



**GOLD FIELDS**

# Damang Gold Mine

## Technical Short Form Report

This Technical Short Form Report reflects the latest Life of Mine plan, together with an updated Mineral Resource and Mineral Reserve statement. The declared Mineral Reserve as at 30 June 2009 has increased by 466 koz of gold when reconciled against June 2008, predominantly due to new discoveries, resource modelling and reduction in cut-off grade.

Abosso Goldfields Limited (AGL) is a Ghanaian registered company that owns and operates the Damang Gold Mine. Gold Fields Ghana Holdings Limited holds a 71.1% interest in AGL, IAMGold 18.9% and the Ghanaian Government the remaining 10%. Damang manages five Prospecting Licences as well as two Mining Leases, namely the Damang Mining Lease and the Lima South Mining Lease, which equate to 8,111 ha.

The mine exploits oxide and fresh hydrothermal mineralisation in addition to Witwatersrand style palaeoplacer mineralisation. The hydrothermal mineralisation is located in Tarkwaian sediments and is the only deposit of its kind, located on the eastern side of the Ashanti Belt in southwest Ghana. Mineral Reserves for Damang are estimated using mine designs generated from standard mine optimisation methods, current cost structures, and technical assumptions derived from actual production history and/or feasibility studies.

The Damang Plant processes 5.1 Mt pa from a blend of proximately 37% oxide ore and 63% fresh ore, sourced from the open pit mining operations and existing surface stockpiles. Process feed for the one-year period to 30 June 2009 comprised 5,0 Mt at a yield grade of 1.3 g/t Au for 200 koz.

All Mineral Resource and Mineral Reserve figures reported are managed unless otherwise stated and Mineral Resources are inclusive of Mineral Reserves.

### Salient Features

- Renewed focus on regional and near-mine exploration.
- Damang to accelerate its recent rate of discovery to maintain a pipeline of quality projects.
- Mineral Resources of 4.3 Moz.
- Mineral Reserves of 1.8 Moz – 34% increase year-on-year.
- Life of Mine extends to F2019 (9 years).

The Abosso Mine operated from 1882 until 1956. From 1989, Ranger Exploration, initially with other partners, firstly examined the feasibility of re-treating tailings from the Abosso Mine, and then the northeast extension of the Banket Conglomerates towards Damang Village. Gold appeared to be associated with both Banket Conglomerates and a flat lying quartz vein system.

Pitting and trenching carried out between 1990 and 1992 demonstrated near surface mineralisation over a 3 km strike length and follow up drilling commenced in 1993. By early 1996, a 3 Moz Mineral Resource had been estimated and a feasibility study demonstrated that open pit mining would be viable to a depth of about 200 m. The current estimated depth for the Damang pit is 300 m following the approval of a cutback in 2005.

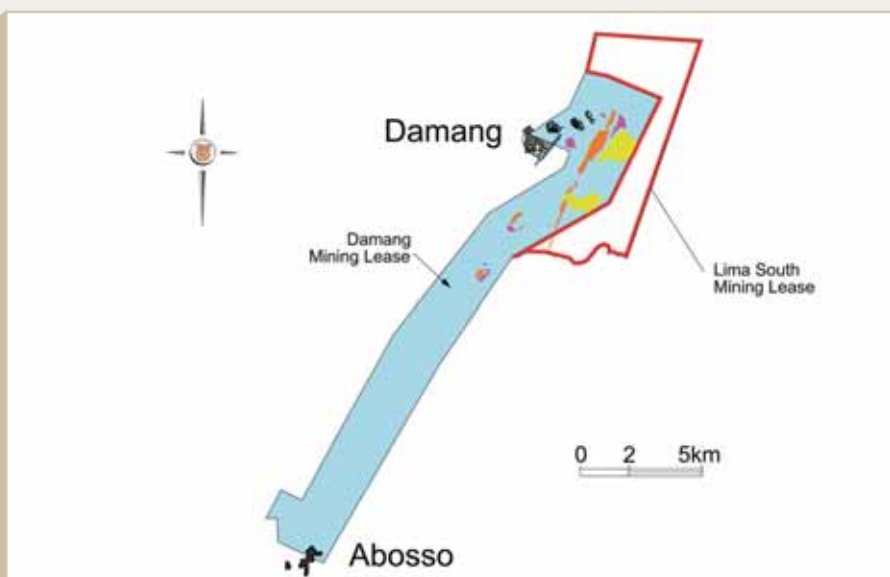
A mining lease was granted to AGL on 19 April 1995 and the mining operation commenced in August 1997.





## Key Features

<b>Independent Audit</b>	Figures reported in this declaration are as reviewed and approved by independent, external consultants as at 30 June 2009
<b>Prepared by</b>	Gold Fields Limited
<b>Effective date</b>	30 June 2009
<b>Source of Information</b>	This Technical Statement is a summary of the detailed internally sourced document entitled F2010 Damang Competent Persons Report
<b>Personal Inspection</b>	Personal inspection is conducted by the Competent Persons as listed, who are full time employees of Gold Fields Limited or contracted external consultants
<b>General Location</b>	Damang is located in south-western Ghana, approximately 300 km by road, west of Accra, the capital, at a latitude 5° 11' N and longitude 1° 57' W. Damang Gold Mine is located 30 km north of the town of Tarkwa with good access roads and an established infrastructure. The Mine is served by a main road connecting to the port of Takoradi, some 90 km to the south-east
<b>Licence Status and Holdings</b>	The Damang concession covers a total area of 27,174 ha. All necessary statutory mining authorisations and permits are in place for the Damang Mine Lease and AGL is entitled to mine all material falling within the lease. Abosso Goldfields holds a mining lease in respect of the Damang Mine dated 19 April 1995, as amended by an agreement dated 4 April 1996. This lease expires in 2025, but is renewable under its terms and the provisions of the Minerals and Mining Law, by agreement between Abosso Goldfields and the Government of Ghana
<b>Operational Infrastructure</b>	The Damang plant processes oxide and fresh ore, which is sourced from the open pit mining operations and from existing surface stockpiles, located on the Damang Mine Lease. The plant throughput is 5.1 Mtpa and comprises 37% oxide ore, and 63% fresh ore blend
<b>Climate</b>	A tropical climate, with average monthly temperatures between 21°C and 32°C, is characterised by two distinct rainy seasons from March-July and September-November. Average annual rainfall near the site is 2,030 mm. Although there may be minor disruptions to operations during the wet season, there is no operating or long-term constraint on production due to climate
<b>Deposit Type</b>	The Damang orebody is hosted by a north to north-westerly plunging antiform developed within Tarkwaian sediments. The main Damang Pit is located close to the closure of the antiform, and all other known mineralisation is located on the east and west limbs of the Damang Anticline. The concession covering the Damang Mine lies to the north of, and joins the Tarkwa concession. The Damang Gold Mine exploits oxide and fresh hydrothermal mineralisation in addition to Witwatersrand style, palaeoplacer mineralisation
<b>Life of Mine (LoM)</b>	It is estimated that the current Mineral Reserve will be depleted in 2019
<b>Environmental</b>	Damang retained its ISO 14001:2004 (Environmental Management System) Certificate following an extended audit during this year, and remains fully compliant to the ICMI Cyanide code
<b>Regulatory Codes</b>	Gold Fields reports its Mineral Resources and Mineral Reserves in accordance with the South African Code for The Reporting of Exploration Results, Mineral Resources and Mineral Reserves (2007 SAMREC Code), and other relevant international codes such as SEC Industry Guide 7, JORC Code and NI 43-101. The Mineral Resources and Mineral Reserves are underpinned by a sufficient Mineral Resource Management process and protocol to ensure adequate corporate governance in respect of the intent of the Sarbanes-Oxley Act



