



South Africa West Wits

Message from Robbie Lazare

AngloGold Ashanti's South African operations have seen much change at both a corporate and operational level over the past decade, not least of which has been the sale of assets and the renaming of operations and, indeed, of the holding company to AngloGold Ashanti Limited.

Change has been present at our operations too – the continued transformation of our country, the ongoing downsizing in our industry and the wavering confidence of many in the future of the mining industry in South Africa, all of which is affecting the economic prosperity of the communities in which we live. This has been exacerbated by the prevailing strength of the rand against the United States dollar which has resulted in a declining revenue base in rand terms and consequently placed greater pressure on margins at an operational level. The impact of these developments has been felt not only in those communities immediately surrounding our operations but has also extended to those rural communities from which the vast majority of our workforce is still drawn. My message to the many stakeholders in our company is that, yes, times are tough, the South African gold mining industry is not the force it once was and our own company employs fewer people and produces less gold at its South African operations than it once did, but this needs to be seen in context.

South Africa remains the most significant gold producer in the world. AngloGold Ashanti's South African operations remain the mainstay of the group, having produced 51% of AngloGold Ashanti's gold in 2004. Of the group's total mineral resources and ore reserves, 54% and 49% respectively are held in this country. The group's capital expenditure of R2.089 billion (\$337 million) in 2004, which accounts for 52% of the group's total, is a good indicator of the confidence that management and board have in the long-term viability and importance of its operations.

While the Savuka mine is reaching the end of its life and is likely to close in 2007, the Mponeng and TauTona mines have sufficient reserves and resources to continue operations at current levels for at least the next decade and beyond. Significant capital investment programmes are currently underway at both of these operations: firstly, the Mponeng Shaft Deepening Project currently underway is expected to produce an additional 4.8 million ounces of gold over a period of 13 years to 2016 and, secondly, at TauTona the CLR shaft pillar project, the VCR development project and the below 120 level project will together add 2.8 million ounces of gold. Both these programmes are the size and scale of a significant mine anywhere else in the world, which is a reflection of the magnitude of our operations.

Yet while we are planning production going forward, we have also got better at attending to those issues that are important to our employees and their communities. We have for the second year produced a Report to Society which details those aspects of our business relating to economic performance and development, to safety and health and the environment, to community issues, to our labour practices and to how we deal with public health threats such as HIV/AIDS. This report is available on our website or in a printed form on request.

This regional report draws from the Report to Society some of those issues which are most pertinent to the West Wits operations. While this report is not an exhaustive account of what we do, it provides some insight into how we address some of these issues, and how we believe that we and our employees live the values that we have collectively agreed upon.

While we maintain the well-known view that the "business of business is business", we also believe that business has an important role to play – particularly in South Africa – in bringing about economic development, in supporting the welfare of our communities and in driving the transformation of our still-new democracy.

Robbie Lazare
Executive officer (South Africa region)



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About this report:

AngloGold Ashanti is committed to reporting to a broad range of stakeholders. In addition to its operational and financial performance the company also reports on its economic, social and environmental performance – the so-called triple bottom line. This country profile forms part of a broader group Report to Society, which is available on the company's website or from the contacts detailed below.

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2 | Introduction

AngloGold Ashanti's underground mining operations in South Africa are located in two geographic areas on the Witwatersrand Basin: the West Wits and the Vaal River area. This fact sheet focuses on the operations in the West Wits area. The West Wits area, near the town of Carletonville,

straddles North West Province and Gauteng, and includes the deep-level mines of Mponeng, Savuka and TauTona. Savuka and TauTona share a processing plant, while Mponeng has its own processing plant and a gold plant, which serves the entire West Wits region.

Geology of the Witwatersrand Basin

The Witwatersrand Basin comprises a six-kilometre thick sequence of interbedded argillaceous and arenaceous sediments that extend laterally for some 300 kilometres north-east south-west and 100 kilometres north-west south-east on the Kaapvaal Craton. The upper portion of the Basin, which contains the orebodies, outcrops at its northern extent near Johannesburg. Further west, south and east the Witwatersrand Basin is overlain by up to four kilometres of Archaean, Proterozoic and Mesozoic volcanic and sedimentary rocks. The Witwatersrand Basin is late Archaean in age and is considered to be around 2.7 to 2.8 billion years old. In the Witwatersrand Basin, gold occurs in laterally extensive quartz pebble conglomerate horizons or reefs, that are generally less than two

metres thick and are widely considered to represent laterally extensive braided fluvial deposits. Separate fan systems were developed at different entry points and these are preserved as distinct goldfields. There is still much debate about the origin of the gold mineralisation in the Witwatersrand Basin. Gold was generally considered to have been deposited syngenetically with the conglomerates but there has been a swing to an epigenetic theory of origin. However, the most fundamental control to the gold distribution in the Basin remains the sedimentary features, such as facies variations and channel directions. Gold generally occurs in a native form associated with pyrite and carbon, with quartz being the main gangue material.

Mponeng

Ownership: 100% owned by AngloGold Ashanti

Location: Mponeng lies on the West Wits Line, close to Carletonville, in Gauteng and about 65 kilometres from Johannesburg.

Geology: Mponeng is located on the north-western rim of the Witwatersrand Basin. There are seven gold-bearing conglomerates within the lease area, of which two are economically viable at present. The Venterdorp Contact Reef (VCR) is a gold-bearing quartz-pebble conglomerate of intermediate grade, capping the last angular Witwatersrand unconformity. A characteristic of this orebody is the pronounced palaeomorphology where thick reef is preserved in the form of terraces separated by thin inter-terrace slope reef.

