

# Tanzania

## Country Report 2008



# Tanzania

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Geita Hill Pit, Tanzania

## SCOPE OF REPORT

The Country and Operational Reports, of which this is one, are produced annually as a component of AngloGold Ashanti's Report to Society which, in turn, forms part of a suite of annual reports through which the company communicates with a wide range of stakeholders and business partners. These stakeholders and business partners include shareholders, employees, community members and many other interested parties in all the countries and regions in which the group operates, as well as regional and national governments.

The main purpose of the Country and Operational Reports, which are primarily web-based documents available in pdf format, is to provide a greater level of detail on the issues and challenges of sustainable development within the group. However, they also draw on information from the company's Annual Financial Statements and Mineral Resource and Ore Reserve Report so that the reader forms a complete picture of the operation/s in the country in question.

This report has been produced in accordance with the G3 guidelines of the Global Reporting Initiative (GRI) and in alignment with the principles of the International Council on Mining and Metals (ICMM). AngloGold Ashanti is an organisational stakeholder of the former and a member of the latter. This report also conforms to the reporting requirements of the UN Global Compact and the Extractive Industries Transparency Initiative (EITI) both of which are supported by AngloGold Ashanti.

The full set of AngloGold Ashanti annual reports are available at [www.aga-reports.com](http://www.aga-reports.com) or, on request, in hard copy from the contacts detailed at the end of this report.

Note: Throughout this report, dollar or \$ represents US dollars unless otherwise stated.

# Message

from Graham Ehm



To say that 2008 has been a challenging year for Geita would be an understatement. The production difficulties, which started in 2007 with the failure of the highwall in the productive Nyankanga pit, continued with some significant breakdowns of major mining equipment and in the process plant. The tail-end of the global resources boom continued to create a high demand for skilled people adding to issues of staff attraction and retention. Ironically, however, the global financial crisis served to bring some relief as the gold price improved and oil prices declined.

It is important to acknowledge and thank the people of Geita Gold Mine who, in the face of these testing conditions, continued to apply themselves diligently. Their efforts have resolved many issues and are paving the way to future success.

Throughout 2008, AngloGold Ashanti continued to underwrite cash shortfalls, and it is fair and sensible to ask why this was the case. It is fair for the Tanzanian Government and other social partners to ask the same question, and to query the value that Geita adds to the community and other stakeholders. Let me try and answer this question honestly, and to provide a few thoughts on the future for Geita and the road to a successful gold mine.

Let me start by saying that AngloGold Ashanti has faith in the mine and believes that Tanzania is great place to do business. AngloGold Ashanti's vision is to become the leading mining company and I am of the firm opinion that Geita has the potential to become the leading gold mine within the group.

With good potential for further resource growth within the mining lease and region, the orebody is world class. Not only is there open-pit potential, but there is scope for the mine to continue underground. The region in which we operate is highly prospective. Adding to this is the fact that AngloGold Ashanti has invested in quality plant and infrastructure.

The Tanzanian Government is supportive of the mining industry, and understands the challenges it faces. We value the good relationship we have with our local Geita district community, and thank them for the supportive and constructive manner in which we engage on local and wider issues. All this means that the fundamentals are right.

We need to focus on our operating practices, where, compared with best practice, we have some distance to go before we recover our former position. Our mining and milling productivities can be increased significantly. Our maintenance practices are falling well short of best practice. We are not using the talents and skills of our people effectively. Our planning, scheduling and execution needs considerable improvement. We need to engage the talents and energies of our people.

This is where AngloGold Ashanti's Business Improvement Project will provide the pathway to our recovery. Firstly, we will operate in line with the company's vision and values. Secondly, using the company's System for People in the human resources field, we will provide the right organisational structure and supporting systems so that all our people are effectively engaged and feel accomplished in the work they do. Finally the company's Business Process Framework will provide the right processes so that we do the 'right work, the right way at the right time', drive productivity, reduce variation and drive costs down. With a strong belief that 'people are the business', we'll strive to invest in our employees as they are central to the future of Geita.

Geita has a bright future and it is ours to create.

**Graham Ehm**  
Managing Director: Geita Gold Mining Limited  
6 March 2009

# Corporate profile

## – Group



AngloGold Ashanti Limited, a leading global gold mining company, has a varied portfolio of assets which includes surface, open-pit and underground operations in key gold-producing regions around the world. At the end of 2008, the company had 21 operations located in 10 countries (South Africa, Argentina, Australia, Brazil, Ghana, the Republic of Guinea, Mali, Namibia, Tanzania and the United States) on four continents, together with a substantial project pipeline and a focused, global exploration programme. Greenfields exploration is currently being conducted in Western Australia, Colombia and the Democratic Republic of Congo (DRC), and the group is involved in exploration partnerships and joint ventures in Russia, China and the Philippines. AngloGold Ashanti's corporate office is in Johannesburg, South Africa.

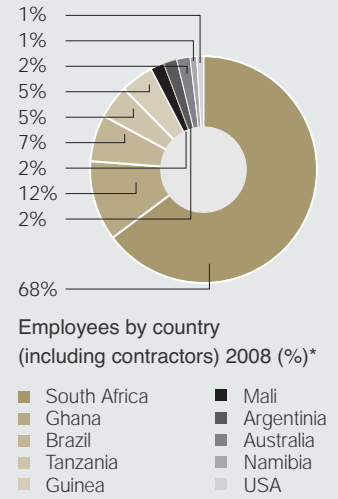
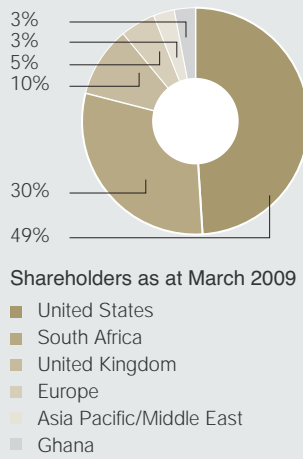
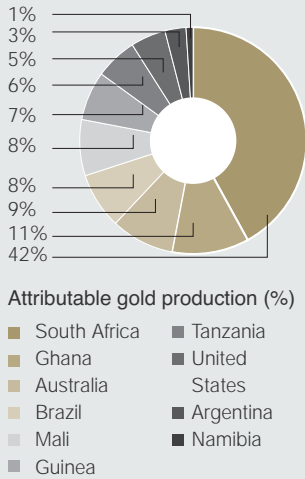
AngloGold Ashanti produced 4.98 million ounces of gold in 2008, of which 2.73 million ounces (55%) came from deep-level operations and the balance of 2.25 million ounces (45%) from shallower and surface operations around the world. As at 31 December, the group employed 62,895 people, comprising 50,206 employees and 12,689 contractors and had proved and probable ore reserves of 74.9 million ounces of gold. Capital expenditure for the year amounted to some \$1.2 billion.

### Stock exchange information

AngloGold Ashanti's primary listing is on the JSE (Johannesburg). It is also listed on exchanges in New York, London, Paris and Brussels as well as in Australia and Ghana. AngloGold Ashanti had 353,483,410 ordinary shares in issue and a market capitalisation of \$9.8 billion as at 31 December 2008 (31 December 2007: \$11.9 billion). At year-end most shareholders' free float, that is, excluding Anglo American and Government of Ghana positions, were located in the Americas (46%), South Africa (36%), the United Kingdom (9%), Europe (6%) and Asia Pacific/the Middle East (3%).

### Guided by values

AngloGold Ashanti remains a values-driven company. Its values, the foremost of which is safety, together with the group's business principles, continue to guide the actions of the company, its managers and employees, particularly in respect of sustainable development. These values and principles underpin all that the group does and form the basis of its relationships with others – shareholders, employees, communities, business partners, governments and civil society organisations. In this report, performance is measured against these values and principles, and progress recorded.



\* Due to rounding up percentages may add up to >100%

# Corporate profile

## – Tanzania

Geita, which began production in 2000, is the largest of AngloGold Ashanti's eight open-pit mines in Africa and the only operation that the group has in Tanzania.

Prior to April 2004, the mine was managed under the joint venture agreement between Ashanti and AngloGold. Following the business combination between the two companies, Geita became a wholly owned subsidiary.

Geita produced 264, 000 ounces of gold in 2008, equivalent to 6% of the group's global production, and employed 3,116 people (including contractors).



Geita, Tanzania

# Review of operations



Geita		2008	2007
Pay limit	(oz/t)	0.10	0.09
	(g/t)	3.10	3.04
Recovered grade	(oz/t)	0.056	0.059
	(g/t)	1.92	2.01
Gold production	(000oz)	264	327
Total cash costs	(\$/oz)	728	452
Total production costs	(\$/oz)	929	601
Capital expenditure	(\$m)	53	27

## GEITA

### Description

The Geita gold mine is situated 80 kilometres south-west of the town of Mwanza in the north-west of Tanzania.

### Mining and processing

The Geita gold deposit is an Archaean mesothermal orebody, largely hosted in a banded ironstone formation. It is a multiple open-pit operation with further underground potential which is currently serviced by a 5.2-million-tonne per year carbon-in-leach (CIL) processing plant.

### Operating review

Production at Geita declined by 19% to 264,000 ounces in 2008. Lack of access to higher-grade orebodies following the collapse of the Nyankanga pit in the first quarter of 2007 continued to have an effect on recovered grades which declined to 1.92g/t. Process plant throughput was seriously affected by a 30-day shutdown of the SAG mill during part of September and October, resulting in a halving of production for that period.

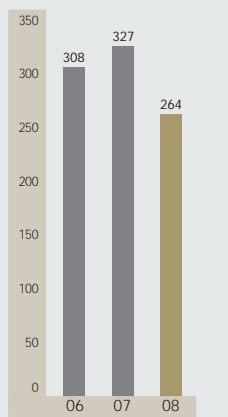
Global Inflation affected the entire business. Major contributors to the 55% increase in total production costs of \$929/oz included the price of oil, which affected on-site power generation and the running costs of heavy earth-moving equipment, as well as that of spares and reagents. Although a substantial increase in basic salaries was enforced, the total number of employees was reduced through natural attrition by 9% for the year with further consolidation of functions envisaged in the future. In addition, a fourth shift was introduced in the production arena, which had the effect of reducing overtime requirements by some 90%.

Capital expenditure of \$53 million, double that of 2007, was spent on the purchase of heavy mining equipment and exploration costs.

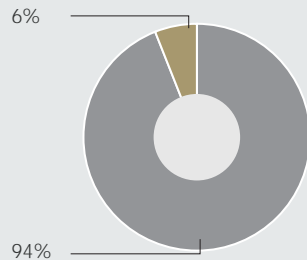
### Growth prospects

#### Exploration

Exploration activities during 2008 focused on strike additions at the Area 3, Star & Comet, Kalondwa Hill and Lone Cone deposits, together with the detection of regolith gold anomalies below laterite cover via air core drilling at Matandani NW. Results suggest the potential for a 1.7-kilometre zone of gold mineralisation on-strike at Area 3, and infill drilling to prove up the resource continues. To assist future exploration, an airborne geophysics survey of the areas covered by Geita's licences and adjacent prospecting licences started in the third quarter. Early interpretation

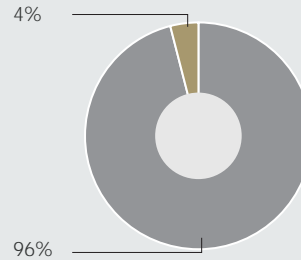


Gold production (000oz)  
Geita



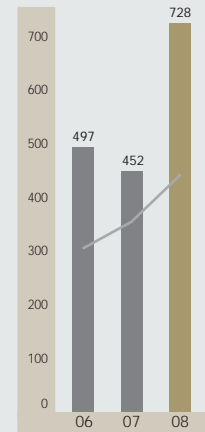
Contribution to attributable group production in 2008 (%)

■ Geita  
■ Rest of the world



Capital expenditure

■ Geita  
■ Group



Total cash costs (\$/oz)  
Geita

■ Total cash costs  
— Group average

of transient electromagnetic data defined several targets which will be followed up in 2009. During the third quarter of 2008, an intense programme of advanced grade control was completed at Nyankanga Cut 5 to increase confidence in the production forecast for 2009.