**Gold Fields has stated that:**  
**“If we cannot mine safely, we will not mine”.**  
**This principle is embedded at Damang.**

**Operating Statistics**

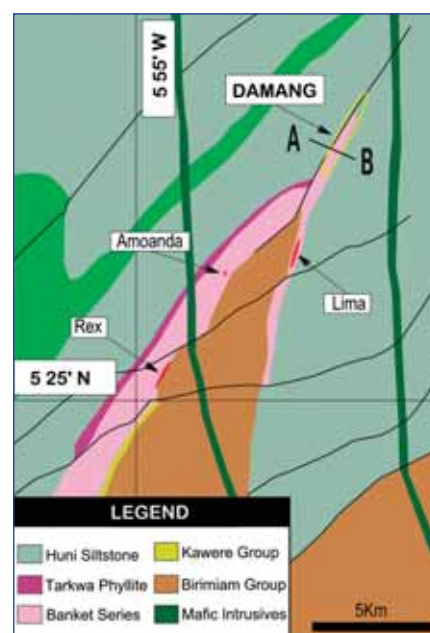
Year ended June	Units	F2009	F2008	F2007	F2006	F2005
Material Mined	'000 tons	19,459	31,422	31,250	24,735	11,586
Ore	'000 tons	4,402	4,092	3,141	3,172	3,370
Waste	'000 tons	15,057	27,330	28,109	21,563	8,216
Stripping ratio (Tons)	Waste:Ore	3.4	6.7	9.0	6.8	2.4
Ore Grade mined	g/t	1.6	1.6	1.4	1.7	1.5
<b>Source of ore</b>						
- Total tons milled	'000 tons	4,991	4,516	5,269	5,328	5,215
- Head grade	g/t	1.3	1.4	1.2	1.5	1.6
- Average yield	g/t	1.2	1.3	1.1	1.4	1.5
- Gold produced	kg	6,233	6,041	5,843	7,312	7,703
- Gold produced	'000 oz	200.4	194.2	187.9	235.1	247.7
<b>Operating cost</b>						
- Mining (Open Pit)	US\$	65.4	64.3	38.7	33.4	25.6
- Processing (Open Pit)	US\$	24.6	43.7	36.2	31.6	28.8
- Engineering	US\$	29.2				
- Marketing/Overheads	US\$	13.3	10.1	13.1	12.6	12
<b>Total</b>	<b>US\$</b>	<b>132.5</b>	<b>118.1</b>	<b>88.0</b>	<b>77.6</b>	<b>66.4</b>
Notional Cash Expenditure	US\$/oz	745	753	637	439	311
Capital expenditure	US\$ (million)	16.9	28.1	31.7	25.6	10.6
<b>General</b>						
- Number of employees	TEC's	1,649	1,146	899	913	861
- Expected Life-of-Mine	years	9	5	6	5	5
- Mineral Reserves	Mt	36.1	25.5	29.3	26.2	23.5
- Head Grade of Mineral Reserves	g/t	1.6	1.7	1.7	1.5	1.6

*Rounding off of figures presented in this report may result in minor computational discrepancies. Where this occurs it is not deemed significant.*



**Geological Setting and Mineralisation**

The Damang ore bodies are located within the Tarkwaian Sediments, which form a significant portion of the stratigraphy of the Ashanti Belt in southwest Ghana. The Ashanti Belt is a north-easterly striking, broadly synclinal structure made up of Lower Proterozoic sediments and volcanics underlain by the metavolcanics and metasediments of the Birimian System. The Tarkwaian unconformably overlies the Birimian, and is characterised by lower intensity metamorphism and the predominance of coarse grained, immature sedimentary units.



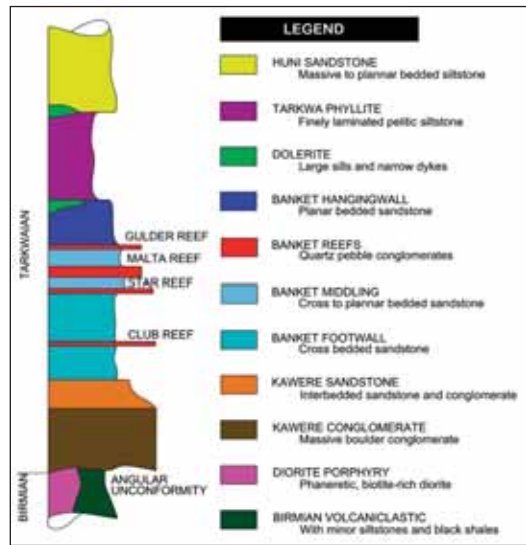
*Local geology map*

## Local geology

The stratigraphy at Damang is primarily through the Tarkwaian Group and comprises a large-scale fining upwards sequence of clastic sediments interrupted by up to four major gold-bearing quartz pebble conglomerate horizons. This sequence unconformably overlies a mixed Birimian Supergroup basement comprising volcanoclastic deposits and minor fine-grained clastic sediments and black shales. The entire region is intruded by a number of igneous intrusions, the most common being dolerites that occur as narrow dykes and sill-like bodies along contacts on either side of the Tarkwa Phyllite, a particularly fine-grained pelitic unit in the upper Tarkwaian. A second intrusive body, the so-called 'Diorite Porphyry' occurs sporadically along the boundary between the Birimian and the Tarkwaian.