Mining and processing: Mining at Mponeng is conducted at an average depth of 2 800 metres. The mine operates two vertical hoisting shafts, a sub-shaft and two service shafts. The hoisted ore is milled and smelted at the processing plant which comprises a crusher, mill, and carbon-in-pulp (CIP), zinc precipitation and smelting facilities.

Performance in 2004: Gold production decreased by 12% to 438,000 ounces. Total cash costs increased by 46% to \$322 per ounce. In rand terms, total cash costs rose by 25% to R66,437 per kilogram. Adjusted operating profit at \$11 million was significantly down. Capital expenditure, mostly stay-in-business capital, of \$62 million for the year, was 10% lower than the previous year.

Growth prospects: The Mponeng Shaft Deepening Project to deepen the sub-shaft system and provide access tunnels to the VCR horizon at depths of between 3,172 metres to 3,372 metres. This project is expected to produce 4.8 million ounces of gold over a period of 13 years until 2016. Total capital expenditure for this project is estimated at \$207 million (at closing 2004 exchange rate), and of this around \$8 million (at closing 2004 exchange rate) remains. The average project cash cost over the life-of-mine is expected to be approximately \$226 per ounce in 2004 real terms. Progress continued to be made on this project during 2004, with stoping operations commencing in May 2004.

Mponeng			
		2004	2003
Gold production	000oz	438	499
Total cash costs	\$/oz	322	221
Total cash costs	R/kg	66,437	53,052
Total production costs	\$/oz	386	269
Total production costs	R/kg	79,718	64,618
Capital expenditure	\$ million	62	69
Capital expenditure	R million	402	518
Total number of employees		5,876	6,169
Employees		5,164	5,374
Contractors		712	795

Outlook: Production at Mponeng in 2005 is expected to increase by 7% to 470,000 ounces at a total cash cost of \$295 per ounce and capital expenditure of \$54 million.



Savuka

Ownership: 100%-owned by AngloGold Ashanti

Location: Savuka lies on the West Wits Line, close to Carletonville, in Gauteng and about 65 kilometres from Johannesburg.

Geology: At Savuka, the CLR constitutes the largest portion of the resource available to mine. This conglomeratic auriferous and uraniferous horizon is sub-divided into a high-grade eastern zone and a lower-grade western zone.

Mining and processing: Savuka mines both the CLR and the VCR with mining conducted from sub and tertiary shaft systems. A combination of mining methods is used – longwall, conventional and sequential grid mining. Savuka shares a processing plant with TauTona. This plant follows the conventional mill circuit which feeds into the CIP circuit. The product from here is transferred to the Mponeng gold plant for final elution and smelting of the product into gold bars.

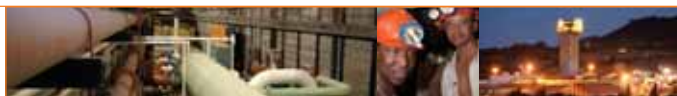
Performance in 2004: Gold production declined by 16% to 158,000 ounces. Total cash costs were well-contained, rising by 11% to \$455 per ounce; in rand terms total cash cost declined by 5% to R94,036 per kilogram. As a result, the adjusted operating loss was held to \$18 million. Capital expenditure of \$8 million, mainly on ore reserve development, was down by 62% on the previous year.

Outlook: Production at Savuka is expected to remain at 2004 levels of around 160,000 ounces at a total cash cost of \$404 per ounce, while the downsizing of this operation continues. Minimal capital expenditure is forecast at \$7 million.

Savuka			
		2004	2003
Gold production	000oz	158	187
Total cash costs	\$/oz	455	411
Total cash costs	R/kg	94,036	99,343
Total production costs	\$/oz	523	467
Total production costs	R/kg	108,457	112,603
Capital expenditure	\$ million	8	21
Capital expenditure	R million	54	157
Total number of employees		3,299	4,529
Employees		3,001	4,122
Contractors		228	407



TauTona



Ownership: 100% owned by AngloGold Ashanti

Location: TauTona lies on the West Wits Line, close to Carletonville in Gauteng, about 70 kilometres south-west from Johannesburg.

Geology: Two reef horizons are exploited at the West Wits operations: the Carbon Leader Reef (CLR) and the Ventersdorp Contact Reef (VCR). The vertical separation of the VCR from the CLR varies between about 900 metres and 1,200 metres with the VCR lying above the CLR. The CLR lies on a shallow dipping unconformity and is a laterally continuous, ologomictic, small-medium pebble conglomerate. Channel widths vary from a few centimeters to a little over one metre. The CLR is underlain by 10 metres of coarse-grained quartzite with locally discontinuous pebble bands. The VCR exhibits highly erratic morphological and grade characteristics.

Mining and processing: Mining at TauTona takes place at depths ranging from 1,800 metres to 3,500 metres, where the world's deepest stoping section is found. The mine has a main shaft system as well as a secondary and a tertiary shaft. It is predominantly a longwall operation. The TauTona and Savuka mines share a processing plant which uses conventional milling to crush the ore and a CIP plant. Once carbon has been added to the ore, it is transported to the plant at Mponeng for electro-winning, smelting and final recovery of the gold.

Performance in 2004: Gold production decreased by 12% to 568,000 ounces. Total cash costs rose by 43% to \$245 per ounce in

TauTona			
		2004	2003
Gold production	000oz	568	646
Total cash costs	\$/oz	245	171
Total cash costs	R/kg	50,531	41,224
Total production costs	\$/oz	311	207
Total production costs	R/kg	64,085	49,836
Capital expenditure	\$ million	65	80
Capital expenditure	R million	416	604
Total number of employees		5,498	5,457
Employees		5,673	4,794
Contractors		825	663

dollar terms, and by 23% to R50,531 per kilogram in local currency. Adjusted operating profit was down by 42% to \$58 million. Capital expenditure of \$65 million was 19% lower than in 2003. This was spent mostly on the below 120 level CLR project, the CLR pillar project and the VCR development project.