### New pits

While the Star & Comet pit was commissioned during 2008, the Lone Cone pit was depleted. Pushback 5 in the Nyankanga pit will start yielding ore during the first quarter of 2009. Together with the Star & Comet, these two pits will be the main sources of ore in 2009. The Geita Hill pit will provide the background tonnes, albeit at a much lower grade.

### Metallurgy

Test work continues to identify processing options regarding the refractory ore from Matandani and Kukuluma. These resources have significant potential, but require unconventional processing.

### Outlook

Gold production in 2009 is forecast to increase to 315,000 ounces at a cost ranging from \$800/oz to \$820/oz as higher-grade ore is intersected in the mining schedule. Capital expenditure of \$17 million is planned, which includes stay-in-business expenditure and exploration expenditure.



Geita, Tanzania

# Mineral resources

## and ore reserves

Ore reserves and Mineral Resources are reported in accordance with the minimum standard described by the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code, 2004 edition), and also conform to the standards set out in the South African Code for the Reporting of Mineral Resources and Mineral Reserves (the SAMREC 2000 Code). Mineral Resources are inclusive of the Ore Reserve component unless otherwise stated.

AngloGold Ashanti had Mineral Resources of 241 million ounces and Ore Reserves of 74.9 million ounces at 31 December 2008. Of these, Tanzania accounted for Mineral Resources of 12.86 million ounces and Ore Reserves of 5.11 million ounces.

### Mineral Resource

As at 31 December 2008

Tanzania	Category	Tonnes million	Grade g/t	Contained gold tonnes	Contained gold Moz
	Measured	–	–	–	–
	Indicated	83.84	3.63	304.10	9.78
	Inferred	25.12	3.81	95.77	3.08
	<b>Total</b>	<b>108.96</b>	<b>3.67</b>	<b>399.87</b>	<b>12.86</b>

### Ore Reserve

As at 31 December 2008

Tanzania	Category	Tonnes million	Grade g/t	Contained gold tonnes	Contained gold Moz
	Proved	–	–	–	–
	Probable	54.30	2.93	159.06	5.11
	<b>Total</b>	<b>54.30</b>	<b>2.93</b>	<b>159.06</b>	<b>5.11</b>

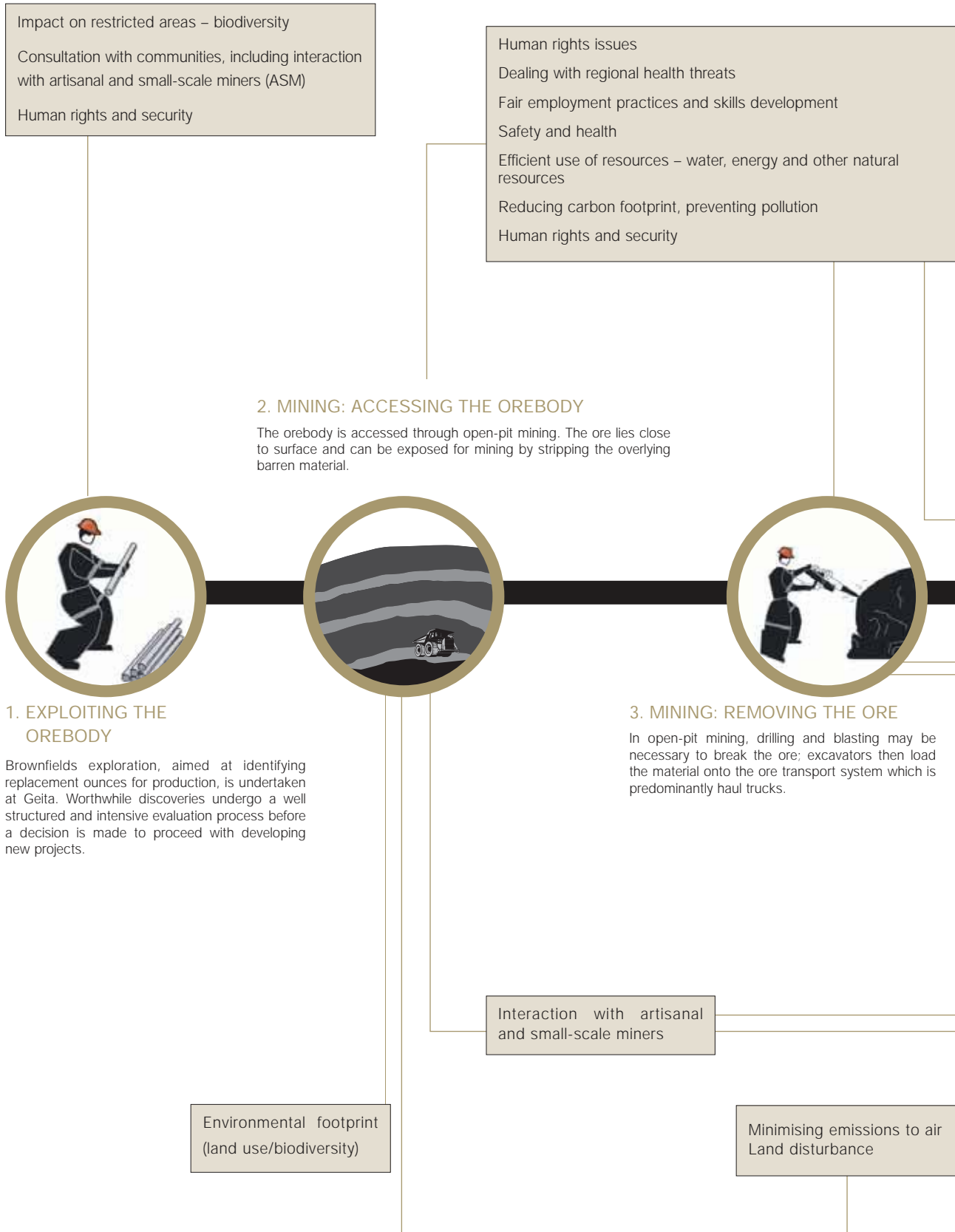
More detailed information on the Mineral Resources and Ore Reserves at Geita may be found in the AngloGold Ashanti Mineral Resource and Ore Reserve Report 2008 which is available on the corporate website [www.anglogoldashanti.com](http://www.anglogoldashanti.com)



Geita, Tanzania

# Sustainability footprint

*This section illustrates key sustainability issues during the cycle of mining and processing gold at Geita.*



The process of producing gold can be divided into the following main activities:

- Finding the orebody
- Mining – Creating access to the orebody
- Mining – Removing the ore
- Mining – Transporting the broken material to plants for treatment
- Processing
- Refining
- Mine site rehabilitation

#### 4. MINING: TRANSPORTING BROKEN MATERIAL TO PLANTS FOR TREATMENT

In open-pit operations the haul trucks deliver the ore directly to the processing facilities.



Minimising emissions and preventing pollution  
Efficient use of resources  
Management of cyanide  
Reducing carbon footprint

#### 6. REFINING

The doré bars are transported to a precious metal refinery for further processing. In this process gold is upgraded to a purity of 99.5% or greater for sale to a range of final users. High purity gold is referred to as 'good delivery' which means that it meets the quality standards set by the London Bullion Market Association and gives the final buyer assurance that the bar contains the quantity and purity of gold as stamped on the bar.



#### 5. PROCESSING

Comminution involves the breaking up of ore into small particles so that the contained gold minerals are exposed. This is undertaken by a combination of multi-stage crushing and milling circuits. Recovery of gold can then commence, depending on the nature of the gold contained in the ore.

Free milling and oxidised refractory ores are processed for gold recovery by leaching the ore in agitated (stirred) tanks in an alkaline cyanide leach solution. In this process, ore is crushed and heaped on an impervious or lined leach pad. Low strength alkaline cyanide solution is irrigated over the heaped pad for periods of up to three months. The dissolved gold-bearing solution is collected from the base of the heap and transferred to carbon-in-solution (CIS) columns where the gold cyanide complex is adsorbed onto activated carbon.

Gold which has loaded (adsorbed) onto activated carbon is recovered by a process of re-dissolving the gold from the activated carbon (elution), followed by precipitation in electro-winning cells and subsequent smelting of the precipitate into doré bars.

Local economic development and sustainable social investment

Rehabilitation and achieving closure

Post-closure monitoring

Engaging with communities



#### 7. MINE-SITE REHABILITATION

Once mining has been completed, operations are 'closed' and rehabilitation activities begin to return the land to a productive state. (Rehabilitation is the process of reclaiming mined land to the condition that existed prior to mining or to a pre-determined post-mining use.) Planning for this process is undertaken during the life of mine.

Minimising emissions (air quality)

# Economic performance

## KEY DEVELOPMENTS

- Continued restructuring to focus on new AngloGold Ashanti strategy.
- New company vision, mission and values developed.
- Group-wide Business Improvement Project launched.
- Significant payments to government, reported in line with the guidelines of the Extractive Industries Transparency Initiative (EITI), a coalition of governments, companies and civil society.

## ECONOMIC IMPACT

AngloGold Ashanti has an important impact on the economy of Tanzania. In 2008, Geita produced 264,000 ounces of gold and employed 3,116 people. In addition, the company spent \$373,000 on projects to encourage local economic development as well as a number of corporate social investment initiatives. These aspects are discussed in greater detail in the Community section of this report.

### Key economic impacts – Geita 2008

	\$000
Revenue generated in the country of operation	327,671
Cost of sales in country of operation	300,975
Dividends paid to government	–
Amounts paid for salaries, wages and other benefits	38,166
<b>Taxation</b>	
- Taxation paid in 2008*	715
- Provision for taxation in 2008*	(3,861)
- Withholding tax (STFC, royalties, etc)	6,966
- Other indirect taxes and duties	18,251
- VAT paid	5,428
- VAT refunded	(3,785)
- Employee taxes and other contributions**	12,165
- Property tax	–
- Other taxes	369
Capital expenditure	53,000
Exploration expenditure	2,333
Corporate social investment expenditure	373

\* Includes capital gains tax.

\*\* Includes remittance made to the government but borne by employees as individual taxation, eg. PAYE, UIF.

As a member of the EITI, AngloGold Ashanti supports its request for transparency in the disclosure of payments to government and receipts from governments. Geita did not receive any financial assistance from the Government of Tanzania during 2008.