## Palaeoplacer mineralisation

There are three gold-bearing conglomerate horizons recognised on the western limb of the Damang Anticline, these are known as, the Star/Composite, Malta/Breccia, and Gulder Reefs. There are also three gold-bearing conglomerate horizons recognised on the eastern limb, namely the Lima, Kwesie-K1, and Kwesie-K2 Reefs. These conglomerate horizons are separated by poorly mineralised sandstone units.



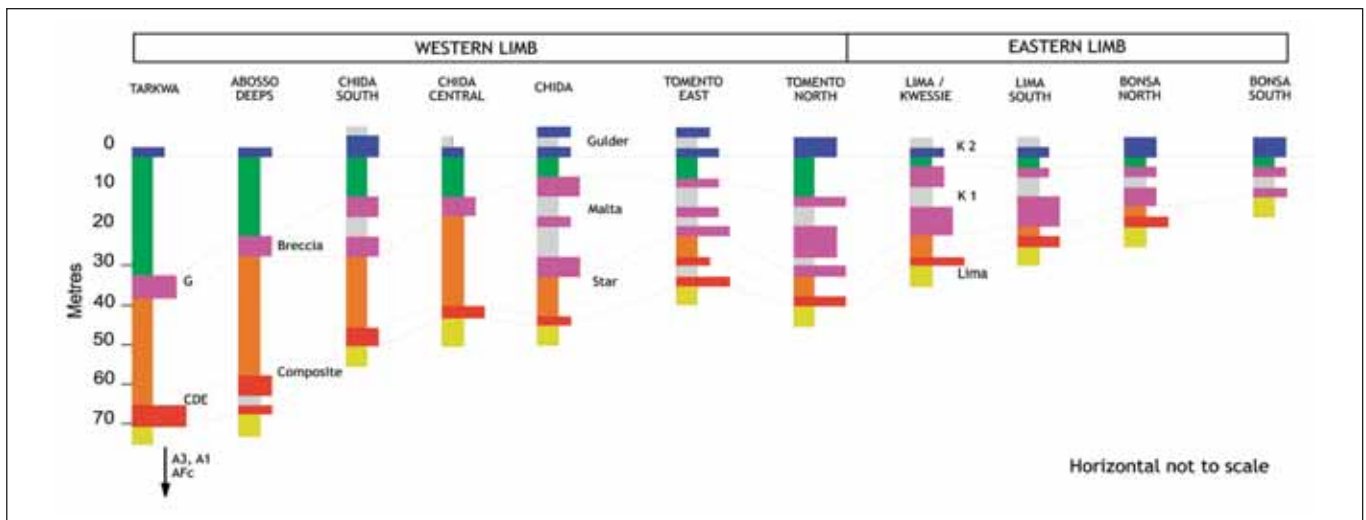
Local stratigraphy



Siting exploration drillholes

The reefs are usually characterised by a fining upwards sequence of poorly to moderately sorted, clast supported polymictic conglomerates. However, local variations are observed where the conglomerate domain is interbedded with fine to coarse grained, poorly sorted sandstones. The Star/Composite, Malta/Breccia, and Gulder Reefs on the west limb and the Lima, Kwesie-K1 and Kwesie-K2

Reefs on the east limb of the Damang Anticline, feature significantly higher gold grades than the poorly mineralised sandstone units, which separate the reefs. The conglomerate reefs may contain between 1.3 to 1.5 g/t Au, and the poorly mineralised sandstone units usually contain between 0.2 to 0.1 g/t Au.



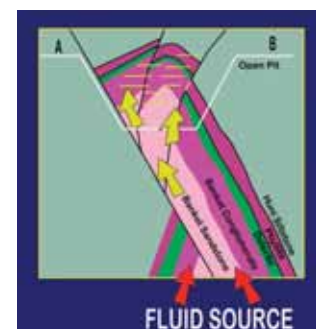
Stratigraphic profiles showing proximal to distal setting across property

## Hydrothermal mineralisation

Hydrothermal gold mineralisation at Damang occurs in pyrite and pyrrhotite alteration selvages, which are usually less than 1 m wide and located immediately adjacent to en-echelon quartz veins. Gold is also associated with accessory vein minerals such as carbonate, muscovite, tourmaline, ilmenite, and apatite. These alteration zones are often linked, and may result in significant volumes,

characterised by intense veining and gold mineralisation.

Damang is unique in Ghana by virtue of having hydrothermal mineralisation hosted in the quartzites of the Tarkwaian Banket Footwall as opposed to the Metavolcanics and Metasediments of the Birimian Basement as seen at Prestea, Bogoso, and Obuasi.



Hydrothermal mineralisation model



## Exploration and drilling

The Exploration Strategy constitutes the following:

- Aggressive five year exploration program to extend Life of Mine to 2025;
- Mineral Resource extension drilling to assess the magnitude and style of mineralisation;
- Infill and Mineral Resource conversion drilling to increase the level of confidence in the estimate;
- Geophysics survey to aid in target generation; and
- Prospect development.

Exploration drill programmes are designed to assess the magnitude and style of mineralisation. Reverse circulation (RC) drilling is usually employed for initial exploration drill testing of both palaeoplacer and hydrothermal styles of mineralisation. Diamond drilling is usually minimised in the initial exploration stages due to the higher cost, however, it is common for a small component of core drilling to be performed, to establish stratigraphic and structural relationships and to enable samples to be collected for metallurgical test work.