Growth prospects: At TaoTona these include the following projects:

- The CLR shaft pillar project allows for stoping operations up to the infrastructural zone of influence. The project, which began production in 2004, is expected to produce 550,000 ounces of gold over a period of 10 years, at a capital cost of \$35 million (converted at closing 2004 exchange rate). Approximately \$29 million (at closing 2004 exchange rate) has been spent to date. The expected average project cash cost is \$134 per ounce.
- The VCR development project aims to access two distinct reserve blocks on the VCR horizon, one situated north-east of the shaft complex, and the other in the VCR pillar area situated outside the zone of influence. The project will add some 300,000 ounces to

production, with a capital cost of \$30 million (at closing 2004 exchange rate).

- The CLR reserve block project is aimed at enabling access, via a twin decline system, below the 120 level down to 125 level. The project is expected to produce 2 million ounces of gold over a period of nine years, with a project capital cost of \$152 million (at closing 2004 exchange rate). The average cash cost of this project is expected to be \$203 per ounce.

Outlook: Production at TauTona is expected to remain constant at 2004 levels of around 570,000 ounces in 2005 with a total cash cost \$229 per ounce. Capital expenditure should amount to some \$66 million.



Mineral resources and ore reserves

Mineral resources and ore reserves are reported in accordance with the Australasian Code for Reporting of Mineral Resources and Ore Reserves (the JORC Code), together with the South African Code for the Reporting of Mineral Resources and Mineral Reserves (the SAMREC Code). Mineral resources include the ore reserve component.

As at 31 December 2004, AngloGold Ashanti had total mineral resources of 218.2Moz and ore reserves of 78.9Moz. Of these, the West Wits region accounted for mineral resources of 54.6Moz and ore reserves of 12.7Moz (the respective numbers for the South Africa region as a whole are 117.0 Moz and 39.1Moz).

Mine	Category	Metric			Imperial		
		Tonnes million	Grade g/t	Contained gold tonnes	Tons million	Grade oz/t	Contained gold million oz
Mineral resources (as at 31 December 2004)							
Mponeng	Measured	7.1	14.99	105.8	7.8	0.437	3.4
	Indicated	58.6	13.85	811.5	64.6	0.404	26.1
	Inferred	0.0	0.00	0.0	0.0	0.000	0.0
	Total	65.6	13.97	917.2	72.3	0.408	29.5
Savuka	Measured	1.5	14.02	20.5	1.6	0.409	0.7
	Indicated	18	12.98	233.5	19.8	0.379	7.5
	Inferred	0.0	0.00	0.0	0.0	0.000	0.0
	Total	19.5	13.06	254.0	21.5	0.381	8.2
TauTona	Measured	2.0	27.04	54.3	2.2	0.789	1.7
	Indicated	14.6	25.70	376.2	16.1	0.750	12.1
	Inferred	3.1	13.63	41.7	3.4	0.398	1.3
	Total	19.7	23.96	472.1	21.7	0.699	15.2
Western Ultra Deep Levels ⁽¹⁾	Measured	0.0	0.00	0.0	0.0	0.000	0.0
	Indicated	0.0	0.00	0.0	0.0	0.000	0.0
	Inferred	3.0	15.66	47.7	3.4	0.457	1.5
	Total	3.0	15.66	47.7	3.3	0.457	1.5
West Wits Surface	Measured	0.0	0.00	0.0	0.0	0.000	0.0
	Indicated	0.3	0.52	0.1	0.3	0.015	0.0
	Inferred	6.9	0.68	4.7	7.6	0.020	0.2
	Total	7.2	0.68	4.9	7.9	0.020	0.2

Mine	Category	Metric			Imperial		
		Tonnes million	Grade g/t	Contained gold tonnes	Tons million	Grade oz/t	Contained gold million oz
Ore reserves (as at 31 December 2004)							
Mponeng	Proved	2.6	9.16	23.4	2.8	0.267	0.8
	Probable	20.7	8.98	185.4	22.8	0.262	6.0
	Total	23.2	9.00	208.8	25.6	0.262	6.7
Savuka	Proved	0.1	6.56	0.6	0.1	0.191	0.0
	Probable	1.7	7.35	12.3	1.9	0.214	0.4
	Total	1.8	7.31	13.0	2.0	0.213	0.4
TauTona	Proved	1.0	12.10	12.0	1.1	0.353	0.4
	Probable	14.9	10.89	162.6	16.5	0.318	5.2
	Total	15.9	10.96	174.5	17.5	0.320	5.6



Economic performance

Government remittances: AngloGold Ashanti's operations in South Africa paid an amount of US\$6 million (R39 million) in corporate taxes in the 2004 financial year.

Meeting the Mining Charter's procurement targets

With R711 million (\$111 million) of total procurement spend at its South African operations in 2004 being attributable to companies with at least 25% ownership by historically disadvantaged South Africans (HDSA), AngloGold Ashanti has been able to raise its own HDSA procurement targets in line with its commitment to the spirit of the Broad-Based Socio-Economic Charter for the Mining Industry (the Mining Charter) and the

accompanying Scorecard. Though the Mining Charter and Scorecard do not set specific targets, a key aspect is procurement from HDSA-affiliated companies. The intention is to encourage and promote growth and employment by businesses managed and owned by HDSAs. AngloGold Ashanti's black economic empowerment (BEE) procurement policy is designed to comply with the principles set out in the Mining Charter.