Geita, Tanzania

# Ethics and governance

## KEY DEVELOPMENTS

- Amendments made to Conflict of Interest and Gifts, Hospitality and Sponsorship policies during the year.
- Voluntary compliance with a number of organisations.

## ANGLOGOLD ASHANTI VALUES

In respect of ethics and governance, the AngloGold Ashanti values state that:

***We are accountable for our actions and undertake to deliver on our commitments.***

*We are focused on delivering results and we do what we say we will do. We accept responsibility and hold ourselves accountable for our work, our behaviour, our ethics and our actions. We aim to deliver high performance outcomes and undertake to deliver on our commitments to our colleagues, business and social partners, and our investors.*

## GOVERNANCE

AngloGold Ashanti remains committed to the highest standards of corporate governance. Corporate governance is the responsibility of the Board of Directors as a whole, with some authority delegated to the Audit and Corporate Governance Committee of the board and the management Disclosure Committee. Further details on Corporate Governance may be found in the Annual Report at [www.aga-reports.com](http://www.aga-reports.com).

### *Legal issues*

No significant legal issues arose at Geita in 2008.

### *Voluntary compliance*

In addition to its regulatory obligations, AngloGold Ashanti firmly believes in self-regulation and holds the view that local and international industry leaders should establish robust standards against which companies should perform and be measured. The group is actively involved in a wide range of organisations and initiatives, and is either a member of or signatory to the organisations listed below. It actively supports their aims and objectives, and participates in their development and functioning.

- United Nations Global Compact (UNGC)
- International Council on Mining and Metals (ICMM)
- Responsible Jewellery Council (RJC)
- Global Reporting Initiative (GRI)
- Extractive Industries Transparency Initiative (EITI)
- International Cyanide Management Code for the Manufacture, Transport and Use of Cyanide in the Production of Gold (Cyanide Code)
- Voluntary Principles on Human Rights



Geita, Tanzania

# Ethics

## and governance



### *Political donations*

Where political donations are made, these are subject to full disclosure. The group's purpose in making these donations is not to advance its immediate, narrow commercial interests, but rather to promote political competition and public scrutiny of policy and law-making, and the exercise of executive power.

No political donations were made in Tanzania in 2008.

### *Policies and procedures*

AngloGold Ashanti has a number of policies and procedures in place to ensure that employees are aware of what is expected of them and that they conform as appropriate. Employee induction regarding these policies and procedures is mandatory. Some of the policies in place are discussed below.

- The Market Abuse (Insider Trading) Policy applies to employees and directors and effectively prohibits them from trading shares when they have access to unpublished, material information concerning the company or its operations.
- The Gifts, Hospitality and Sponsorship Policy aims to ensure that no supplier receives undue favour and that employees do not compromise their integrity and impartiality by the receipt or giving of gifts. The policy was amended during the year to include sponsorships.
- The Conflict of Interest Policy aims to ensure that the company's commercial transactions take place in a manner that ensures the integrity and fairness of the company's contract and tender processes. The policy applies to all employees and was amended during the year to include the coherent and comprehensive response that must be made once a conflict has been declared.

### *Code of Ethics and confidential reporting (whistle-blowing)*

To comply with the obligations of the Sarbanes-Oxley Act and the King Report on Corporate Governance, 2002, and in the interests of good governance, the company has systems and procedures to introduce, monitor and enforce its ethical codes (including risk related to corruption at all operations). The whistle-blowing policy and process encourages employees and other stakeholders to confidentially and anonymously report acts of an unethical or illegal nature that are prejudicial to the company's interests and compromise its values.

The codes and the whistle-blowing policy are available on the company's website at [www.aga-reports.com/08/governance.policies.htm](http://www.aga-reports.com/08/governance.policies.htm). Reports may be submitted via the intranet, internet, telephone, fax and post, and an initiative is under way to implement text messaging as a further medium for reporting.

All reports made in terms of the whistle-blowing policy are administered by a third party, Tip-Offs Anonymous, to ensure confidentiality or anonymity. The information is relayed through a reporting structure to an independent official and internal audit for investigation. Feedback on reports is given when requested. A report is provided to the Audit and Corporate Governance Committee on a quarterly basis.

# Safety and health

## KEY DEVELOPMENTS

- Re-evaluation of the group's mission, vision and values, and affirmation of safety and health as the group's first value.
- Start of a safety and health transformation project to develop a strategic 'blueprint' for AngloGold Ashanti.
- Geita:
  - tackles its biggest safety challenges and makes significant progress; and
  - makes periodical medical surveillance examinations compulsory for all employees returning from leave.

## SAFETY: IS OUR FIRST VALUE

A key part of AngloGold Ashanti's safety initiative in 2008 was the assertion that safety is the group's first value. This was the focus of the extensive safety initiative conducted during the year to ensure that this value is both understood by all and put into practice at all levels within the group. The following is an extract from AngloGold Ashanti's statement of values:

### ***Safety is our first value***

*We place people first and correspondingly put the highest priority on safe and healthy practices and systems of work. We are responsible for seeking out new and innovative ways to ensure that our workplaces are free of occupational injury and illness. We live each day for each other and use our collective commitment, talents, resources and systems to deliver on our most important commitment...to care.*

## MANAGEMENT AND ACCOUNTABILITY

### *Group leadership*

In line with the increased emphasis on the management systems that underpin safety and health, a group-level safety manager oversees and reports on integrated practices, guides policy and reviews performance. The Group Manager: Safety (assisted by safety and health experts) reports to the Executive Vice President: Sustainability, who reports on safety and health matters at the company's regular Executive Committee meetings and safety executive meetings. At board level, oversight of safety and health falls within the ambit of the Safety, Health and Sustainable Development Committee.

AngloGold Ashanti has embarked on an occupational safety and health leadership transformation project to create a strategic 'blueprint' for occupational safety and health in the company. The project is being conducted in conjunction with external consultants, ZEAL, and with the full involvement of the group's safety and health management structures.

### *Managing safety and health*

The group is committed to complying with all relevant occupational health and safety laws in all the countries where it has operations. Geita falls under the Tanzanian Mining Act 1998, Occupational Health and Safety Act 2003, Explosives Act 1963 and Industrial and Consumer Chemical Act 2003. There were no incidents of non-compliance recorded in 2008.

The operation achieved OHSAS 18001 certification in November 2007. A surveillance audit for recertification was held in October 2008.

Geita has a Safety Department which is headed by the Safety Manager who has safety and occupational health superintendents reporting to him. While the Safety Manager and his staff provide technical support and guidance to the various departments on the mine, department heads, line managers and employees themselves are expected to take responsibility for this function. The Safety Manager reports directly to the Managing Director.

### *Employee involvement*

At Geita, there is a health, safety and environmental representative for every 50 employees. They make up the Safety and Health Representatives' Committee which meets twice a month. The chairman of this committee is drawn from the ranks of the representatives themselves with the Safety Manager and officers acting in a supervisory capacity. Contractors are also represented at these meetings.

# Safety and health

Apart from this committee, employees participate in the daily toolbox talks and the monthly safety meetings which are held by every head of department on the mine.

Employees are also involved in the identification of hazards and in safety and health inspections.

## *Communication and training*

In addition to the regular meetings discussed above, noticeboards, signboards (with safety slogans in English and Swahili) and e-mails are used to communicate safety and health messages.

Every new employee goes through a safety induction process before starting work. The mine provides courses for the health, safety and environmental representatives and for supervisors while specific training is given in hazard identification, first aid, emergency response and fire-fighting, and in the handling of cyanide.

## SAFETY

### *Safety performance*

No fatal injuries occurred at Geita during 2008, however, the Lost Time Injury Frequency Rate (LTIFR) per million hours worked deteriorated, from 0.68 in 2007 to 0.86. The causes of the seven lost time injuries recorded by the mine were as follows: vehicles (three), equipment (three) and machinery (one).

Fatal Injury Frequency Rate (FIFR) per million hours worked			
	2008	2007	2006
Geita	0.00	0.00	0.00

Lost Time Injury Frequency Rate (LTIFR) per million hours worked			
	2008	2007	2006
Geita	0.86	0.68	0.63

### *Risk assessments*

The mine's entire baseline risk assessment was reviewed, including the standards and procedures followed to ensure conformity with OHSAS 18001 requirements.

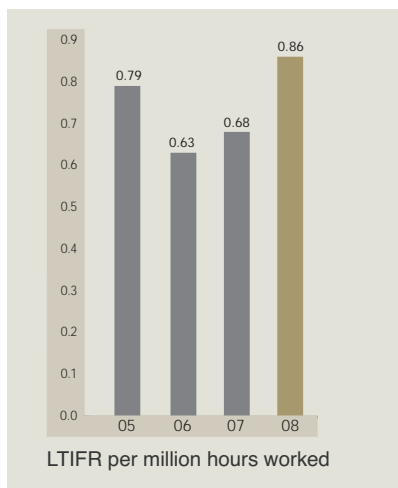
The primary risks identified were:

- rock falls;
- geotechnical failure;
- equipment catching fire;
- mined-out areas that are not backfilled;
- interface mining; and
- transport of excavators in certain circumstances.

To address these, objectives for the reducing of each risk as well as target dates form part of Geita's safety and health strategy. The revised standards and procedures include the carrying out of planned task observation and training for employees who work in areas where there are high risks.

### *Emergency preparedness*

Geita has a 15-strong emergency response team as well as a fire-fighting team which has all the necessary equipment. All the employees who make up these teams are fully trained to handle all kinds of emergencies – vehicle accidents, chemical spillages, fire, flooding, for example – and drills are held once a month. The mine has a fully equipped clinic on site with doctors and a paramedic on the staff.



Geita, Tanzania

### Safety challenges

Geita's biggest safety challenges are vehicle accidents, fatigue and equipment catching fire. A traffic function was established in 2008 to carry out speed trapping across the mine, to increase driver awareness, to retrain all drivers (including those working for contractors) and to improve signage. Fines were also reviewed. Since these steps were taken, vehicle accidents have decreased by almost 99%.

To tackle the problem of fatigue, a fourth shift was added to the work schedule, which gives operators more resting days. The result has been a 92% reduction in fatigue-related incidents.

Equipment is washed regularly to remove any oil spillages that could cause fires.

## HEALTH

Dust and noise pose the greatest health challenges at Geita which put employees at risk of occupational lung disease (OLD), comprising silicosis and TB, and noise-induced hearing loss (NIHL) which develops as a consequence of consistent exposure to high levels of noise (in excess of 85dBA) over an extended period of time. Dust and noise are monitored throughout the mine on a regular basis to minimise employees' exposure to these risks and personal protective equipment (PPE) is issued to all at-risk employees. Lead tests are also undertaken on employees who work in the gold room.

As was the case in 2007, no new cases of NIHL were reported in 2008 while only one new case of TB was detected during this period (2007:0).

### Medical surveillance

In 2008, Geita carried out over 530 initial (pre-employment), 900 periodic and 350 exit medical examinations on employees at its clinic. This demonstrates a significant increase in the number of employees undergoing periodical tests from last year when 148 were recorded. This is because more employees are being released by their departments for these examinations and it has now become a requirement at the mine that no one who returns from leave may re-enter the workplace before undergoing a medical examination.