In general terms, it is aimed to achieve a RC drill spacing of 100 m along strike by 100 m down dip, with confirmation core drilling

undertaken to resolve local complexities, in both hydrothermal and palaeoplacer mineralisation.

Initial, and follow-up exploration drilling, is undertaken outside optimised pit shells and is done to assess the magnitude, grade distribution and continuity, engineering and metallurgical character of the mineralisation. Exploration objectives are specified in the operation's business plan and Mineral Reserve Replacement Strategy.

Infill and Mineral Resource conversion drilling is required to increase the level of confidence in a resource estimate by more accurately resolving mineralisation boundaries, grade continuity and distribution and internal waste boundaries. Resource models, which will be generated following the completion of this drilling, will be used to establish more robust production schedules and will enable more accurate and confident grade and tonnage reconciliation to be undertaken.

Damang needs to accelerate its recent rate of discovery to maintain a pipeline of quality projects and to provide additional Mineral Reserves to drive the LoM extension initiative

to F2025. On-Mine lease exploration activities in F2010 will be assisted by the near mine exploration initiative to ensure that the highest potential targets are investigated as a priority. Prime targets include Amoanda North, Damang North (Huni) and Nohokoa.



*Air-core exploration drilling at Nohokoa*

## Mining

Mining at Damang is carried out by conventional open pit methods using a contractor-fleet operated by African Mining Services (AMS). AMS has held the earth-moving contract since the commencement of operations in August 1997.

Load and haul is undertaken using a standard truck-shovel operation, with excavators in backhoe configuration (two Liebherr 994 and five Liebherr 984s). The haulage fleet consists of thirty-five (35) Caterpillar 777F dump trucks, with an average payload capacity of 100 t.



*Open pit mining in Tomento Pit 4*

Off-highway trucks haul ore to interim stockpiles near to the mining area. A fleet of tipper trucks operated by Engineers and Planners Ltd then reclaims the ore and transports it to the treatment plant.

### Mining methods

Consistent with the current production schedule, mining is carried out seven days per week, two shifts per day. Dayshift is 11 hours duration and night shift is 10 hours duration.

Ancillary equipment includes bulldozers, graders, water trucks, and service truck vehicles, supporting the drill-and-blast and haulage operations through vehicle, road, and bench maintenance, dust and erosion control.

Fresh rock and transitional zones are drilled and blasted in 6 m lifts, with excavation in 3 m flitches. To optimise ore fragmentation and blast control, blasting in fresh rock utilises both conventional (Nonel) and electronic detonators. Oxide material, which cannot be 'free-dug', is blasted using lower powder factors. Waste material is hauled to planned dumps located close to the pit exit. AGL has a progressive reclamation plan, whereby, as areas become inactive, they are immediately rehabilitated

through contouring, and replacement of topsoil, seeding, planting, and fertilisation.

Oxide ore is selectively mined to provide incremental feed to the mill with Tomento North and East pits, located at 5.3 km and 6.3 km respectively from the treatment plant, currently serving as the main oxide sources. During 2008 the Rex pit, located 15 km to the south of the treatment plant was developed to replace the nearly depleted Tomento North.

The haul roads are designed for CAT 777F trucks. For double lane traffic, the minimum width is 23 m, and includes a drainage ditch and safety berm. For single lane traffic, a minimum width of 15 m is used.



*Tomento Pit 3*

## Mine planning and scheduling

The Mineral Resource forms the basis for subsequent design, planning, and extraction scheduling, incorporated into the LoM plan. In the majority of instances, this is completed using a combination of commercial software packages.

For all operational plans, a detailed (one-year) operating and capital cost budget is produced and where appropriate extended for the LoM production schedule. The operational plan is prepared on a monthly basis. Zero-based costing is used to formulate the plan. Of critical importance is the utilisation of historically achieved data for productivity and operating costs. All capital projects are ranked and prioritised to maximise capital efficiency and return on investment.

Open pit planning involves the input of economic parameters and physical constraints into optimisation software to generate a series of nested pits from which an optimal shell is selected. Detailed design is then undertaken to confirm the mineability of the optimised shell. The process is iterated until an acceptable level of correlation is achieved between the optimised shell and detailed design. The relatively small dimension of the pits and the characteristics of the ore bodies (i.e. narrow and steeply dipping palaeoplacer reefs), combined with the equipment size, make the pit design exercise critical when it comes to

keeping strip ratios in line with optimisation results.

Standard mine design software is used; Whittle 4X to derive the optimal pit shell and Datamine or MineSight for the detailed engineering and design work on the optimised pit shells.

Mine planning is based on three-dimensional block models of in situ mineralisation, with allowances made for minimum mining widths, dilution and ore loss appropriate to the mining method being considered. Historical performance measures are considered in determination of these modifying factors.

Infrastructure, waste disposal and ore stockpile management requirements are incorporated into the planning process.

## Projects

Initial drilling projects for F2010 are as follows: The Bonga Hydrothermal project lies on the Eastern Limb of the Damang anticline within the north-south striking Banket Formation. Birimian basement occurs to the west and Tarkwaian Phyllite to the east. A number of the important east-northeast trending faults traverse the project area.