In 2001, the then AngloGold introduced its black economic procurement strategy which serves as a guide for the purchase of goods and services from BEE companies. At that time, total BEE procurement was 7.5% of total procurement of R3.4 billion (\$530 billion). Since then, this has increased steadily towards the target of 63.5% for 2012.

Growing small business in South Africa

Since its formation, AngloGold Ashanti has been involved in stimulating economic growth by developing small business enterprises. The Small and Medium Enterprise Development Initiative (SMEDI) identifies people, mainly from an historically disadvantaged South African (HDSA) background, who have ability and potential, and enters into a partnership with them to provide education, capacity-building and funding with the long-term aim of creating self-sustaining businesses. The raising of venture capital is managed through Masakhisane (meaning 'Come Let's Build Each Other Together' in Zulu), which was established with an initial R10 million (\$1.6 million) capital in 1998. Since then, SMEDI has been involved in setting up 172 small businesses.



These have a current average annual turnover of R696 million (\$109 million) and have created jobs for more than 3,289 people. There is a close link between SMEDI and AngloGold Ashanti's Black Economic Empowerment (BEE) procurement strategy, which serves as a guide in obtaining goods and services from suppliers in compliance with the Mining Charter's Procurement Scorecard. "We have made good progress in this area," says commercial services manager, Johan Coetzer. "In 2003, BEE procurement amounted to R367 million (\$57 million), or 11% of the total: in 2004, this amounted to R711 million (\$111 million), or 21% of the total. We are confident that we will be able to meet our scorecard target, which is 63.5% by 2012."

6 | Community

- R23.6 million (US\$3.8 million) was spent on social investment initiatives by the South Africa region in 2004. These funds were distributed largely through the AngloGold Ashanti Fund with the balance being dispensed by corporate office and the operations
- The individual operations support and encourage local economic development and the development of small business in particular.
- The Mineral and Petroleum Resources Development Act, which came into effect in May 2004, requires that all mining operations apply for conversion of so-called old order mining rights into new order mining rights. This includes the submission of social and labour plans in addition to mining works plans and environmental management plans.

Social investment spending in South Africa (000)

South Africa	R23,610	\$3,808
Corporate office	R7,087	\$1,143
AngloGold Ashanti Fund	R15,618	\$2,519
Operational expenditure	R905	\$146



Making a difference – the AngloGold Ashanti Fund and Trust

The AngloGold Ashanti Fund is the primary vehicle for the group's social initiatives in southern Africa. During 2004, the Fund distributed R16.148 million (\$2.59 million) to a wide range of projects across the region - primarily in those areas where the company operates and in the regions from which it draws its employees and where many employees families reside. The Fund's primary areas of activity are:

- education
- welfare and development
- health care
- HIV/AIDS
- skills training and job creation

The AngloGold Ashanti Fund is managed by Tshikululu Social Investments with a professional management team at the helm, and aims to provide constructive support for sustainable projects which contribute to the region's longer-term well-being and development.

An important change for the Fund in the past year has been the increasing emphasis placed on the local area committees. These comprise operational personnel who are in close contact with the regions and communities in which they operate and are able to better advise on local needs. It is hoped that the role of the local area committees will grow and bring the Fund closer to the communities and people to whom it contributes. In addition, in South Africa, relationships with local authorities have been strengthened by the appointment of a Corporate Social Responsibility (CSR) manager, Butiki Loliwe. He works with a small team whose duties include ensuring a closer alignment between the fund's activities and the local authorities' Integrated Development Plans.

Lesotho water project – bringing a much needed resource to employees' families

TEBA, formerly the mining industry's recruitment agent, has been engaged in the development and maintenance of village water supplies in Lesotho since 2001, working in close co-operation with the Lesotho Department of Rural Water Supply (RWS). Lesotho is a major labour-sending area, with 60,000 mineworkers, including contractors working on South African mines. The work of the RWS has been restricted by limited funding and by challenges in the supporting water distribution network to support the dam building project put in place. Research undertaken by AngloGold Ashanti in 1998 showed that communities in southern Lesotho regarded the

supply of water as their main priority. This project, based in the Mafeteng District of Lesotho, involves repairing and refurbishing 180 boreholes and hand pumps across at least 50 villages. Most of the pumps in the villages are in extremely bad condition having been neglected and vandalised. On average about 40 households use one water pump and with the average number of people per household estimated at six people, about 240 people benefit from each pump.

The first phase of the project began in 2003 and costs about R65,000 per month, of which AngloGold Ashanti provides R50,000.



HIV/AIDS

HIV/AIDS is a significant challenge in South Africa, and given the labour-intensive nature of mining in this country, this pandemic is critical. Employees at the South Africa operations account for 69% of the group's workforce. Based on best available information, AngloGold Ashanti estimates an HIV-prevalence rate in 2004 of 30.24% (2003: 29.95%) among its South African workforce.

HIV/AIDS policy and agreement

AngloGold Ashanti's HIV/AIDS policy is contained in an agreement signed with all recognised trade unions in July 2002. Embodied within this agreement are the principles of:

- non-discrimination
- confidentiality and non-disclosure
- benefits applicable, and
- rules governing ill-health retirement.

While the provision of anti-retroviral therapy (ART) was not part of the original agreement, trade unions have participated in the ART programme from inception through the project's steering committee and ethics forum. Efforts have been made to engage with the primary union, the National Union of Mineworkers (NUM) to undertake an HIV-prevalence survey amongst employees, linked to a behavioural study. This information would be used to plan for and implement appropriate changes to the current programme.

No progress has been made in this regard as the company has been unable to convince the NUM that this will be to the benefit of the company and employees alike.