### OBJECTIVES FOR 2009

AngloGold Ashanti has set a number of objectives for safety and health performance in 2009 including:

- 20% reduction in all injury rates; and
- continued strengthening of occupational safety and health systems across all operations.
- In addition to these, Geita plans to:
  - reduce its 12-hour shift to eight hours to solve fatigue issues completely;
  - identify hazards and carry out planned task observations continually;
  - improve the visibility of road signs; and
  - have safety officers on duty for day and night shifts.

# Employment

## KEY DEVELOPMENTS

- Revision of AngloGold Ashanti's vision and values, and their communication to employees.
- Development of the System for the Management of People, based on the Requisite Organisation model.
- Restructuring of responsibilities and hierarchy in line with corporate strategy.
- Implementing a company-wide approach to collective bargaining.

## ANGLOGOLD ASHANTI VALUES

AngloGold Ashanti's values, as reviewed and redefined in 2008, are underpinned by the philosophy that 'People are our business... our business is people'. The group's values specifically state:

***We treat each other with dignity and respect.***

*We believe that individuals who are treated with respect and who are entrusted to take responsibility respond by giving their best. We seek to preserve people's dignity, their sense of self-worth in all our interactions, respecting them for who they are and valuing the unique contribution that they can make to our business success. We are honest with ourselves and others, and we deal ethically with all of our business and social partners.*

***We value diversity.***

*We aim to be a global leader with the right people for the right jobs. We promote inclusion and teamwork, deriving benefit from the rich diversity of the cultures, ideas, experiences and skills that each employee brings to the business.*

Giving life to this are AngloGold Ashanti's undertakings or business principles related to the group's labour practices.

## MANAGEMENT SYSTEMS AND ACCOUNTABILITY

Operational restructuring has been undertaken across AngloGold Ashanti over the past year to align the company's structure with the revised corporate strategy and the new executive team, and to bring the leadership of the operations closer to the company. Key developments here include the appointment in late 2007 of three operational heads (one in Africa, one in Australia and one in the Americas) and the separation of divisional responsibility in Africa.

Given AngloGold Ashanti's renewed vision and values and revised company strategy, a complete review of the group's human resources management systems and structure, called the System for the Management of People (SMP) is being undertaken. This is considered a strategic imperative within the context of a changing world of work and the current socio-economic climate and continued key skills shortages in the mining industry. This SMP is particularly relevant for the management of the group's talent at all levels and across all operations.

## EMPLOYMENT PRACTICES

AngloGold Ashanti is committed to upholding the Fundamental Rights Conventions of the International Labour Organisation (ILO), ensuring the implementation of fair employment practices by prohibiting forced, compulsory or child labour. It is also committed to creating workplaces that are free of harassment and unfair discrimination.

AngloGold Ashanti's employment policy:

- recognises and promotes diversity within the company;
- acknowledges that women have an equal right to participate in mining and a career; and
- regards the employment of locals and the replacement of expatriate employees as a priority.

The group's policy encourages the employment of locals and replacement of expatriate employees over time through skills transfer programmes and the career development of citizens of the country.

Remuneration and overtime policies were implemented at Geita in June 2008.



Geita, Tanzania

## EMPLOYMENT REVIEW

A total of 3,116 people were employed in Geita in 2008 (2,130 permanent employees and 986 contractors). The mine had a turnover rate of 13%. This is a slight improvement on last year, when it was 15%, but considerably higher than the 8% rate for the group as a whole. There is a worldwide shortage of skilled employees in the mining sector and main reason for Geita's high turnover rate is the loss of staff to other mining companies in Tanzania. Another factor is the roster system in place at some other mines which allows employees to work for two months out of three. Geita is addressing the issue of fatigue (see Safety and health section of this report).

### Employees and contractors

Operation	2008			2007		
	Employees	Contractors	Total	Employees	Contractors	Total
Geita	2,130	986	3,116	2,304	922	3,226

### *Freedom of association and collective bargaining*

AngloGold Ashanti recognises that freedom of association is a fundamental right of all employees and contractors, and adheres to collective bargaining agreements with due regard to the relevant legislation of a particular country. In the case of Tanzania, this is the Employment and Labour Relations Act, 2004 and the Employment and Labour Relations (Code of Good Practice) Rules, 2007.

At Geita, a Code of Conduct and Access Agreement (effectively a recognition agreement) between the Tanzania Mines and Construction Workers' Union (Tamico) has been in force since June 2003. Only 5% of employees (102 workers) are unionised and the collective bargaining agreement covers 7% of the workforce.

Employees are represented through the Junior Staff Council and the Senior Staff Forum. Meetings of these bodies provide the opportunity for consultations and discussions.

# Employment

## *Benefits and conditions of service*

AngloGold Ashanti aspires to be the employer of choice in the regions and countries in which it operates, offering attractive and fair remuneration practices and conditions of service. In Tanzania, a minimum wage has been legislated for the mining industry. This is well above other legislated minimum wages in the country as part of that government's intention that mineworkers should benefit from the mineral wealth of the country. AngloGold Ashanti's remuneration exceeds this.

A full medical service is provided free of charge to employees and their dependants (a spouse and up to four children below the age of 18 years) at the on-site clinic and there are hospitals which are contracted to take referral cases in Mwana and Dar es Salaam. Maternity/paternity leave is one of the benefits of service.

All employees receive a housing allowance and there is a housing loan scheme in place for those who wish to own their own homes.

Geita's reward system is based on remunerating people for their performance. Senior staff members undergo performance and career development reviews twice a year. In 2008, 199 employees were reviewed. Pension and provident fund schemes are in place and applicable to all employees.

## *Training and development*

AngloGold Ashanti places great emphasis on training and development. Training and development initiatives at all levels – from Adult Basic Education and Training (ABET) and skills development to graduate training and executive development programmes – underpin the group's System for the Management of People and ensure the requisite skills are in place for the future.

Training at Geita falls into the following categories: safety (first aid and hazard identification, for example); process (course modules for employees working in the process plant); engineering; artisan skills (boiler-making, fitting, electrical, auto-electrical and rigging trades); and operators' skills (for operators working on different machines in the open pit). A total of \$1,487,587 was spent on training in 2008.

As is the case at all AngloGold Ashanti operations, bursaries and scholarships for employees, their dependants and community members are offered at Geita. The purpose is to make a contribution to local skills development. In 2008, the mine supported three bursary candidates who are pursuing tertiary studies in mining and related fields.



Geita, Tanzania



Geita, Tanzania

### *Diversity and equal opportunity*

AngloGold Ashanti recognises and promotes the diversity of the people within its host countries and within the company. It is cognisant of requirements in certain countries to address past and institutionalised inequities while affording all employees the opportunity to develop further in their chosen careers.

At the group's African operations, the employment of locals and the replacement of expatriate employees at senior levels is a priority which is supported by skills transfer programmes and the appointment of understudies. Legislation in Tanzania requires that nationals should be considered first for all jobs and expatriates only employed if that skill cannot be found in the country. The national target that has been set is that the expatriate complement at any operation should not exceed 5%.

Since 2006, there has been a great focus at Geita on upgrading and aligning the skills of nationals to meet the requirements of the business. Upon engagement, expatriate employees train local employees to take up their positions in due course and there are succession development programmes in place. A major problem, however, is the shortage of technical skills and in 2008, the expatriate component of the total workforce increased to 6.2% from 5.1% in 2007.

AngloGold Ashanti recognises that women have an equal right to participate in mining as a career. At Geita, women make up 7% of the workforce, while 9% of the people in management positions on the mine are female.

The operation has policies to deal with harassment and there is a well-established grievance procedure. Employees are made aware of this during the induction process and through departmental meetings. The principle of equal opportunity is fundamental to all Geita's employment practices.

### OBJECTIVES FOR 2009

AngloGold Ashanti's objectives for 2009 include:

- entrenching company values through employee participation in determining behaviours which support values; and
- delivering and executing a transformation model to ensure the group's licences to mine are maintained across the globe.

# Human rights

## KEY DEVELOPMENTS

- A Vice President for Global Security appointed.
- Global security review undertaken to develop a framework for the management of security issues in line with Voluntary Principles on Security and Human Rights
- Escalating tension between the company and artisanal and small-scale miners, and illegal miners. A shooting incident occurred at Geita.

## THE YEAR IN REVIEW

Respect for human rights is a key principle in many of the policies and practices that are integral to the group's sustainability efforts, and are entrenched in the constitutions and legislation of many of the countries in which the group operates. Oversight and implementation of various practices in this area are largely the function of line managers as they are the direct interface between the company and employees and the company and communities. Human rights cut across a range of disciplines, from safety and health, community and environment, to human resources, ethics and governance.

The group continues to support both the UN Global Compact and the Voluntary Principles on Security and Human Rights (see accompanying case study). A major development during the year was the appointment of a Vice President for Global Security, with a specific remit to ensure that all security operations and practices take due cognisance of human rights.

### *Fundamental human rights conventions*

AngloGold Ashanti is committed to upholding the basic labour rights captured in the Fundamental Rights Conventions of the ILO. Specifically, it seeks to ensure the implementation of fair employment practices by prohibiting forced, compulsory or child labour and implementing these practices through country, operation and shaft level recognition and collective bargaining agreements, and through disciplinary, grievance and non-discrimination agreements and codes. No breaches of fundamental rights were alleged, nor were any charges brought against the company in connection with these during the year. No operations are deemed to be at specific risk in this regard.

### *Human rights training*

AngloGold Ashanti has initiated human rights training – for security personnel in particular – at all operations where this is required.

### *Significant incidents*

Increased levels of tension between the company and both artisanal and small-scale miners and illegal miners are being felt at Geita, and this has necessitated the use of force by security personnel in fulfilling their duties. In line with its commitment to the Voluntary Principles, AngloGold Ashanti advocates minimum force by its own, contracted and state security staff.

In 2008, shots were fired by a guard reacting to an attack by armed intruders at Geita. This incident is discussed in greater detail in the Community section of this report.

See the case study below for an in-depth look at AngloGold Ashanti's approach to security practice.



Geita, Tanzania

## IMPROVING SECURITY PRACTICE IN LINE WITH THE VOLUNTARY PRINCIPLES ON SECURITY AND HUMAN RIGHTS

Securing its assets and ensuring the safety of its employees is not only a right of the company, but a responsibility – to employees, to their communities, to shareholders and to the countries that have entrusted the exploitation of their natural wealth to AngloGold Ashanti. The traditional approach to security focuses specifically on securing assets, particularly as the product reaches further down the processing, smelting and refining end of the process stream, and as its value increases exponentially. In recent years and in various locations however, the security of people and non-product related assets (from cables to building materials) has also become important.

One of the most significant challenges facing the group is that of dealing with artisanal and small-scale miners on the one hand and illegal miners on the other. This is a material issue at the company's operations in Tanzania, Ghana and Guinea, and in Mali to a lesser extent, as well as at the exploration sites in the Democratic Republic of Congo. In these countries AngloGold Ashanti has to work closely with the state to be able to exercise its legal title to its operations, while at the same time being mindful of traditional values and norms as well as access to land. A feature of the year under review has been illegal mining, trespassing and theft.

Given the increasingly complex situations relating to security on the one hand, and the need to ensure compliance with the UN Global Compact and the Voluntary Principles on the other, the company undertook a global security review between May and July 2008 to assess the existing security measures, needs and the way in which the various disciplines can work together. The review was undertaken by Mike Faessler, formerly Director of AngloGold Ashanti's security operations in Colombia, and now Vice President of Global Security.