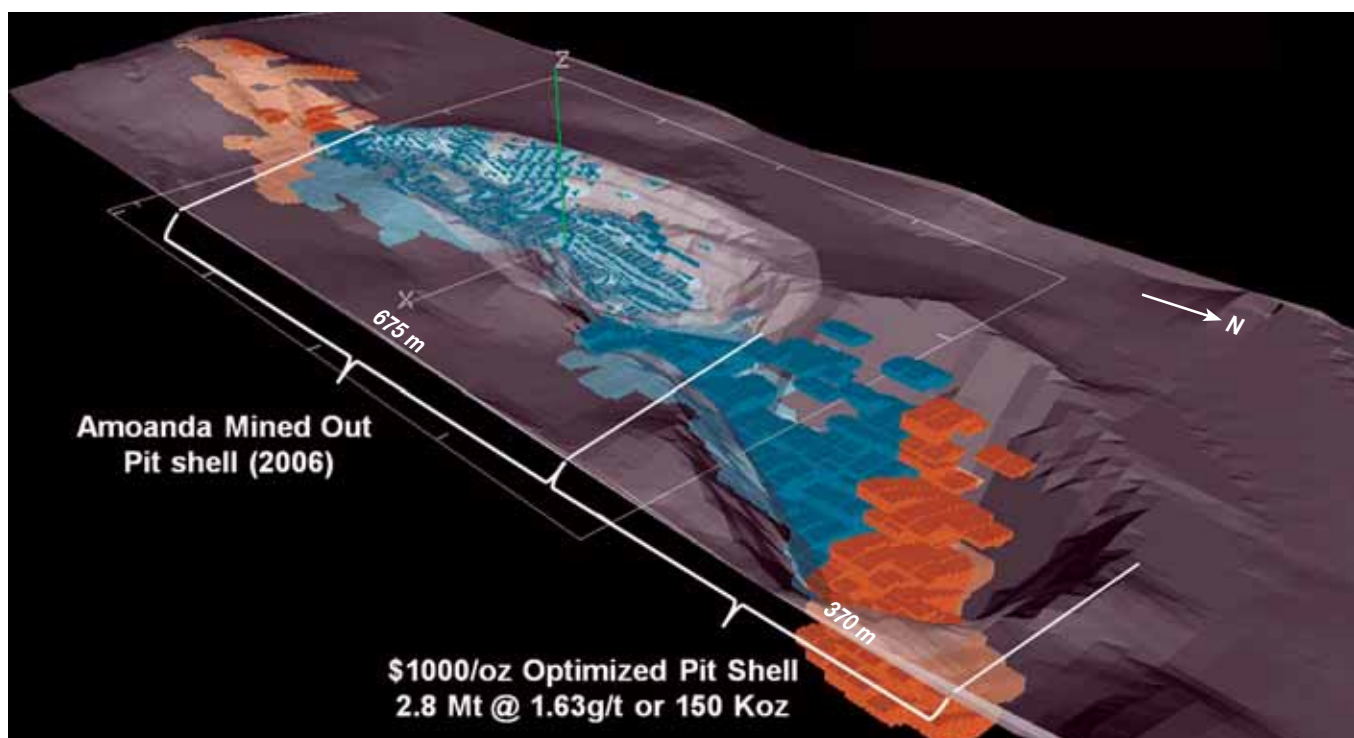
The Tomento Gap project just south of the Tomento pits was identified as a possible

source of hydrothermal mineralisation and needs to be explored. This is in line with the view that Palaeoplacer orebodies should also be tested for hydrothermal mineralisation.

The geological setting of the Chida East project, just north of Rex, is very similar to the Rex orebody and needs to be tested for hydrothermal mineralisation.

The Rex South project borders the Rex orebody and features an east-northeast structure with north east striking magnetic lineaments across the Banket, Kawere and Birimian contacts. Soil sampling, trenching and pitting at Rex South have identified hydrothermal mineralisation along the Birimian – Tarkwaian contact. A previous diamond drilling program, designed to explore Rex South, was prematurely stopped due to bad weather conditions and the undulated terrain but work will continue during the new financial year.

Nohokoa extends for over 3 km between Amoanda in the north and Rex North in the south. The area is located on the contact between the Tarkwaian and Birimian Basement, and has potential for Rex/Amoanda – style hydrothermal mineralisation. Previous exploration work was followed-up by a diamond drilling program during F2009



Amoanda block model (view to south-west)



and in view of the unexpected geology and mineralized formations, a follow-up phase may well be drilled in F2010 pending final assay results.

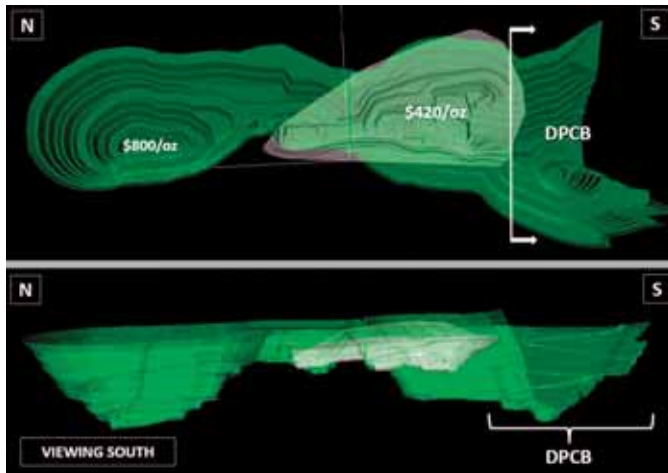
The Damang North and Koduakrom projects lie to the north of the Damang (Huni) orebody and on strike of the Damang Fault and have

potential hydrothermal mineralisation. These areas received little attention in the past and will be explored during the next financial year.

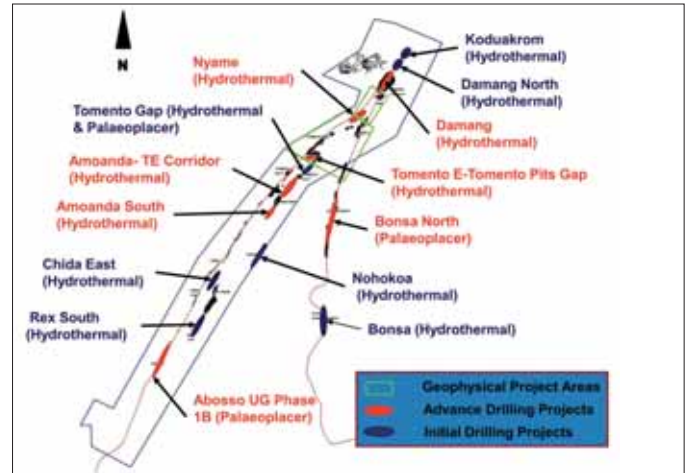
In order to locate concealed/sub-surface ore bodies, geophysical exploration techniques (Induced Polarization and Gravity surveys) were employed during the fourth quarter of

F2009 and this work will be continued during F2010.

The target area extends from the Damang pit in the north to Rex in the south with the Tarkwaian and Birimian as target Formations. A secondary crusher is to be installed to reduce the current dependency on oxide ore.