Governance and structure

AngloGold Ashanti's HIV/AIDS programme is managed at both a clinical and operational level, and overseen by a joint management/union committee. The clinical expertise, resources and oversight are provided by AngloGold Health Service (AHS). AHS provides a comprehensive medical service at on-mine clinics, occupational health centres, and two world-class hospitals. These services are complemented by the research undertaken by Aurum Health, a subsidiary of AHS. Included as part of the AHS service is the company's voluntary counselling and testing (VCT) and wellness programme which includes the provision of ART. Since the health care service is managed independently of the mining operations, this promotes the confidentiality of the medical programme. In addition to centralised education, training and management initiatives undertaken under the auspices of AHS, each operation has a joint management/union HIV/AIDS committee that oversees the implementation of mine-based programmes, and raises any issues of concern.

The AngloGold Ashanti HIV/AIDS programme comprises five parts: education and training; voluntary counselling and testing (VCT); a wellness programme (including ART); ill-health retirement for employees who become AIDS-ill; and home-based and community-based programmes.

AIDS prevalence levels



An anonymous unlinked survey undertaken in 1999 indicated an HIV prevalence level among employees of 24%. This was followed up by a second survey in 2000/2001, undertaken in collaboration with the London School of Hygiene and Tropical Medicine which indicated a prevalence level of 29%. Based on these surveys, provincial antenatal data and extrapolations from comparable reference groups, AngloGold Ashanti's current best estimate of prevalence

among employees is 30.24%. Using actuarial modelling, the company is able to project prevalence levels going forward. In terms of this model, prevalence levels are thought to have peaked in 2004. However, without a scientifically-based survey, these numbers cannot be confirmed. Based on the current stance of the NUM on anonymous testing, such a survey is unlikely to be conducted within the foreseeable future.

Safety and health

In 2004, the LTIFR data per million man hours worked for the West Wits operations were as follows:

Mponeng	9.81
TauTona	8.24
Savuka	17.57

In particular:

- Savuka won the South African Safety Shield Competition for 2004 and improved its serious injury frequency rate by 8.34% compared to its best performance over the past four years.

AngloGold Ashanti is committed to its long-term objective of eliminating accidents. Regrettably though, 31 employees lost their lives in work-related accidents at the South Africa operations, of these 22 were from the West Wits area (5 at Mponeng, 11 at TauTona and 6 at Savuka). The primary cause of accidents is falls of ground (64%) with seismically induced falls of ground accounting for 50% of these.

At the South Africa operations, comprehensive health care services are provided by AngloGold Health Service. Medical surveillance is conducted in line with the Mine Health and Safety Act: 51,084 occupational medical surveillance examinations (initial, periodical, transfer and exit) were performed in 2004.

In South Africa, noise-induced hearing loss (NIHL), occupational lung diseases (OLD) and tuberculosis (TB) are categorised as occupational diseases and are therefore compensable by law. In 2004:

- 285 new cases of NIHL were compensated during 2004, which is a rate of 7 per 1,000 employees. This is a decrease of 61% on the previous year's rate of 18 per 1,000 employees.
- 319 cases of OLD were compensable in the South Africa region during 2004, which is a rate of 8 per 1,000 employees.
- 1,386 new cases of TB were detected and treated during the year, which is a rate of 35 per 1,000 employees. Despite intensive efforts to both detect and treat TB, prevalence rates are increasing as a result of the increasing incidence of HIV and AIDS among a silica-exposed workforce.

Aurum Health Research, a wholly-owned subsidiary of AngloGold Health Service (AHS) has been granted \$14 million for a major HIV-TB research project over five years. The grant is part of a larger award to the international Consortium to Respond Effectively to the AIDS/TB Epidemic (CREATE) to research strategies for TB control, by the Bill and Melinda Gates Foundation.

Control of mining-induced seismicity in the South Africa region

Seismic events and rockbursts are a constant feature of South African gold mines and are a significant cause of fatalities in the South African gold mining industry. AngloGold Ashanti has adopted a holistic approach to the management of seismicity at its deep level mining operations in the South Africa region.

The type of seismicity experienced in an area or particular mine is closely related to the geological setting. In the West Wits area, the geology is less complex than in the Vaal River area and all three forms of seismicity are observed, and face bursting is a particular problem when mining the Ventersdorp Contact Reef here. Generally, seismicity levels in the West Wits area are far higher than in the Vaal River area due to the greater depth of mining and stiffer rock mass. Events in the West Wits area also occur closer to the workings.

AngloGold Ashanti's fall-of-ground management (FOGM) system was developed in 2002 and has been implemented at all its South African deep level mines to manage mining-induced seismicity and rockbursts.



Five strategic thrusts underpin South African safety drive

The South Africa region's 2004 safety summit resolved to follow five key strategic thrusts for safety management during 2004/2005. These are:

- mindset change;
- risk management;
- fall of ground management;
- horizontal and vertical transport; and
- wellness in the workplace.



Mponeng's safety strategy focuses on behavioural change

Mponeng mine, which employs some 5,700 people including contractors, is situated in the West Wits area of AngloGold Ashanti's South Africa region. (Mponeng means 'look at me' in Tswana.) The mine has had a great deal to be proud of in recent years, with lost time injury frequency rate (LTIFR) rates declining steadily from 22.7 in 1999 to 9.5 for 2004. Mponeng won the South Africa region safety shield in 2001 and 2003, and was the runner up in 2002. The mine has achieved 500,000 fatality free shifts on four occasions in the last two years, and achieved 116 'White Flag Days' (days on which no injury is recorded) in 2004, compared with 75 days in 2003.

