti that develops and implements seismic monitoring management systems

**IUCN:**

International Union for the Conservation of Nature

**J**

**JSE:**

JSE Securities Exchange South Africa

**K**

**King Report/ King 2:**

King Report on Corporate Governance, 2002

**KOSH communities:**

Klerksdorp, Orkney, Stilfontein, and Hartebeesfontein

**L**

**Life-of-mine (LOM):**

number of years that the operation is planning to mine and treat ore, and is taken from the current mine plan

**LTIFR:**

Lost Time Injury Frequency Rate per million hours worked. Note that AngloGold Ashanti utilises the strictest definition in reporting Lost Time Injuries in that it includes all Disabling Injuries (where an individual is unable to return to his place of regular work the next calendar day after the injury) and Restricted Work Cases (where the individual may be at work, but unable to perform full or regular duties on the next calendar day after the injury) within this definition.

**GLOSSARY OF TERMS AND ACRONYMS**





**M**

**MAEP:**

Medically Affected Employees Programme

**Managerial employees:**

defined as those in supervisory and management roles in Paterson job grades C-upper and above

**Masakhisane:**

venture capital company set up by AngloGold Ashanti to invest in small businesses. Works in conjunction with SMEDI.

**Masifunde Fund:**

(means 'Let us learn' in Zulu and Xhosa) - A fund established by AngloGold in 1999 to fund the education for the children of those who have died in mine-related accidents on the South African operations

**MBOD:**

Medical Bureau of Occupational Diseases

**MDP:**

Management Development Programme

**MHSC:**

Mine Health and Safety Council

**Milling:**

a process of reducing broken ore to a size at which concentrating can be undertaken

**Mineral resources:**

A mineral resource is a concentration or occurrence of material of economic interest in or on the earth's crust in such form, quality and quantity that there are reasonable and realistic prospects for eventual economic extraction. The location, quantity, grade, continuity and other geological characteristics of a mineral resource are known, estimated from specific geological evidence and knowledge, or interpreted from a well-constrained and portrayed geological model. Mineral resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories. The mineral resources are inclusive of those resources which have been modified to produce ore reserves.

**Mining Charter or**

Broad-based Socio-Economic Empowerment Charter

**the Charter:**

**Mining-induced seismicity:**

failure of the earth's crust or rock mass as a result of mining-induced changes in rock stress levels.

**MLTIFR:**

malaria lost-time injury frequency rate

**MONUC:**

the United Nations Organisation Mission in the DRC

**MPRDA:**

Mineral and Petroleum Resources Development Act, 28 of 2002, which came into effect in South Africa on 11 May 2004. Regulates the granting of mining authorisations and prospecting permits

**MQA:**

Mine Qualifications Authority. A South African government body charged with developing standards and qualifications for the country's mining sector; maintaining the quality of standards, qualifications and learning provi-

sion; developing and implementing a sector skills plan; disbursing grants from the Skills Development Levy; and establishing, registering, administering and promoting learnerships and apprenticeship administration

**MRS:**

Mine Rescue Services, South Africa. A private sector non-profit organisation that trains volunteer brigadesman who work in the industry and find and recover fellow employees in the event of an underground accident or incident

**MSF:**

Médecins Sans Frontières – Doctors Without Borders

**MUN:**

Mineworkers Union of Namibia

**MWU:**

Mineworkers' Solidarity

**GLOSSARY OF TERMS AND ACRONYMS**

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**N**

**N\$:**

Namibian dollar

**NDA:**

National Department of Agriculture, South Africa

**NEMA:**

National Environmental Management Act, 1998, South Africa

**NETU:**

National Employees' Trade Union

**NGO:**

non-governmental organisation

**NICNAS:**

National Industrial Chemicals Notification and Assessment Scheme

**NIHL:**

noise-induced hearing loss. Compensable cases reported per 1,000 employees

**NIOSH:**

National Institute of Occupational Health and Safety - health and safety organisation based in Washington DC

**NNR:**

National Nuclear Regulator, South Africa

**NOSA:**

National Occupational Safety Association. Provides auditing and certification services, based in South Africa

**NPO:**

non-profit organisation

**NPPR:**

natural property private resource

**NQF:**

National Qualifications Framework

**NUM:**

National Union of Mineworkers (South Africa)

**NYSE:**

New York Stock Exchange

**O**

**ODMWA:**

Occupational Diseases in Mines and Works Act of 1973 (South Africa)

**OHSAS 18001:**

The Occupational Health and Safety Assessment Series, presents requirements for an occupational health and safety (OH&S) management system

**OKIMO:**

Offices des Mines d'or de Kilo Moto

**OLD:**

occupational lung disease. Compensable cases reported per 1,000 employees.

**Open-pit:**

where top layers of soil are removed to uncover the reef

**Operating margin:**

adjusted operating profit as a percentage of gold income including realised non-hedge derivatives

**Ore reserves:**

an ore reserve is the economically mineable material derived from a measured and/or indicated mineral resource. It is inclusive of diluting materials and allows for losses that may occur when the material is mined.

Appropriate assessments have been carried out, including consideration of, and modification by, realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. These assessments demonstrate at the time of reporting that extraction is reasonably justified. Ore reserves are sub-divided in order of increasing confidence into probable ore reserves and proved ore reserves

**OTD:**

old tailings deposits

**Ounces (oz) (troy):**

used in imperial statistics. A kilogram is equal to 32.1507 ounces

**GLOSSARY OF TERMS AND ACRONYMS**

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**P**

**Paterson grading system:**

well-known job classification system used at a number of AngloGold Ashanti operations

**PCAOB:**

Public Company Accounting Oversight Board. Established in the US to oversee and regulate a public company's auditors in terms of the Sarbanes-Oxley Act

**PCDP:**

Public Consultation and Disclosure Plan

**PEC:**

priority existing chemical

**PEPAR:**

President's Emergency Plan for Aids Relief in the United States

**PLH:**

percentage loss of hearing

**PPE:**

personal protective equipment

**Preconditioning:**

drilling of holes ahead of the face to be blasted and detonating these with a light charge. To mitigate against mining-induced seismicity.