Huni Pit design



Exploration project areas

### Mineral Processing

The Damang milling circuit was commissioned in November 1997 at the design throughput of 3 Mtpa. A number of modifications and optimisations allowed an increase in the annual throughput to about 5.2 Mtpa. The Plant is a conventional two-stage grinding circuit using SAG and Ball mill combination, with pebble crusher and gravity concentration, followed by a carbon-in-leach recovery process. The average throughput of the Plant is currently 14,200 tpd, with an average availability of 94.9%.

The ore being treated at Damang consists of fresh rocks (siltstone, sandstone, phyllites and dolerite) and weathered material (laterite, saprolite). The blend requirement of the feed to the plant is currently budgeted at 65% fresh and 35% oxide. A high fresh rock proportion up to about 65% is treated when new shell liners are installed in the sag mill. However, in order to sustain the mill throughput getting

to the end of the life of the liners, the blend is made a little softer, with up to 55% fresh rocks.

The optimisations and modifications work carried out on the Plant, has seen the Plant throughput increasing from 450 tph to a current 630 tph. This has reduced the total residence time at the CIL circuit from 30 hours to 17.8 hours. The reduction in the residence time has affected the overall gold recovery on the CIL Plant, with a reduction from an average

of 93.6% (from 1998 to 2000) to 90.5% (from 2001 to 2006). However, since the successful installation and commissioning of the seventh tank in October 2008 and a second Knelson concentrator, the recovery has increased by 1.6% to 93.8%. The plant will therefore be in a better position to receive the high grade material from the Damang cut back at the current throughput.



### Damang LoM Tailings Storage Facility Assessments

Mining Operation	LoM Deposition (Mt)	Available Capacity (Mt)	Surplus/ (Shortfall) (%)	Capital Requirement (US\$M)	Expenditure Period
Damang	25.5	23.6	8	7.78	F2006-F2009

## Sustainable Development

Damang aims to comply with established Gold Fields Group Health and Safety Policy, which subscribes to international best practices, specifically in the context of World Bank Policies and Guidelines, International Finance Corporation Operational Policies, International Labour Organisation Conventions and OHSAS18001.

Damang has achieved an outstanding health and safety performance through the participation of all employees and the application of safe, innovative processes and technologies, within a framework of full compliance. The Mine has set itself a target of zero lost day injuries for the next financial year. The Mine's progressive fatality free shifts is currently in excess of 4 million. There have been 29 injuries recorded during F2009, comprising 2 lost day injuries, 5 medically treated injuries and 22 minor injuries.

Analysis of incidents indicates that hand injuries due to material handling and/or use of equipment, are the major factors to be addressed. Seventy percent of near miss and dangerous occurrences were related to the use of mobile equipment, particularly light vehicles, and haul trucks.

Environmental management at Damang is conducted within the framework of an

ISO14001 certified Environmental Management System (EMS). Certification of the system occurred first in July 2003 for a three-year period and has since then been the subject of annual third-party audits. Re-certification of the EMS under the revised ISO14001:2004

standard was achieved in July 2006 for another three-year period. The foundation of the EMS is the Abosso Goldfields Limited Environmental Policy, which is aligned with the Gold Fields Limited Environmental Policy.



Damang mine village

Safety Statistics	Units	F2005	F2006	F2007	F2008	F2009
Fatalities	(No)	0	0	0	0	0
Fatality Rate	(per Mmh)	0	0	0	0	0
LDIFR	(per Mmh)	0.22	1.2	1.28	0.7	0.6

## Mineral Resources and Mineral Reserves

The Damang Mineral Resource and Mineral Reserve declarations are based on systematic and sustainable mineral reporting practices. Systematic RC and DD drilling and subsequent core-logging, consistently updates the geological structure and reef-pod models used as the basis of each declaration. On-going sampling of RC, DD and grade control core

is carried out to provide additional grade data that is incorporated into a detailed evaluation model.

Updated pit designs and schedules are then compiled and evaluated based on the most recent technical and economic parameters to compile a LoM plan. Cognizance is taken

of pit limitations, haul road distance and plant capacity. Detailed economic and scenario models are subsequently compiled to ensure validity of positive cash flow for Mineral Reserve declaration purposes. Internal and external audits as well as peer reviews are conducted to ensure consistency and compliance to regulatory practices.

## Mineral Resources

Mineral Resources are quoted at an appropriate in-situ economic cut-off grade with tonnages and grades based on the resource block model. They also include estimates of any material below the cut-off grade required to be mined to extract the complete pay portion of the Mineral Resource;

Mineral Resource Classification	Tons (Mt)			Grade (g/t)			Gold ('000 oz)		
	June 09	June 08	Dec 06	June 09	June 08	Dec 06	June 09	June 08	Dec 06
Open pit and underground									
Measured	9.4	9.1	10.0	1.5	2.3	2.0	464	680	644
Indicated	48.0	26.0	28.5	1.5	1.6	1.6	2,268	1,309	1,471
Inferred	12.5	11.2	12.5	3.4	3.7	3.4	1,367	1,336	1,381
<b>Total open pit and underground</b>	<b>69.9</b>	<b>46.3</b>	<b>51.0</b>	<b>1.8</b>	<b>2.2</b>	<b>2.1</b>	<b>4,100</b>	<b>3,325</b>	<b>3,496</b>
Surface									
Indicated low-grade stockpiles	5.1	4.8	6.8	1.1	1.1	1.2	184	165	263
<b>Grand Total</b>	<b>74.9</b>	<b>51.1</b>	<b>57.8</b>	<b>1.8</b>	<b>2.1</b>	<b>2.0</b>	<b>4,283</b>	<b>3,490</b>	<b>3,759</b>





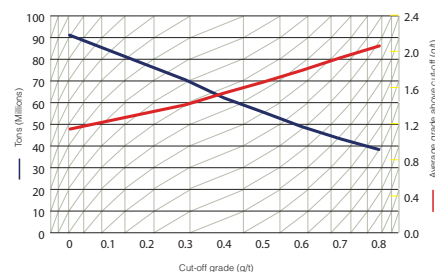
### Modifying factors

- The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce Mineral Reserves;
- Unless otherwise stated, all Mineral Resources and Mineral Reserves are quoted as 100% and are not attributable with respect to ownership;
- All Mineral Reserves are quoted in terms of Run-of-Mine (RoM) grades and tonnages as delivered to the metallurgical processing facilities and are therefore fully diluted;
- Mineral Reserve statements include only Measured and Indicated Mineral Resources, modified to produce Mineral Reserves and contained in the LoM plan; and
- Mineral Resources and Mineral Reserves have undergone both internal and external audits during the current year, and any issues identified were rectified during the current reporting cycle.