Early in 2004, tragedy struck when four fatal accidents took place within four weeks. One of these events, which took place on 29 January and resulted in the loss of two lives, was attributable to a seismic fall of ground; one (on 23 January) was attributable to a failure to comply with equipment standards, and one (on 10 February) was a rigging hoist accident. "No one went underground for three days after the third accident," says general manager Johan Viljoen. "Everyone on the mine - employees, unions and associations - went through an intensive process of renewing our commitment to safety."

Mponeng has implemented the SHARP (Safety, Health, Achieve, Respect, Productive) system. This was developed at Mponeng, based on the DuPont principles of peer observation. "The SHARP system represents a step in the process of taking the peer observation principle down to mineworker level," explains Viljoen.



Controlling dust levels underground remains a focus area

Silica dust in the air, generally as particles too small to be visible to the naked eye, is an inevitable accompaniment to South African gold mining. The inhalation of silica dust may cause silicosis, an occupational lung disease (OLD).

In 2003, AngloGold Ashanti's South Africa region established a 'wellness in the workplace forum' – a multi-disciplinary body comprising experts from the areas of dust control, noise in the workplace, radiation, TB and HIV/AIDS. The forum has taken over the work of the regional dust steering committee. Similar forums will be established at an

operational level during 2005 to ensure that this integrated approach to occupational health is cascaded through the company. Kobus Dekker, (occupational environment, safety and health manager – occupational hygiene) is responsible for dust and noise control. Dust management involves both the implementation of dust control systems and the education and training of employees to implement these. Results are encouraging. Between 2002 and 2004, the percentage of employees at the South African operations exposed to levels of total respirable dust in excess of 1.00 mg/m³ has decreased from 2.4% in 2002 to zero for the second and third quarters of 2004.



Implementing fall of ground regulations

Falls of ground have remained one of the most significant causes of fatal accidents in the South African underground mining industry. In an effort to combat this, the Department of Minerals and Energy (DME) formulated new Fall of Ground Regulations, in accordance with the provisions of Chapter 14 of the Mine Health and Safety Act, in July 2002. These came into effect in January 2003.

Two groups are affected by these regulations: people who are required to declare a working place safe ('Competent Person A'), and those who are required to install, maintain or remove any support unit ('Competent Person B'). These groups need to be assessed and found competent in accordance with education and training standards and qualifications as generated by the Mining Qualifications Authority (MQA). The MQA determined the specific competencies required to perform these activities and grouped the associated unit standards into clusters. These clusters of unit standards were registered as skills programmes.

As this was one of the first sets of regulations to place the responsibility on employers to determine the competence of employees, the MQA decided to select four lead sites to pilot the implementation process. AngloGold Ashanti was selected as a gold mining lead site. The assessment and implementation process was carried out simultaneously at AngloGold Ashanti's South Africa region's business units, so that any problems encountered could be timeously communicated to the MQA.

Towards the transformation of proto teams

In any mine accident in South Africa, important behind-the-scenes players are the personnel of the Mines Rescue Services (MRS), commonly known in the industry as proto teams. Started 80 years ago to provide resources and expertise for an effective emergency service in the mining sector, MRS is a private sector, non-profit organisation that trains volunteer brigadesmen who work in the industry to find and recover fellow employees in the event of an underground accident or incident.

Before the democratic election in 1994, the proto teams consisted of whites only. Although there was no legislation excluding people of colour, brigadesmen were usually drawn from within the supervisory ranks from which – historically – men of colour and women were excluded. The transformation of the mine's proto teams, in line with the management structure of the company, has become an important priority for AngloGold Ashanti.



A total of 14,603 people were employed at the West Wits operation in 2004, a decline of 10.7% on 2003 and largely a result of natural attrition and downsizing at Savuka. Approximately 93% of all employees are either represented by unions or catered for by the agency shop agreement.

The four recognised unions are the National Union of Mineworkers (NUM), the United Association of South Africa (Uasa), Mineworkers Solidarity and the South African Equity Workers' Association (SAEWA), representing respectively 72.2%, 11%, 2.6% and 0.8% of employees in the region.

Employment equity: This forms a part of AngloGold Ashanti's broader human resources strategy to promote an organisational culture that recognises the diversity of the societies within which the company conducts its business, and which affords all employees the development opportunities that will enable them to achieve their optimal levels of career development in the course of their employment with the company. Key elements of the group's employment equity programme include employee development and retention, the implementation of strategies to counteract losses, to develop careers and to promote mobility in an environment that is free of discrimination.

In South Africa the employment of historically disadvantaged South Africans (HDSAs) is a particular priority. Employment targets and achievements are reported annually to the South African Department of Labour. Within South Africa, 32% of management comprises HDSAs. The Employment Equity Act and Broad-based Socio-economic Empowerment Charter (the Mining Charter) both cater for the promotion of HDSAs. An employment equity and skills development committee was launched at corporate office in 2004 to identify and promote employment equity and diversity, and to monitor compliance with statutes and regulations. The South Africa region has developed policies regarding equal opportunity employment, a framework promoting opportunities for women in mining, sexual harassment, and fair practices for appointments and promotions.

Foreign migrancy is reported in line with the Mining Charter. Foreign migrants are defined as employees drawn from outside of the borders of the country. Many other migrant workers originate from rural areas within South Africa. The percentage of foreign migrant employees was 37% as at 31 December 2004.