Security operations have been aligned with industry 'best practices'. A two-to-three-year plan was approved by the Executive Committee for implementation in November 2008. Some of the major recommendations of this review are described below.

- The creation of a global security department (from the base of the existing asset protection discipline) to consolidate, centralise and oversee all aspects of security management.
- The enforcement of threat and security risk assessments for all parts of the portfolio.
- A greater degree of outsourcing to security contractors is being considered as security is not the company's core business. Greater use will also be made of technology to support the security activities in the future.
- To commit resources to better quantify theft of ore and other mining equipment; and to understand the structures and relationships between artisanal miners, gold dealers and 'black market' operations.
- An increase in efforts by the social and security departments to better understand and deal with aggressive and illegal behaviour within the local communities and to engage with non-governmental organisations (NGOs) on this matter.

# Human rights



Geita, Tanzania

Says Faessler: "The company has around 4,000 security professionals supporting its operations globally. These include company employees, host nationality military or police, and subcontractors. Their efforts will now be coordinated by corporate security experts so that they may have a common understanding of what their roles are, and the boundaries (moral and legal) within which they operate. Their actions will be guided by industry best practices.

"While the security arrangements with the police and military are very common in certain host countries, we need to ensure that our relations are transparent and without prejudice. Contracts must be open to scrutiny, and compensation paid directly to authorised governmental authorities. Units deployed are trained and educated regarding the Voluntary Principles. While we hold them accountable for the high levels of compliance that we expect of our own personnel, we often lack jurisdictional authority or operational control over them. Notwithstanding this, when and where we suspect violations occur, we insist on thorough and transparent investigations."

The appropriate level of training, too, is vital to achieve excellence in security operations, says Faessler. "In a series of workshops planned for security managers in early 2009, training will be based on the nine pillars of the new AngloGold Ashanti security management framework – corporate security, asset protection, crisis management, resource management, risk management, policy standards and compliance, training and education, technology management and the Voluntary Principles.

At the same time the group is implementing a human rights grievance management process. "Excellence in security enforcement does not have to come at the expense of respect for human rights. Both objectives are complementary," says Faessler.

He adds: "AngloGold Ashanti will roll out its new security standards to all operations during 2009, with a view to ensuring that all operations will be compliant with the Voluntary Principles by year-end and will be audited against these commitments."

## OBJECTIVES FOR 2009

- Develop the AngloGold Ashanti global framework for collective bargaining.
- Fully embed the functioning of the new Security Department, and appoint requisite staff.
- Roll out new policies and practices for the new security discipline, and train security personnel in respect of the Voluntary Principles.

# Malaria

## KEY DEVELOPMENTS

- Roll out of Obuasi Malaria Control Programme to AngloGold Ashanti's other operations in Africa.
- Substantial decline in malaria cases at Geita.

## ANGLOGOLD ASHANTI'S RESPONSE TO MALARIA

AngloGold Ashanti is committed to prompt and supportive action in response to any major health threats in the regions in which it operates. Malaria not only results in death, illness and absenteeism among employees, it is also a major cause of mortality in young children and pregnant women, with an obvious impact on employees' families and communities.

An extensive integrated Malaria Control Programme is in place at the group's Obuasi mine in Ghana and the lessons learnt here are being applied to AngloGold Ashanti's other operations in Africa, including Geita. All programmes and protocols are based on World Health Organisation (WHO) standards and guidelines.

Malaria programme performance and statistics are reported to the regional management of AngloGold Ashanti on a monthly basis and to the Safety, Health and Sustainable Development Committee of the Board every quarter. The issue is also considered during the company's risk management process.

## MANAGING MALARIA

Overseen by the mine's Health Service Manager, Geita's Malaria Control Programme is based on the Obuasi programme and follows the Tanzanian National Guidelines for Malaria Management. Monthly malaria statistics are reported to the Geita District Malaria Co-ordinator and there is regular liaison with the Tanzanian National Control Programme.

A local Malaria Steering Committee has been established: apart from the mine, the other stakeholders are the Geita District Malaria Co-ordinator, the Geita District Medical Officer, the Geita District Council and the African Medical and Research Foundation (AMREF). This committee, which meets once a month, is currently finalising a proposal for controlling malaria in the district (along the lines of the Obuasi programme) which will be submitted to potential donors to secure external funding. The money raised will be used in conjunction with the funds (some \$170,000) that have been set aside by the mine for this purpose.

Currently, the mine concentrates on the prevention of malaria through education, the use of insecticide treated/impregnated bed nets (ITNs) and chemoprophylaxis (anti-malarial drugs) for employees who are not immune to the disease. In terms of treatment, the emphasis is on the early diagnosis of malaria – the on-site clinic has qualified medical staff and a laboratory – and the administration of Artemisinin-based combination therapy (ACT). When people present with more serious cases of the disease, they are admitted to the clinic's in-patient facilities. Employees and their dependants as well as community members who belong to the Bupa medical aid scheme are treated free of charge. Contractors pay an inclusive fee per visit while community members who do not have medical aid are treated at the Geita District Hospital.

Posters and leaflets are distributed around the mine to raise awareness about the causes and prevention of malaria. Educational material is also sent to employees via e-mail.



Geita, Tanzania

# Malaria

## Malaria overview

A 52% decline in malaria cases has been recorded at Geita: whereas there were 3,212 cases in 2007, the total was 1,557 in 2008. Particularly significant was the decrease in the number of cases in the fourth quarter (the rainy season) of 2008 to 99 from 667 cases during the same quarter in 2007. From losing 512 work days as a result of malaria in 2007, Geita lost 255 days in 2008.

In addition to monitoring the incidence of diagnosed malaria cases and the number of days lost as a result of the disease, AngloGold Ashanti has developed a Malaria Lost Time Injury Frequency Rate (MLTIFR). This is expressed as the number of cases of malaria for every million hours worked, and allows the rate to be compared with the commonly used safety measure, LTIFR. The accompanying table shows the significant and progressive drop in MLTIFR recorded at Geita during the course of 2008.

Malaria cases per quarter in 2008				
	Q1	Q2	Q3	Q4
Geita	767	527	164	99

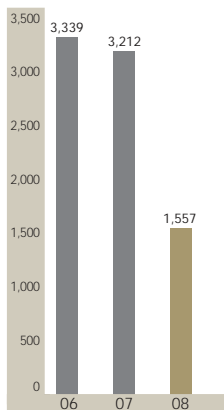
Work days lost per quarter as a result of malaria in 2008				
	Q1	Q2	Q3	Q4
Geita	142	69	24	20

Malaria lost time Injury Frequency Rate (MLTIFR) in 2008				
	Q1	Q2	Q3	Q4
Geita	351	260	67	39

## OBJECTIVES FOR 2009

- To maintain good performance at Geita.



Malaria cases at Geita, including employees, contractors, dependants and community members



Geita, Tanzania

# HIV & AIDS

## KEY DEVELOPMENTS

- Improving health care outcomes of AngloGold Ashanti HIV prevention and treatment programmes.
- Significant VCT uptake among Geita employees.

## ANGLOGOLD ASHANTI'S RESPONSE TO HIV & AIDS

AngloGold Ashanti's response to HIV & AIDS is underpinned by the Board-approved HIV & AIDS policy. The management of HIV & AIDS is undertaken on a regional and operational basis, with the appropriate level of resources dedicated to the threat posed by the disease. Although the pandemic is at its most severe in southern Africa, it is a concern in other African countries, Tanzania among them.

The group's HIV & AIDS programme aims to:

- minimise the risk of HIV & AIDS to its employees and the company by reducing, and ultimately, eliminating new infections;
- efficiently manage and treat those infected; and
- support those who are AIDS-ill.

Based on a national survey conducted by the African Medical and Research Foundation (AMREF) in 2008, the prevalence level is estimated at 6% for the males in the region around the Geita mine and 10, 3% among the women in the area.

## MANAGING HIV & AIDS

Geita adheres to Tanzania Department of Health guidelines on the rights of people living with HIV & AIDS who are entitled to the same rights and benefits as other employees suffering from long-term illnesses or disabilities.

AMREF is contracted by Geita to provide a comprehensive HIV & AIDS programme and the necessary technical support. In line with AngloGold Ashanti's approach, the comprehensive programme extends to the communities surrounding the mine.

The mine's Health Manager oversees the programme with guidance and advice being provided by a steering committee. This comprises representatives from AMREF, the mine, the Tanzanian National Institute for Medical Research (NIMR) and the local health authorities.

In 2008, \$71,818 was spent on Geita's HIV & AIDS programme.



Geita, Tanzania

# HIV & AIDS

## *Prevention*

One of the cornerstones of Geita's HIV & AIDS programme is prevention and peer educators – one for every 60 employees – play a big part in this. The peer educators communicate the mine's HIV & AIDS policy, raise awareness about the disease, promote behavioural change and encourage safe sex practices. Educational materials are translated into Swahili and peer education sessions are conducted in this language.

During 2008, 52,344 condoms and 674 femidoms were distributed on the mine. Condoms and femidoms were provided to the Geita HIV Information Centre.

## *Voluntary counselling and testing*

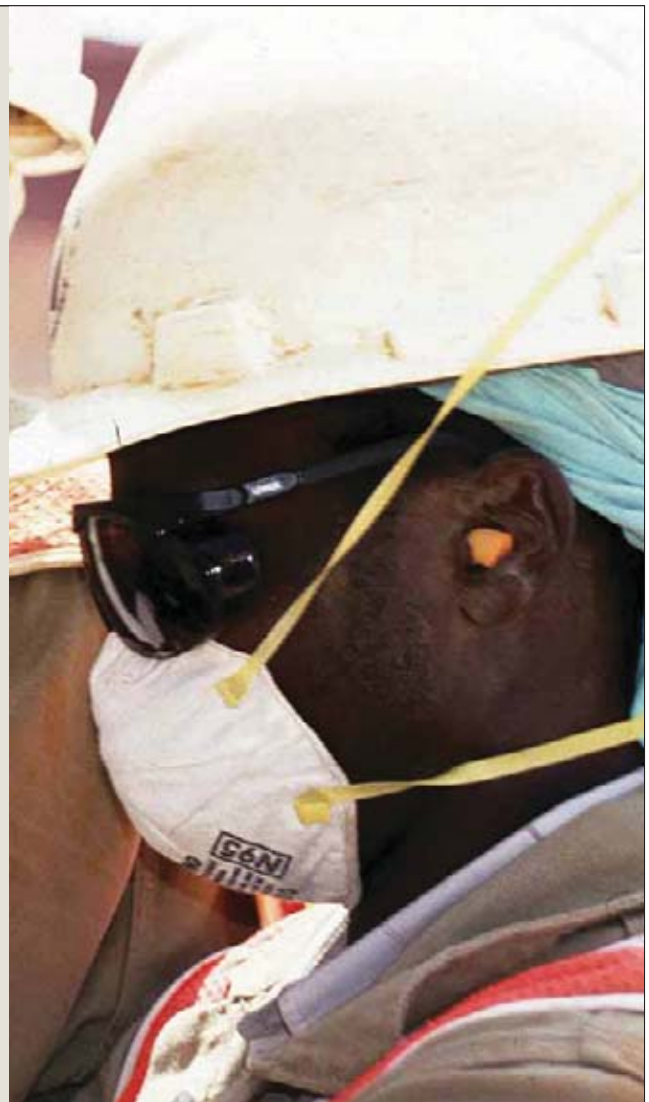
Voluntary counselling and testing (VCT) is available at the on-site clinic as well as at AMREF's VCT Centre in the town of Geita. It is provided free of charge at both venues. AMREF runs quarterly campaigns to encourage people to make use of this service. In 2008, more than 2,000 employees participated in VCT sessions.