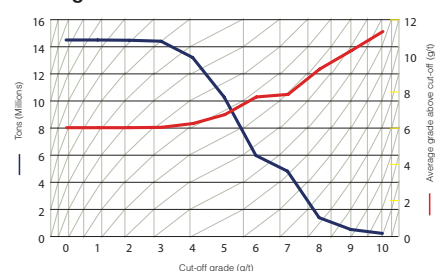
Mineral Resource Parameters			
Resource gold price	US\$/oz	1,000	
Cut off for fresh ore	g/t	0.55	
Cut off for oxide	g/t	0.35	
Mineral Reserve Parameters			
Reserve gold price	US\$/oz	800	
Cut off for mill feed open	g/t	0.62	
Cut off for fresh ore	g/t	0.62	
Cut off for oxide	g/t	0.43	
Stripping	waste:ore	3.33	
Dilution (hydrothermal)	%	15	
Dilution	cm	40	
Mine Call	%	100	
Plant recovery factor fresh ore	%	92.5	
Plant recovery factor oxide	%	93.5	
Processing	Mtpa	5.2	

### Grade tonnage curves

#### Open pits



#### Underground



### Mineral Reserves

The Mineral Reserves are derived following the production of a LoM plan, by incorporating modifying factors into the Mineral Resource model. Optimal pit shells are used as a basis for pit design. Bench Mineral Reserves are generated from the pit designs for scheduling and comprise four scheduling categories, oxide and fresh ore plus oxide and fresh waste. The oxide and fresh ore categories are based on confidence intervals, weathering codes and cut-offs, whilst the oxide and fresh waste categories include all materials that are not considered as ore.

In general, Proved Mineral Reserves are derived from Measured Mineral Resources, and the Probable Mineral Reserves are derived from Indicated Mineral Resources, except where confidence levels of modifying factors leads to Measured Mineral Resources converting to lower confidence Probable Mineral Reserves.

The stockpiles included in the Mineral Reserve comprise mostly lower grade mineralisation that has been accumulated since the start of mining of the Damang Pit. The stockpile material comprises about 10% of the Mineral Reserve ounces and 14% of the Mineral Reserve tons.

Mineral Reserve Classification	Tons (Mt)			Grade (g/t)			Gold ('000 oz)		
	June 09	June 08	Dec 06	June 09	June 08	Dec 06	June 09	June 08	Dec 06
<b>Open pit</b>									
Proved	3.5	4.6	6.0	1.8	2.6	2.2	207	388	434
Probable	27.5	16.1	16.5	1.6	1.6	1.7	1,429	800	902
<b>Total open pit</b>	<b>31.0</b>	<b>20.7</b>	<b>22.6</b>	<b>1.7</b>	<b>1.8</b>	<b>1.8</b>	<b>1,636</b>	<b>1,189</b>	<b>1,336</b>
<b>Surface stockpiles</b>									
Probable	5.1	4.8	6.8	1.1	1.1	1.2	184	165	263
<b>Grand Total</b>	<b>36.1</b>	<b>25.5</b>	<b>29.3</b>	<b>1.6</b>	<b>1.7</b>	<b>1.7</b>	<b>1,820</b>	<b>1,354</b>	<b>1,599</b>

### Mineral Reserve by deposit

Deposit	Proved			Probable		
	Tons (Mt)	Grade (g/t)	Gold ('000 oz)	Tons (Mt)	Grade (g/t)	Gold ('000 oz)
DPCB	2.4	1.9	148	6.8	1.9	407
Juno 3	1.1	1.7	59	0.5	2.0	33
Huni	-	-	-	11.4	1.7	630
Tomento North	-	-	-	0.2	1.7	12
Tomento East	-	-	-	1.3	1.0	41
Lima Gap	-	-	-	0.4	1.2	16
Lima South	-	-	-	2.4	1.0	78
Rex	-	-	-	2.4	1.8	140
Abosso Tails	-	-	-	1.9	1.2	73
Stockpiles	-	-	-	5.1	1.1	184
<b>Total</b>	<b>3.5</b>	<b>1.8</b>	<b>207</b>	<b>32.6</b>	<b>1.5</b>	<b>1,614</b>

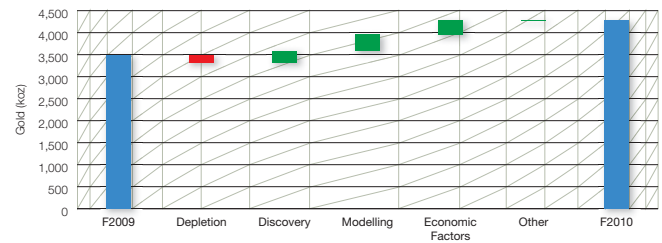
## Mineral Resources and Mineral Reserve Reconciliation year-on-year

### Mineral Resource

Factors that affected Mineral Resource reconciliation:

- Growth due to discovery, resource modelling and Gold Price.
- Decrease only as a result of depletion.

Change in Mineral Resource F2009 to F2010

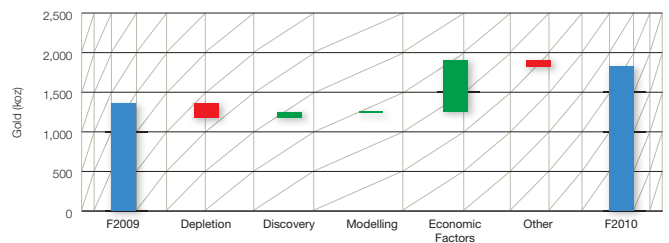


### Mineral Reserve

Factors that affected Mineral Reserve reconciliation:

- Growth largely as a result of discovery and increase in Gold Price.
- Decrease mainly due to production depletion.