Reducing the trauma of retrenchment at Savuka

AngloGold Ashanti's Savuka operation in South Africa (formerly West Deep Levels West mine) has been a source of employment and income for thousands of employees and their families since the 1960s, with much of this spent in the local community and rural areas. Savuka has also subscribed to the practice of providing job opportunities for employees' children. For some time, Savuka's costs have consistently exceeded its revenues. In 2003 it became apparent that right-sizing was inevitable, and as part of this, it was planned to reduce the labour complement by 40% – 1,800 people out of a total of some 4,500. Current life-of-mine plans will see Savuka continuing at this reduced level until 2007.

Management and labour developed a strategy to benefit both the company and employees, ensuring the financial feasibility of Savuka for as long as possible on the one hand, and minimising the resulting trauma on employees on the other. The planning process was guided by the Retrenchment Agreement in place at the mine. There were two

Training and development: In South Africa, where 69.4% of the group's employees are based, the company is registered with the Mining and Minerals Sector Education and Training Authority (SETA) known as the Mining Qualifications Authority (MQA), a tripartite body formed between labour, the state and employers. The South Africa region's centralised training venue provides accredited technical training in the following core disciplines: mining, mining services, engineering, metallurgy, and occupational environment safety and health. The centre is ISO 9002 certificated and accredited by the MQA. Skills programmes and learnerships presented at the centre are outcomes-based and provide employees with the necessary knowledge and skills to do their work safely and efficiently.

Adult basic education and training (ABET): Achieving 100% employee literacy and numeracy has long been a target for AngloGold Ashanti. More recently, the South African Mining Charter requires that all employees are offered the opportunity to become functionally literate and numerate within five years of conversion to new order mining rights.

During the past 12 years, some 32,000 employees have attended ABET in South Africa: 76% of all supervisory employees (approximately 10,060 employees) have an ABET qualification; 45% of all employees have an ABET level 3 and above qualification. ABET has three qualification levels, 1, 2 and 3. ABET 1 is equivalent to three years of formal education, ABET 2 to five years and ABET 3 to seven years. As from 2004, the equivalent of ABET 4 – NQF1 – is available to employees.

Full-time and part-time ABET courses are held at individual mines at Vaal River and West Wits.

Graduate training: The South Africa region spent \$1.79 million (R11.5 million) on bursaries for 112 students at various tertiary institutions. Currently, students are pursuing tertiary studies in:

- mining: 34 students;
- engineering (mechanical, heavy current electrical, as well as process and instrumentation control): 36 students;
- metallurgy: 17 students; and
- mineral resource management (geology and survey): 25 students.

role players in the downscaling process – NUM and Uasa.

Agreement was reached in 2003 on a number of key elements, including extended unpaid leave, voluntary separation packages, transfers, early retirement, the replacement of contractors, the application of the last-in first-out principle, and skills training, provided by an external agency in consultation with the Department of Labour.

The process has been overseen by an advisory committee – the Future Forum – and when the next phase of labour reductions starts in the latter part of 2005, regular meetings of the Future Forum will be re-instituted. The mine found that the Future Forum was crucial to this process, ensuring fairness, interviewing employees for possible transfers, and in providing advice on skills training and ensuring that the skills training actually took place. In addition, as many employees as possible will be redeployed at Moab Khotsoong, at the Vaal River operations, as this mine builds up to full production.

Environment

All the South African operations have approved environmental management programmes (EMPs) in place. These have been submitted to the Department of Minerals and Energy as part of the applications for conversion to new order mining rights in line with the MPRDA. An internal audit of the South African operations has indicated that the region is largely compliant with its EMP obligations.

A total of 72 environmental audits were conducted at the South Africa operations in 2003 – most legal non-compliance issues were associated with water management and waste management. Attention during 2004 focused on addressing the findings of these audits. A new auditing protocol to evaluate legal compliance has been developed and will be introduced in 2005.

Cyanide protocol – the international Cyanide Code has been adopted as the standard for cyanide management within AngloGold Ashanti. An internal audit of compliance was completed at the South African operations in 2004.

South African law requires that AngloGold Ashanti calculate its estimated environmental closure and final rehabilitation costs for operations which are subject to the requirements of the law. The law also requires that this estimate be used by AngloGold Ashanti to make periodic cash contributions to an environmental trust fund. In 2004, the West Wits operations contributed \$3.38 million (R20.96 million) to such a fund, bringing the balance at the end of the year to \$17.8 million (R110.36 million).

Energy usage: Energy is a major cost driver, particularly in underground mining. In its efforts to conserve energy, the group is focusing on ensuring the efficient use of energy and on developing and implementing renewable energy sources.

During 2004, AngloGold Ashanti together with Anglo American plc completed a technology strategy in respect of the energy platform which has as its objective the reduction of the group's energy intensity year-on-year.

Pollution prevention: The prevention of pollution, particularly of the air and water resources is generally also considered in the operational EMS.

Action plans are being put into place to address the 16 identified near-surface polluted aquifers. The Department of Water Affairs and Forestry has recommended that companies involved in mining areas, such as Klerksdorp and Carletonville, collectively design a water management closure plan for the region, in addition to the normal mine closure plans. Water management agreements will be negotiated with the relevant mining parties in the two operational areas to address potentially elevated constituent concentrations in ground water.

Budgetary constraints in recent years have hampered environmental remediation efforts in the South Africa region. In an effort to remedy this, some R19 million (\$2.96 million) has been spent on the so-called 'legacy projects' in 2004 and an additional R9 million (\$1.40 million) is budgeted for 2005.

Hydro-power: At the South African operations, for example, hydro-power is used to generate sufficient energy for rockdrills and other equipment at the Tau Lekoa mine in the Vaal River region. This is one of the few gold mines in the country to operate on this system, which also has a number of occupational health advantages (such as reduced noise and dust levels). Other applications include the powering of pumps at a number of other mines in the area. The Moab Khotsong mine in the Vaal River area is participating in the National Electricity Regulator's demand-side management programme, with significant cost savings expected.