### VCT NEEDS SURVEY AT GEITA DIRECTS PROGRAMME

A survey of the Geita workforce aimed at understanding the needs of employees regarding VCT and, in particular, at trying to understand how to improve VCT, was undertaken between 20 and 30 May 2008. The survey found that several factors hindered the uptake of VCT, including:

- the residual stigma about the disease and a fear of discrimination (by peers);
- concerns about security of employment should test results be positive;
- a lack of understanding (and indeed permission) from supervisors in allowing time off to attend VCT;
- perceived lack of confidentiality; and
- inconvenient timing of VCT (not long enough and only during shifts).

Suggested improvements were tabled and many of these have now been implemented. A VCT outreach campaign was undertaken in November 2008 as a follow-up to the survey. (Outreach campaigns also took place in November 2007 and February 2008). Heads of departments, the workers representatives' council, peer counsellors and mineworkers were briefed thoroughly in advance and encouraged to participate. A key outcome of these initiatives was a 97% VCT uptake of the workforce, assuming single testing.



Geita, Tanzania



Geita, Tanzania

### *Treatment and support*

HIV-positive cases are referred to the Geita District Hospital. Anti-retroviral treatment (ART) is provided when required and this is funded by the government.

The Post Test Club (PTC) has been formed at the mine to support those who are HIV-positive, and it includes both employees and community members. Trained by AMREF, members of the PTC regularly visit AIDS-ill patients to provide simple medication (paracetamol and oral rehydrants) as well as education to the families about caring for patients, and to discuss referrals. The group meets once a month and members are involved in activities, such as dressmaking, to generate an income.

Employees who are ill and unable to work continue to be provided with medical treatment free of charge. Should the illness persist, their salaries are paid in full for the first three months and they receive 50% of their income for the next three months. If their condition does not improve after six months, employees are medically separated from the company.

The families of employees who die receive a death benefit and funeral expenses are met.

### OBJECTIVES FOR 2009

- AngloGold Ashanti aims to increase VCT uptake at all African operations.

# Community

## KEY DEVELOPMENTS

- Integration of community and environmental disciplines at a corporate level.
- Management standards on social investment, cultural heritage and sacred sites, stakeholder engagement, indigenous peoples, artisanal and small-scale mining (ASM), land use management, grievances and complaints and land acquisition being developed in support of the group's Community Affairs Management Framework.
- Increased demand from local communities for the provision of basic services such as water, roads and electricity.
- Escalating tension between the company and artisanal miners, trespassers and others, at certain operations in Africa, Geita among them. These have resulted in a number of incidents and injuries.

## ANGLOGOLD ASHANTI VALUES

One of the group's six core values is:

*The communities and societies in which we operate will be better off for AngloGold Ashanti having been there.. We uphold and promote fundamental human rights where we do business. We contribute to building productive, respectful and mutually beneficial partnerships in the communities in which we operate. We aim to leave host communities with a sustainable future.*

## MANAGEMENT SYSTEMS AND ACCOUNTABILITY

Community-related matters are addressed at Board level by the Safety, Health and Sustainable Development Committee.

During 2008, the AngloGold Ashanti community affairs and environmental teams were integrated, reflecting the interdependence of these issues from both a strategic and operational perspective. This integrated team is responsible for developing company policy, and providing guidance and processes to assist operations to act in accordance with the group's business principles. A corporate level Community and Environment Vice President has been appointed to head up the discipline.

Work on the Community Affairs Management Framework continued during the year. An additional module on human rights and security is being refined, in support of the new security discipline and in compliance with the Voluntary Principles on Security and Human Rights. In view of the integration of the community and environmental aspects of the business from a management perspective, a decision was taken late in 2008 to include community aspects into the ISO14001 management systems which are in place at all operations. It is envisaged that this process will take two to three years.

AngloGold Ashanti is committed to engaging with non-governmental organisations (NGOs), community-based organisations (CBOs) and other stakeholders on issues of mutual concern. Underpinning its strategy is the group's view that it is desirable that the various parties engage directly, based on the mutual recognition of each other's legitimate right to operate. Specific structures are being put in place to deal with grievances and legacy issues.

The group has continued during the year with its strategy of building relationships with key stakeholders, monitoring emerging trends, being proactive where possible and responsive where issues arise unexpectedly. Relative to prior years, fewer NGO reports and campaigns on the company's activities were witnessed during the past year.

## MANAGING COMMUNITY RELATIONS

The Community and Sustainable Development Superintendent handles managing community relations and social investment at Geita and reports to the Community and Environmental Manager. There is also co-ordination with the Community Relations and Social Development Manager at corporate office in Johannesburg.

Geita is currently reviewing its current policy on Community Relations and Sustainable Development which will provide clear guidelines on stakeholder engagement, corporate social responsibility and social investment, and land acquisition and resettlement.



Geita, Tanzania

### *Engaging with key stakeholders and communities*

The mine carries out its Stakeholder Engagement and Sustainable Development programme, which is based on the principle of mutual respect, in partnership with the Geita District Council, local and international NGOs and corporate associates. These partnerships have helped to improve relationships with the host communities. Geita has a Community Relations Committee (CRC) chaired by the District Commissioner which comprises representatives from the mine, the four wards adjoining the operation and heads of key departments in the District Council. The CRC meets every quarter and on an ad hoc basis when there is a need to deliberate on pertinent issues regarding relationships with stakeholders and social development. These range from land conflicts and security to the development of infrastructure, such as roads and water, education and health. Mine staff involved in community engagement are also active participants in meetings at ward and village level to take note of any community grievances, to plan appropriate measures to address these and to give feedback to the community in respect of such complaints.

Geita recognises the diversity of cultural backgrounds among its stakeholders and employees. The induction programme for new local and expatriate employees includes a detailed module on cultural sensitivities.

The mine participates in several initiatives which serve to bring the mine closer to its communities. These include the National Uhuru Torch Summit, International Workers Day and Annual Environmental Day.

After reviewing its feedback mechanisms for stakeholders, the mine took the decision to conduct biannual stakeholders' opinion and social development mapping surveys. The first was held in December 2008.

### *Addressing community concerns*

A grievances and complaints management process forms part of the mine's community engagement programme and includes a grievances/complaints register. Issues relating to the impact of the operation on neighbouring communities are usually presented and discussed at the meetings of the Geita Community Relations Committee. Remedial action is taken once there is mutual agreement and feedback is provided to the members of the community concerned and to their leaders. Increasingly, this approach is encouraging the communities to report mining impacts and this facilitates the early identification of problems.

Eight complaints were received in 2008, most of these related to land acquisition and environmental issues.

# Community

## *Significant community incidents*

In November 2008, a group of approximately 20 intruders tried to access the mine workings, allegedly to try and steal diesel (which is a common problem at Geita). When confronted by an AngloGold Ashanti security guard armed with a shotgun, one of the intruders – armed with a machete – approached the guard in a threatening manner, which prompted the guard to fire a shot in the intruder's direction. The individual sustained minor birdshot wounds to his body and was treated at the mine's on-site clinic.

After a full investigation it was found that the guard had acted with justifiable force and was within his rights. The intruder was arrested for attempted robbery and trespassing and detained by the police.

Guards at Geita were threatened by suspected criminals several times during 2008, and several warning shots were fired throughout the year to ward off groups of people attempting to steal.

In September 2008, a suspected diesel thief, who was trespassing at one of the waste dump areas at Geita was fatally injured when struck by a rock being dumped by a truck in the area.

## *Artisanal and small-scale mining*

There have been a number of instances of conflict between the company and artisanal and small-scale miners around Geita. It is estimated that between 400 and 500 miners are typically engaged in activities on and around the lease area. The company continues to work with authorities and through the Small Miners' Association to establish dialogue, provide education and training (especially in respect of safety, health and environmental issues) and to minimise conflict.

## CORPORATE SOCIAL INVESTMENT

AngloGold Ashanti's total corporate social investment expenditure in 2008 was \$8.9 million. Of this amount, \$373,000 was spent at Geita. Currently all social investment funding at the mine is channelled through the budget for community and sustainable development budget. Management is in the process of establishing a specific fund for all social investment from 2009. An appraisal of community needs is conducted on an annual basis.

The sectors which received most of the funding in 2008 were community health care, education and water infrastructure. With regard to health care, the company constructed an operating theatre at the Geita District Hospital and upgraded three community health centres. Support for education included contributing towards the construction of classrooms in several primary schools and funding the building of the only boarding school for girls in the district, the Nyankumbu Girls' High School. When complete, the school will be able to accommodate more than 400 girls. In terms of water infrastructure, the company has commissioned an agency to conduct a feasibility study for a water project for the town of Geita. The study is under way and a decision will be made after the final report is submitted.

Infrastructure is another focus area with Geita maintaining a number of roads used by neighbouring communities.

The mine is reviewing its strategy for local economic development. The intention is to promote the purchase of supplies from local vendors and to partner with communities and other stakeholders to identify and fund viable grassroots initiatives with the aim of increasing people's incomes and providing them with sustainable livelihoods.

## LAND MANAGEMENT

AngloGold Ashanti has developed a new approach to land management. This draft standard draws on the International Finance Corporation's policies on Involuntary Resettlement. The standard makes provision for grievance mechanisms (see case study: Implementing a land management policy for AngloGold Ashanti at [www.aga-reports.com/08/resettlement-roadmap.htm](http://www.aga-reports.com/08/resettlement-roadmap.htm)).

In 2008 Geita was involved in a compensation exercise with 553 property owners in the village of Katoma. Negotiations on this resettlement were initiated in 2004, property valuations were conducted in 2006, and resettlement of all but 16 households was completed. The group of property owners who declined compensation filed a case in court against the company and they will not be displaced until their concerns have been resolved. Negotiations took place through local government authorities and a memorandum of understanding was signed in December 2008 with a view to conducting valuations of the properties, providing compensation and organising relocation. The matter should be concluded by the end of 2009.

### OBJECTIVES FOR 2009 TO 2011

- Incorporate community aspects into ISO14001 management system at all AngloGold Ashanti operations by 2011.
- Implement community management standards across the group.



Geita, Tanzania

# Environment

## KEY DEVELOPMENTS

- Further development of the group's position on climate change, including the quantification of its carbon footprint and the identification of potential Clean Development Mechanism (CDM) projects as part of the group's business case for greenhouse gas (GHG) emission reductions.
- Start of external review process of the group's closure planning and liabilities.
- Good progress with the implementation of the International Cyanide Management Code.
- Improved environmental reporting contributed to more accurate incident tracking.
- AngloGold Ashanti ranked third in the Carbon Disclosure Project's Carbon Intensive Sector Leadership Index of the largest 100 companies listed on the JSE.