Change in Mineral Reserve F2009 to F2010

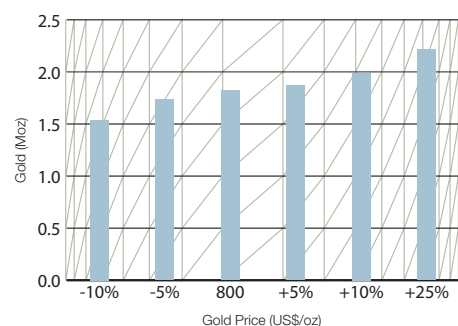


### Mineral Reserve sensitivity

The Mineral Reserve sensitivity has been derived from the application of the relevant cut-off grades to individual grade-tonnage curves of the optimised pit shells for the open-pits. The Mineral Reserve sensitivities are not based on detailed depletion schedules and should be considered on a relative and indicative basis only.

The following graph indicates the Managed Reserve sensitivity at -10%, -5%, base, +5%, +10% and +25% to the gold price.

Managed Mineral Reserve Sensitivity



## Regulatory Codes

### SAMREC

This Technical Statement has been prepared in Compliance with the South Africa Code for the Reporting of Exploration Results, Mineral Resources and Mineral Reserves (2007 SAMREC Code).

### JSE

This Technical Statement has been prepared in compliance with the listing requirements of the JSE Securities Exchange, South Africa (JSE), specifically Section 12 – Issue 11.

### Sarbanes-Oxley Act

The Mineral Resource and Mineral Reserve is underpinned by an adequate Mineral Resource Management process and protocol to ensure adequate corporate governance in respect of the intent of the Sarbanes-Oxley Act.

### Environmental

Damang has an environmental management team who are supported by specialist assistance from the South Africa regional office in Johannesburg. The systems, procedures, training etc. are at international best practice levels. Gold Fields has produced a Sustainability Report in 2009 and intends reporting annually in accordance with the Global Reporting Initiative.



## Competent Persons

### Arnand van Heerden: Mineral Resources Manager

BSc (Hons) Economic Geology, BSc Geology, SACNASP (No. 400106/02), MAusIMM (No. 990525). Arnand has 11 years experience in mining and exploration in South Africa and Ghana and is jointly responsible for the overall correctness, standard and compliance of this declaration.

### Chris Murray: Chief Mine Geologist

MSc (Sedimentology), SACNASP (No. 400046/04). Chris has 30 years experience in mining and exploration in South Africa and Ghana and is responsible for Grade Control, Reserve Reconciliation and Resource Modelling.

### Sean Kelly: Geostatistics and Evaluation Manager

National Higher Diploma (Mineral Resource Management), GDE (Mining Engineering), Mine Surveyors Certificate of Competency, Member of PLATO (No. MS0095). Sean has 27 years experience in the mining industry and is responsible for the Resource Modelling and Estimation.

### Deon Steenkamp: Chief Exploration Geologist

BSc (Hons.) Economic Geology, BSc (Geology), MBA, MAusIMM (Membership pending). Deon has 27 years experience in mining and exploration in Ghana and South Africa and is responsible for Exploration Programme Planning and Implementation.

### David Lee: Consulting Mining Engineer

B.Eng (Hons) (Mining Engineering), MAusIMM (No. 106796). David has 22 years experience in the mining industry in Australia, Ghana and Tanzania and is responsible for Mine Planning, Optimisation and Scheduling.

## Key Technical Staff

Post	Incumbent	Qualifications	Years	Key Responsibilities
General Manager	Alfred Baku	MSc (Mining Engineering), MAusIMM (Membership No. 226333)	13	Responsible for the overall strategic direction, leadership & management
Mine Manager	Gareth Phillips	National Higher Diploma (Metalliferous Mining)	22	Mine planning optimisation and scheduling
Metallurgy Manager	Charles Amoah	BSc Metallurgy	15	Mineral Processing and Metallurgy
Environmental Manager	Ben Addo	BSc (Chemistry), MSc (Environmental management)	4.5	Environmental management Monitoring and compliance with regulatory requirements Conformance with ISO14001 systems
Finance Manager	Gabriele Decina	B.Comm (Hons), CCISA Surveyors Certificate of Competency	13	Financial management, reporting and compliance
Engineering Manager	Manfred Hildebrandt	EECC. (Mines & Works) EECC. (Factories) PG Dip, MDP	24	Engineering, logistics and infrastructure management
Human Resources Manager	Charles Klutse	BSc (Human Resources) MSc (Human Resources)	5	Human Resources Training & development, Social responsibility
Safety Superintendent	Andre von Solms	COMSOC 1&2 CoM adv Cert (Mine environmental control)	23	Management of safety risk exposure occupational hygiene monitoring programmes
Local Affairs Manager	Robert Siaw	M.A. (Urban management) BSc. (Hons) (Planning)	12	Community Relations Crop compensation resettlement and livelihood programmes Promotion of positive corporate image



# Damang History at a Glance



## Disclaimer

### Forward looking statements

Certain statements in this document constitute "forward looking statements" within the meaning of Section 27A of the US Securities Act of 1933 and Section 21E of the US Securities Exchange Act of 1934.

Such forward looking statements involve known and unknown risks, uncertainties and other important factors that could cause the actual results, performance or achievements of the company to be materially different from the future results, performance or achievements expressed or implied by such forward looking statements. Such risks, uncertainties and other important factors include among others: economic, business and political conditions in South Africa, Ghana, Australia, Peru and elsewhere; the ability to achieve anticipated efficiencies and other cost savings in connection with past and future acquisitions, exploration and development activities; decreases in the market price of gold or copper; hazards associated with underground and surface gold mining; labour disruptions; availability terms and deployment of capital or credit; changes in government regulations, particularly environmental regulations; and new legislation affecting mining and mineral rights; changes in exchange rates; currency devaluations; inflation and other macro-economic factors, industrial action, temporary stoppages of mines for safety reasons; and the impact of the Aids crisis in South Africa. These forward looking statements speak only as of the date of this document. The company undertakes no obligation to update publicly or release any revisions to these forward looking statements to reflect events or circumstances after the date of this document or to reflect the occurrence of unanticipated events.