**Price received:**

attributable gold income including realised non-hedge derivatives divided by attributable ounces/kilograms sold.

**Prophylactic treatment:**

preventative/precautionary treatment

**Proxies:**

persons authorised to vote/act on another's behalf

**PwC:**

independent auditors PricewaterhouseCoopers

**Q**

**QA/QC:**

quality assurance/ quality control

**R**

**R:**

South African rand

**Rehabilitation:**

the process of restoring mined land to allow an appropriate post-mining use. Rehabilitation standards are determined amongst others by the South African Department of Minerals and Energy, the US Bureau of Land Management, the US Environmental Protection Agency, and the Australian Minerals Industry Code for Environmental Management, and address ground and surface water, topsoil, final slope gradient, waste handling and re-vegetation issues

**Resettlement policy for**

**AngloGold Ashanti:**

based on the IFC's Resettlement Policies, Guidelines and Standards

**Return on equity:**

adjusted headline earnings expressed as a percentage of the average equity, adjusted for the timing of acquisitions and disposals

**Rockburst:**

seismic release of energy, similar to an earthquake, that results in obvious damage to mining excavations

**RPL:**

Recognition of prior learning. Employees' current level of education is established and acknowledged.

**RWD:**

return water dam

**GLOSSARY OF TERMS AND ACRONYMS**

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**S**

**SACU:**

Southern African Customs Union

**SAEWA:**

South African Equity Workers' Association

**SANS:**

South African National Standards

**SAQA:**

South African Qualifications Authority

**Sarbanes-Oxley:**

Sarbanes-Oxley Act of 2002. Introduced into law in the US to set new corporate governance standards for corporate boards and accountability standards and penalties for corporate management

**SECNAMI:**

Section Nationale des Mines et des Industries (Malian trade union)

**Seismic event:**

the transient motion and release of kinetic energy caused by sudden failure of the earth's crust, usually felt as shaking or tremors in the rock mass. Seismic events range in size from barely perceptible tremors to major earthquakes

**SEMOS:**

La Societe d'Exploitation des Mines d'Or de Sadiola

**SETA:**

Sector Education Training Authority

**Shaft:**

vertical or decline - means of transporting men and materials

**SHEC:**

safety, occupational environment, biophysical environment and community investment

**Silicosis:**

occupational lung disease caused by the inhalation of free silica dust which is present in mining where quartz concentrations are high

**SMAT:**

Safety management auditing technique

**SMEDI:**

Small and Medium-sized Enterprise Development Initiative. Set up by AngloGold Ashanti in South Africa to stimulate economic growth by developing small businesses.

**Social Development**

**Toolbox:**

Guide to AngloGold Ashanti's community practices

**SPCC:**

spill countermeasure and contingency plan

**SRI:**

Socially Responsible Investment Index, launched in 2004 by the JSE to identify those companies that integrate the principles of sustainability into their business activities, and to facilitate investment into those companies

**STD:**

sexually transmitted disease

**STI:**

sexually transmitted infection

**T**

**Tailings:**

the rejected material from mining and screening operations

**TB:**

pulmonary tuberculosis

**TEBA:**

The Employment Bureau of Africa. An institution owned by the South African mining industry, through which the industry has historically recruited labour but which now fulfills a broader social role in addition to its recruitment function

**GLOSSARY OF TERMS AND ACRONYMS**

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**TEBA Development:**

Not-for-profit company that undertakes development in rural labour-sending areas

**Total cash costs:**

total cash costs include site costs for all mining, processing and administration, as well as contributions from byproducts and are inclusive of royalties and production taxes. Amortisation, rehabilitation, corporate administration, retrenchment, capital and exploration costs are excluded. Total cash costs per ounce are the attributable total cash costs divided by the attributable ounces of gold produced

**Total production costs:**

total cash costs including amortisation, retrenchment, rehabilitation and other non-cash costs. Corporate administration, capital and exploration costs are excluded. Total production costs per ounce are the attributable total production costs divided by the attributable ounces of gold produced

**TRI:**

toxic relief inventory

**TSF:**

tailings storage facility. An engineered dam, designed and constructed as a repository for the ground rock or tailings after gold has been extracted.

**TSI:**

Tshikululu Social Investments. Non-profit organisation. Specialist managers of social investment – managers of the AngloGold Ashanti Fund

**U**

**UASA:**

United Association of South Africa (South African trade union)

**UNDP:**

United Nations Development Programme

**UN General Assembly:**

United Nations General Assembly

**UNEP:**

United Nations Environment Programme

**USFS:**

U.S. Forest Service

**USFWS:**

U.S. Fish and Wildlife Service

**V**

**VCT:**

voluntary counselling and testing

**VLF:**

valley leach facility

**W**

**WAD:**

weak acid dissociable

**WHO:**

World Health Organization

**Z**

**ZDD:**

zero discharge dam

**GLOSSARY OF TERMS AND ACRONYMS**

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SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this Current Report to be signed on its behalf by the undersigned, thereunto duly authorized.

AngloGold Ashanti Limited

Date: MARCH 22, 2006

By:

Name: C R Bull

Title: Company Secretary