## ANGLOGOLD ASHANTI VALUES

One of the group's six values states:

***We respect the environment.***

*We are committed to continually improving our processes in order to prevent pollution, minimise waste, increase our carbon efficiency and make efficient use of natural resources. We will develop innovative solutions to mitigate environmental and climate risks.*

## ENVIRONMENT REVIEW

Day-to-day responsibility for environmental issues lies with mine and project management; the group's corporate environment team provides strategic guidance and monitors performance against company standards. Site-based and regional environmental specialists contribute to operational environmental functioning and combine to form the Environmental Steering Committee at a group level.

At Geita, the Sustainable Development and Environment Manager reports directly to the Managing Director, who has overall responsibility for environmental management at the mine.

Geita submits an annual environmental report to the Ministry of Energy and Minerals and communicates with the ministry when major environmental incidents occur.

### *ISO14001*

In common with all AngloGold Ashanti's operations, Geita has an Environmental Management System (EMS) certified to the ISO14001 standard. The mine first achieved certification in 2001 and was recertified in 2004 and 2007. Current certification is valid until July 2010.

The primary environmental risks identified at the mine during 2008 were:

- spills of tailings from the tailings pipeline;
- discharge of silts during the rainy season from waste rock dumps and disturbed lands;
- spills of heavy fuel oil and diesel from storage tanks;
- seepage from tailings storage facility (TSF); and
- air emissions above the legislated limits from power generators and other items of machinery and equipment.

Containment bunds along the pipeline, containment bund walls and silt settling ponds at the toes of waste dumps, and 110% capacity bunds around the storage tanks are in place to address the first three risks. To deal with any potential seepage, the TSF is underlain by an impermeable hardpan ferricrete layer, and wall stability and downstream water quality are both monitored. Air emissions are monitored, equipment is maintained regularly and source tests are carried out at the power plant to ensure that discharges from the generators are maintained at acceptable levels.

### *Compliance*

As a minimum, AngloGold Ashanti requires all its operations to comply with legislation, regulations and permits in their countries of operation. The primary laws and regulations regarding environmental management at Geita are contained within the country's Mining Act, 1998; the Mining Regulations, 1999; and the Environmental Management Act, 2004.

During 2008, no incidents of non-compliance were reported at the operation.

### *Environmental incidents at Geita*

Operations are required to report all major environmental incidents to corporate office. Four such incidents occurred at Geita in 2008 – a schedule appears below.

Date of incident	Description of incident	Impact	Corrective action
4 July	The decomposing carcass of a cow was found partly immersed in mud at the Kukuluma silt settling pond.	Livestock fatality	The District Resident Mines Officer, officials from the district police force and the District Veterinary Officer visited the site the following day. The root cause was found to be inadequate security around the mining areas despite the legal requirement to secure such areas.
21 July	Water seepage from the process pond as well as overflow from the process water pump bund occurred, resulting in process water entering the environment.	Water pollution	The water level in the process water pond was lowered. Leaked water was pumped from the sump to the emergency pond and the process water pond wall was supported with rock and laterite layers.
11 to 13 December	Seven dead birds (cattle egrets and black winged stilts) were found on the northern beach of the tailings surface facility (TSF). It is suspected that termites attracted the birds towards the TSF where they consumed supernatant water with high cyanide concentrations. Weak acid dissociable (WAD) cyanide levels in samples collected in the discharge area at the time of the incident were between 100ppm and 150ppm	Wildlife fatality	Several corrective actions were taken, including bird scaring techniques, cyanide dilution by process water in the tailings hopper, and reducing free cyanide concentrations in the last CIL tank.

### *Engaging with communities and employees*

New employees, including contractors, are given environmental training and hazardous chemicals awareness programmes are conducted regularly.

Environmental matters – rehabilitation and mine closure, for example –are discussed with the communities during the scheduled monthly meetings when they have the opportunity to raise any concerns. A cyanide awareness programme is presented to focus groups in the surrounding villages.

The Nyakabale and Nyamalembo villages are involved in the rehabilitation of disturbed areas at the mine and informal education is provided to nursery owners on such matters as seed collection so that they can supply the mine with indigenous plants and trees.

In 2008 the residents of Nyamalembo complained of silts from the waste dump WD15 situated in the area. In response, the mine constructed a bund wall and silt settling pond at the toe of the waste dump in question.

Recently, the company has experienced greater scrutiny from the media, faith-based organisations and NGOs concerning its effect on local communities, particularly with respect to resettlement projects and environmental impacts. As a result, students from local and foreign institutions have become more interested in carrying out research on Geita.

# Environment

One study by a Master's student claimed that the operation had polluted arable land in a neighbouring village. This, in turn, led to negative coverage in the media about the operation. As a result, Geita commissioned an independent consultant to review the thesis and this report was shared with the student and his faculty. The mine also invited the university to conduct a joint study on metals uptake by plants in the affected area. (See case study below for further information.)

## ALLEGATIONS OF ENVIRONMENTAL DAMAGE AT GEITA

Geita faced scrutiny during 2008 following news reports in Norway about a thesis written by a Master's student at the University of Dar es Salaam. The thesis titled 'Evaluation of heavy metals pollution in soils and plants accrued from gold mining activity' describes the presence of a high level of heavy metals in soil samples from the area around Nyakabale village near the mine. The metals include zinc, lead, arsenic, cadmium, chromium, mercury and copper in allegedly sufficient quantities to constitute a health danger.

### *AngloGold Ashanti's response*

AngloGold Ashanti's response involved a combination of immediate reaction to enquiries from the media, submitting the thesis for an independent assessment to a prominent academic scientist, and the initiation of a programme to analyse sediment samples.

The independent assessment of the thesis raised a number of methodological questions which the environmental scientist recommended be discussed with the student and his supervisor. Those discussions were in progress at the time of writing.

In response to ongoing enquiries from journalists, the company provided as much information as possible. It was pointed out that the issues are complicated by the fact that mining has been going on in the region since the 1920s. To quote from a Geita Safety, Health and Environment Report produced by AngloGold Ashanti in 2002, shortly after production at the mine began, and based on a baseline study conducted earlier:

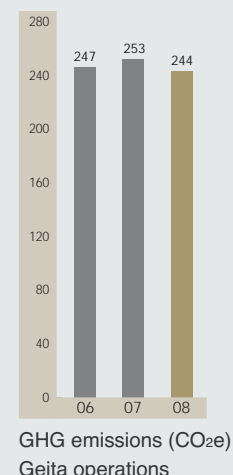
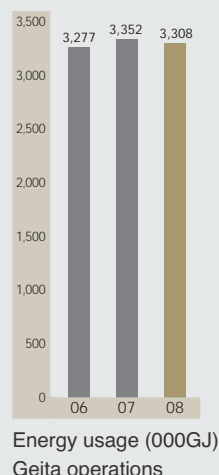
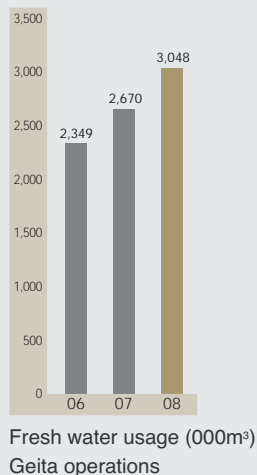
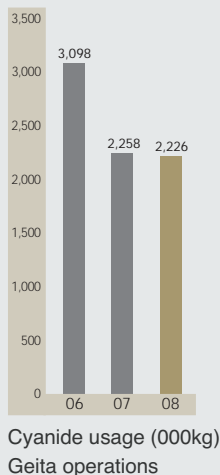
"Historic records indicate that approximately six million tonnes of material were placed as tailings during the operation of the old Geita Mine. Currently Geita Gold Mine estimates that there are approximately 1.5 million tonnes in the stockpile, leaving what is believed to be some 4.5 million tonnes that have migrated into the Mtakuja River since the mine's opening in 1938.

"These sediments have contaminated the Mtakuja River water and the mine sediments have resulted in high heavy metal levels in aquatic and wetland vegetation. In addition, these sediments, when disturbed, are acid-producing, resulting in a lowering of pH. Recent illegal farming activities along the Mtakuja River have disturbed such sediments, resulting in a further downgrading of water quality."

To establish whether Geita's current operations are contributing to metal loads in sediments, four sets of water sampling were done. Initial results suggest no cause for alarm in respect of water, but there were inconsistencies in the results from different laboratories. Sediment sampling will form part of a comprehensive study by an internationally recognised expert consultancy which has been planned to begin in 2009. It will hopefully also identify who is responsible for environmental degradation to the extent that it exists. Local community and regional government leadership will be consulted.



Geita, Tanzania



## MINE CLOSURE PLAN

AngloGold Ashanti supports ICMC's integrated approach to mine closure which considers social, economic and environmental aspects in the closure planning process. Closure plans are reviewed and updated annually and take into account operational conditions, community requirements, planning and legislative requirements, international protocols, technological developments and advances in good practice.

Geita has a closure plan in place which is updated annually. Several guidelines are followed in terms of closure planning, among them:

- open pits will not be backfilled but a safety bund will be constructed around the perimeter;
- infrastructure with the potential for contamination will be demolished and the footprint rehabilitated;
- waste rock dumps will be rehabilitated in order to blend the structure with the surrounding natural environment; and
- stakeholders will be consulted regularly.

While actual closure costs may only be fully determined at the time of closure, liability figures as at 31 December 2008 are set out in the table below.

Rehabilitation and decommissioning liabilities				
Operation	Rehabilitation \$ million	Decommissioning \$ million	Total 2008 \$ million	Total 2007 \$ million
Geita	22.1	24.0	45.8	47.5

The liability for decommissioning represents the cost that will arise from rectifying impacts caused before the start of production. The liability for rehabilitation represents the cost of restoring the site after the cessation of production.

## RESOURCE MANAGEMENT AND USAGE

### *Cyanide usage*

In line with the global mining industry, AngloGold Ashanti has done much over the past 10 years to minimise risk associated with the use of cyanide. AngloGold Ashanti managed sites are signatories to the International Cyanide Management Code for the Manufacture, Transport and Use of Cyanide in the Production of Gold (the Cyanide Code), to which the group was a founding signatory. This code is a voluntary industry initiative developed under the auspices of the United Nations Environment Programme (UNEP) specifically to promote responsible management of cyanide used in gold mining, to enhance the protection of human health, and reduce the potential for adverse environmental impacts.

# Environment

Geita's gap audit has been concluded and the certification audit is planned for 2010.

Cyanide usage				
Operation	Cyanide usage (kg)		Efficiency (kg/oz)	
	2008	2007	2008	2007
Geita	2,226,000	2,258,000	8.43	6.91

## WATER

The approach to water management is determined largely by water availability, topography, mining and processing methods and the mineralogical composition of the orebody. In addition to minimising absolute water abstraction, attention is paid to recycling water at operations.

Surface and groundwater monitoring programmes are in place to detect signs of ineffective water pollution prevention controls to allow for a rapid management response.

Fresh water usage				
Operation	Water usage (m <sup>3</sup> )		Efficiency (m <sup>3</sup> /oz)	
	2008	2007	2008	2007
Geita	3,048,430	2,670,066	11.55	8.17

## ENERGY MANAGEMENT AND USAGE

Mining uses significant amounts of energy for transporting employees; mining of ore and disposal of waste; ventilation and refrigeration; operating metallurgical plants and running administration offices; and for domestic uses in on-site accommodation facilities.