Environmental remediation projects in South Africa include:

- monitoring boreholes at TauTona;
- construction of oil and grease separation systems at the TauTona workshops;
- construction of a decontamination bay at Savuka; and
- lining the pollution control dam at the Mponeng plant.

New heat tolerance centre at West Wits



One of the main risks encountered by underground employees in deep level hard rock mining is exposure to high temperatures, which, coupled with strenuous work and dehydration, can result in varying degrees of heat disorders - from heat cramps to heat exhaustion, to heat collapse and heat stroke. Heat stroke is the most serious and dangerous, causing multiple organ failure, and can be fatal. AngloGold Ashanti employs a heat stress management (HSM) programme to promote the health and well-being of its employees and to meet the requirements of legislation. HSM's focus is not solely on cooling underground working areas, but also on detecting and excluding individuals with heat intolerance by means of a screening procedure.

Employees who are not heat intolerant then proceed underground for natural acclimatisation to occur, during the course of their first 10 shifts. New recruits, employees returning from leave, and employees who have been off sick for seven days or more - and who work in physically demanding jobs at temperatures exceeding 27.5°C wet bulb - are required to undergo heat tolerance screening (HTS).

An equally important aspect of HTS is education and awareness around the risks of heat-related disorders. This takes place in the waiting period prior to the actual heat tolerance test as well as during induction training on the mines. Employees need to know the importance of drinking water regularly to prevent dehydration.



New legislation to impact on air quality management

Air quality management, which is currently governed by the Atmospheric Pollution Prevention Act of 1965, is to fall under the new Air Quality Bill, when it is promulgated in 2005.

Kobus Dekker – occupational, environmental, safety and health manager of AngloGold Ashanti's South African region – describes air quality management at the company as the elimination or control of "all pollutants generated from the metallurgical plants (the main potential source of pollutants), tailings storage facilities and ore piles, as well as any other sources, for example, refrigeration plants, vehicles and ventilation fans". The Bill's priority areas are specifically the ambient concentration of ozone, nitrogen oxide (NO), oxides of nitrogen (NOx), sulphur dioxide (SO₂), carbon monoxide (CO), lead, and amount and size of particulate matter (PM₁₀) and total suspended solids (TSS).

Major concerns arising from the assessment are dust levels, which pose a potential health risk to fauna, flora and humans; and SO₂ emissions from the metallurgical acid plant stacks. In 2004 AngloGold Ashanti focused on monitoring and reducing dust levels and has purchased two weather stations which measure temperature, rainfall, wind speed and direction; dust fall-out buckets for monthly monitoring at West Wits and Vaal River; and two PM₁₀ dust monitors to monitor human inhalation (particles smaller than 10 microns are known to pose a health risk). In 2005, the focus is on the monitoring and reduction of SO₂ and sulphur trioxide (SO₃) emissions. Once approved by management, AngloGold Ashanti's Air Quality Management Plan will be forwarded to each of the South African operations for incorporation into their mine-specific Environmental Management Implementation Plan.

Three-year project to fast track environmental management plans in South Africa



The environmental management department attached to the South African operations has been tasked with fast tracking some of the major environmental remediation initiatives identified by the group over the next three years. Says project manager, Tony Da Cruz, "When pressures mount to reduce the funding requirements, particularly during periods in which the margins are being squeezed, inevitably the environmental

components of the operational budget are cut because they are deemed non-essential to production. The role of the Environmental Management Department is to ensure that the appropriate levels of resources are applied to meet the environmental commitments of the South Africa region in a timely manner and to ensure legal compliance at all times."



Woodlands project – good progress being made

Good progress is being made with the Mine Woodlands and Sustainable Vegetation of Slimes Dam projects being overseen by the University of the Witwatersrand, Johannesburg (Wits) and AngloGold Ashanti South Africa. This research programme, for which the initial work began in 1996, combines ecological engineering with a phytoremediation approach to reduce environmental impact and liability. AngloGold Ashanti has championed this programme since its inception, and between 1996 and 2005, contributed a total of R9.1 million (\$1.42 million) for slimes dam slope reduction, the planting of trials, infrastructure and R&D.

The mining industry's approach to reducing erosion and dust from tailings dams has largely involved the planting and irrigation of pasture grasses. Pasture grassing is expensive and consumes up to three times annual rainfall for irrigation; it prevents surface erosion (i.e. dust control) for less than 10 years, is rarely effective in containing erosion in the longer term, and does not prevent seepage and water pollution, or achieve ecological sustainability. As pasture-grassing has proven unsustainable for mine closure purposes, there is a need to determine what type of vegetation would prevent pollution emissions from tailings dams, and so lead to rehabilitation.

Trees and shrubs have several advantages over grasses for the purposes of pollution control. Many trees are evergreen, in contrast to grasses which are dormant in winter. The more extensive root systems of trees can therefore abstract seepage all year-round, and from greater depths. The fine root and leaf litter of trees is more effective than that of grasses in fostering the formation of top soil, and fine roots can also take-up or immobilise some pollutants. Woodlands can remove organics, nitrates, phosphates, sulphates, various heavy metals and radionuclides from soil and groundwater, and internationally, phytoremediation is gaining acceptance as the technology of choice for landfills, mining waste and contaminated land.

Given the improved state of environmental knowledge, and the changes in legislative emphasis, there is now potential for significant long-term liability on the part of land owners and users. The AngloGold Ashanti-Wits programme is pioneering methods to prevent pollution, remediate polluted soils and water, and convert tailings dams to safe and sustainable land uses.