At Geita, electricity is generated using heavy fuel oil.

Energy usage				
Operation	Energy usage (GJ)		Efficiency (GJ/oz)	
	2008	2007	2008	2007
Geita	3,307,836	3,351,884	12.53	10.25

## CLIMATE CHANGE

AngloGold Ashanti believes that climate change presents both physical and financial risks, as well as opportunities, for the company.

A three-part study, begun in September 2008, includes:

- assessing the greenhouse gas emissions (GHG) footprint of all AngloGold Ashanti operations using 2007 as the benchmark year;
- climate change related risk exposure: various risk categories (financial and investment, physical, and legal/regulatory) are being considered; and
- the identification of opportunities to expand on energy savings and efficiency projects and to reduce dependence on fossil fuels. This component will include opportunities to minimise the group's GHG footprint, and to realise carbon credits and trading to offset the costs of these opportunities and to contribute to the company's bottom line.

Given the group's focus on delivering value, the approach taken was that the process should identify multiple and highly probable Clean Development Mechanism (CDM) projects. For AngloGold Ashanti, carbon trading presents a particular opportunity: around 84% of the company's gold production comes from developing countries, including Tanzania, which are eligible for CDM projects.

GHG emissions				
Operation	Tonnes of CO <sub>2</sub> e		Efficiency (CO <sub>2</sub> e/oz)	
	2008	2007	2008	2007
Geita	243,559	252,834	0.92	0.77

## PREVENTING POLLUTION

Means to minimise and prevent pollution are typically built into mining projects at the beginning of a project. However, this has not always been the case at operations that were established many decades ago, when legislation was less stringent and when technologies and practices used today were largely unknown. This has resulted in the capacity of the pollution prevention systems at several operations being unable to meet current requirements. Geita is working to manage and minimise acid rock drainage (ARD). (See the accompanying case study.)

### ACID ROCK DRAINAGE AT GEITA

Acid rock drainage (ARD) is a notable environmental concern in the mining industry. ARD occurs when sulphide-bearing rocks are exposed to air and water. Mining activity disturbs these rocks and exposes the sulphide minerals in them to oxygen (O<sub>2</sub>) in the air and water (H<sub>2</sub>O), which react and form reaction products. These reaction products are easily dissolved and can form an acidic solution (H<sub>2</sub>SO<sub>4</sub>) characteristic of ARD. Acid Rock Drainage is strongly associated with the presence of heavy metals, and hence the environmental risks are significant should ARD not be contained.

ARD can be managed either by stopping the oxidation process from occurring (breaking the contact between sulphides and oxygen) or by treating the acidic water once it has been formed. At Geita, a combination of both management techniques is being used.

For the former, potentially acid forming material is encapsulated within non-acid forming material. Cut-off drains and containment dams are used to prevent the acidic water exiting the mine lease area. In some cases where testing shows leachate and run-off to have unacceptable levels of contaminants, water is also treated before being discharged from site.

The Environmental Superintendent at Geita, Rebecca Stephen, says: "Geita is always striving towards good environmental practices, and addressing acid rock drainage is one of them."

The mining activities at Geita involve a series of procedures to ensure that ore and waste materials are mined and transported to their final destinations in a controlled manner. ARD management at Geita is mostly done through proper identification and handling of potentially acid-forming waste material from all five operating pits. The procedure for ARD management involves:

- producing a waste model for the life of mine for each pit which identifies potentially acid forming material (PAF) and non-acid forming (NAF) material;
- selective handling and placement of waste in designated areas of the waste rock dump and the tailings dam embankments, controlled by the modular dispatch (computerised) system;
- visual monitoring of waste within the waste rock dump and tailings dam embankments;
- environmental monitoring of underground and surface water in and around the waste rock dump and tailings embankment and downstream of these facilities; and
- regular technical reviews monthly (internal), three to six monthly (external).

However, even with the existing ARD management practices, ARD has occurred from reactive PAF material at Kukuluma and Matandani areas at Geita, (located approximately 20 kilometres from the plant site) inside the pits and at the run-of-mine pad (ore transfer station). Acidic water seepage from the main waste rock dump has added to this challenge – even though it is contained within that area.

# Environment

"Acidic pit lakes currently exist in these two pits which are very close to each other, with an estimated amount of about 500,000m<sup>3</sup> of water at Kukuluma and 40,000m<sup>3</sup> of water at Matandani. The area is temporarily closed due to low recovery of ore material," explains Stephen.

"Other factors which can exacerbate the problem," adds Joseph Chihota, Environmental Manager: Africa Region, "are the over-reliance on the visual identification of NAF and PAF, and a high turnover of employees in the environmental department, sometimes resulting in relaxed monitoring of processes."

Chihota adds that non-reliance on visual identification of NAF and PAF but rather on laboratory tests is preferable. Field tests using hydrogen peroxide to supplement visual methodology of NAF and PAF will also be effective. In addition, further investigation using kinetic tests will be used to establish the most effective cover and waste sampling methodology that will minimise longer-term assets.

Stephen explains that the way forward with the ARD challenge has begun with the construction of containment bunds to direct storm water around the dumps into settling ponds, where quality can be monitored, and treated if need be, before the water is released back into the environment.

Increased capping of waste dumps with compacted laterite material will minimise infiltration of water through the dump, thus minimising ARD formation.

"A viable permanent solution for acidic pit lakes is yet to be found," concludes Stephen.



Gelta, Tanzania



Geita, Tanzania

## BIODIVERSITY STEWARDSHIP

AngloGold Ashanti considers long-term sustainability of the land on which its operations are located to be an integral part of its responsibility.

An important part of the planning and implementation of any rehabilitation work is the restoration of areas disturbed by mining to appropriate levels of biodiversity and land use.

The total area of land leased or managed by AngloGold Ashanti for production activities or extractive use in Geita amounts to 17,509 hectares. A breakdown of land disturbed and whether it has been rehabilitated is as follows:

- land disturbed and not yet rehabilitated (opening balance) – 2,749 hectares;
- land disturbed in 2008 – 14 hectares;
- land rehabilitated in 2008 to agreed upon land use – 11 hectares; and
- land disturbed and not yet rehabilitated (closing balance) – 2,751 hectares.

### OBJECTIVES FOR 2009 TO 2011

- Maintain certification to the ISO14001 Environmental Management System Standard and incorporate community aspects by 2011.
- Develop quantitative performance targets for energy and water.
- Implement in 2009 and ensure ongoing application of the Integrated Incident Notification and Reporting System across managed activities.
- Start implementation of the environment management standards to be approved in 2009, namely:
  - Closure and rehabilitation
  - Water
  - Air quality
  - Chemicals
  - Waste
  - Biodiversity
  - Land use
- Continue the development and roll-out of additional management standards and guidelines, as required.
- Address key opportunities and risks identified by the 2008 climate change study.
- Review closure planning practices during 2009.
- Conduct a corporate Environmental Review Programme biennially.



# Glossary of terms and acronyms

- A**
- AIDS:** Acquired immune deficiency syndrome.
  - AMREF:** African Medical and Research Foundation
  - ARD:** Acid rock drainage
  - ART:** Anti-retroviral therapy – treatment regimen for the treatment of people with HIV & AIDS, with anti-retroviral drugs.
- C**
- Capital expenditure:** total capital expenditure on mining assets to both maintain and expand operations.
  - CDM:** Clean Development Mechanism.
  - CIL:** carbon-in-leach, a gold recovery process.
  - Comminution:** process of breaking up ore to make gold available for treatment.
  - Cyanide Code:** International Cyanide Management Code for the manufacture, transport and use of cyanide in the production of gold.
- D**
- dBA:** Decibels – unit of sound measurement.
- E**
- EITI:** Extractive Industries Transparency Initiative.
  - Elution:** process of re-dissolving gold from activated carbon.
  - EMS:** Environmental Management System.
- F**
- FIFR:** Fatal Injury Frequency Rate – the number of fatal injuries per million hours worked.
  - 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).
- G**
- Grade:** the quantity of gold contained within a unit weight of gold-bearing material per tonne of ore (oz/t), or grams per metric tonne (g/t).
  - GHG:** Greenhouse gas emissions.
  - GRI:** Global Reporting Initiative – a multi-stakeholder process and independent institution the mission of which is to develop and disseminate globally applicable sustainability reporting guidelines.
- H**
- HIV:** human immunodeficiency virus.
- I**
- ICMM:** International Council on Mining and Metals.
  - ILO:** International Labour Organisation, a UN agency for the promotion of social justice and human and labour rights.
  - International Cyanide Management Code:** Industry standard for cyanide management – developed under the auspices of UNEP.
  - ISO:** International Standards Organisation, a voluntary not-for-profit network of national standards institutes from 146 countries.
  - ISO14001:** ISO standard relating to environmental management systems.
  - ISO14001 certification:** certification based on regular auditing by an accredited external body.
- J**
- JSE:** JSE Limited.
- L**
- 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.
- M**
- 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 subdivided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories. The Mineral Resources are inclusive of those Mineral Resources which have been modified to produce Ore Reserves.
  - MLTIFR:** Malaria Lost Time Injury Frequency Rate.

# Glossary of terms and acronyms

- N**      **NGO:** non-governmental organisation.
- O**      **OHSAS 18001:** The Occupational Health and Safety Assessment Series, presents requirements for an occupational health and safety management system.  
**Open-pit mining:** where top layers of soil are removed to uncover the reef from surface.  
**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 subdivided in order of increasing confidence into Probable Ore Reserves and Proved Ore Reserves.  
**Ounces (oz) (troy):** used in imperial statistics; a kilogram is equal to 32.1507 ounces.
- P**      **PTC:** Post Test Club.
- R**      **Refractory ores:** where gold is 'locked' within sulphide material and is not readily available for recovery through cyanidation process.  
**Rehabilitation:** the process of restoring mined land to allow an appropriate post-mining use. Rehabilitation standards are determined among others by the South African Department of Minerals and Energy, the United States 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.
- S**      **Safety, Health and Sustainability Development Committee:** committee of the board responsible for setting targets and oversight of performance on these issues.  
**Sarbanes-Oxley (SOx):** Sarbanes-Oxley Act of 2002 – introduced into law in the United States to set new corporate governance standards for corporate boards and accountability standards and penalties for corporate management.  
**Silicosis:** occupational lung disease caused by the inhalation of free silica dust which is present in mining where quartz concentrations are high.  
**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.
- T**      **Tailings:** the rejected material from mining and screening operations.  
**TB:** pulmonary tuberculosis.  
**Total cash costs:** total cash costs include site costs for all mining, processing and administration, as well as contributions from by-products, 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.  
**TSF:** tailings storage facility; an engineered dam, designed and constructed as a repository for the ground rock or tailings after gold has been extracted.
- U**      **UNEP:** United Nations Environment Programme.  
**UN 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).
- V**      **VCT:** voluntary counselling and testing.  
**Voluntary Principles on Security and Human Rights:** Developed out of a multi-stakeholder engagement process to assist the extraction sector in improving performance in relation to security risk assessment and the control of security operations and to improve relations with communities on security issues.
- W**      **WHO:** World Health Organisation.

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