



## Putting safety first

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Safety is a top priority issue at all our operations, especially with regard to deep level mining and its greater associated risks. Not only is it about putting strategies in place to eliminate workplace accidents, but, equally importantly, the cultivation of a mindset amongst all our employees that safety is an issue which needs to be respected at all times.

Health and Safety Representatives, elected by the workforce, are trained to assist in the identification of hazards and prevent accidents.

A fatal risk review system has been introduced to assess the compliance of Implats' operations with group-wide controls in this area. The initiative uses peer review methodology to evaluate the management of fatal risks at all our operations, whether underground, opencast, plant or refining operations.

The main objectives of the review are to:

1. Analyse and review fatal risk management systems, including:
  - understanding and assessing the manner in which fatal risks are controlled at the site;
  - analysis of the effectiveness of fatal risk control mechanisms and management systems' implementation and compliance at the site; and
  - identification of improvement opportunities in fatal risk management systems at the site.
2. Develop plans to implement agreed improvement opportunities.

# safety

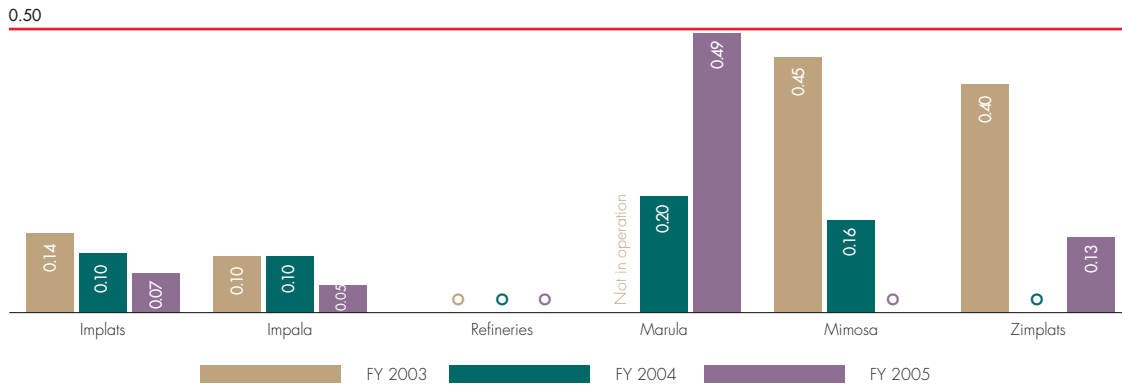
## SAFETY AND INJURY PERFORMANCE

As a group, Implats achieved a commendable improvement in safety performance during FY2005, marked by a significant reduction in incidences, especially at our Rustenburg operations. This resulted in a 34% improvement in Implats' Fatal Injury Frequency Rate (FIFR) to an all-time best of 0.069 (FY2004: 0.104). Moreover, the number of injuries caused by Fall-of-Ground (FOG) at our Rustenburg operations reached an all time low, attributable in part to improved hangingwall conditions at the stope face as a result of the in-stope bolting programme.

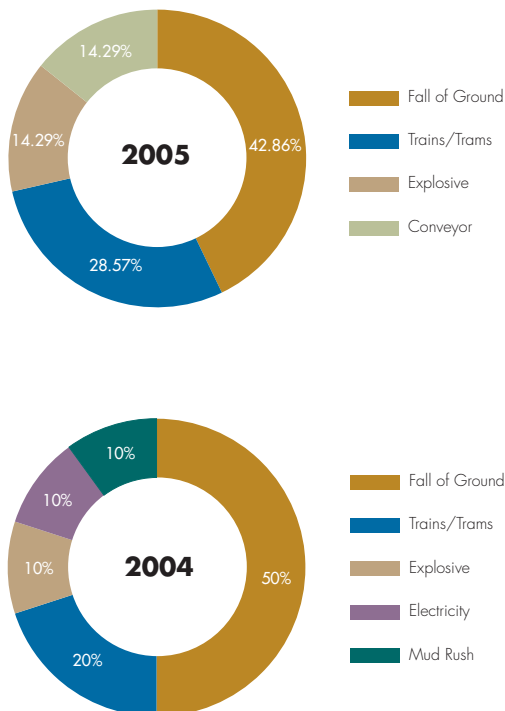
However, notwithstanding the group's continued focus on safety, regrettably seven employees lost their lives as a result of occupational accidents during FY2005.

Refineries maintained its NIOSH status for the seventh consecutive year with an audit result of 97.45%. The audit scope included both the BMR and PMR operations. Refineries also received the 2005 Best Occupational Medicine and Health Practitioner Award and the 2005 Best Advanced Safety Representative Award from NIOSH; and was rated among the top 100 International NIOSH companies.

**Figure 4:** Fatality Frequency Rate (per million man hours worked), Implats total, FY2003 to FY2005

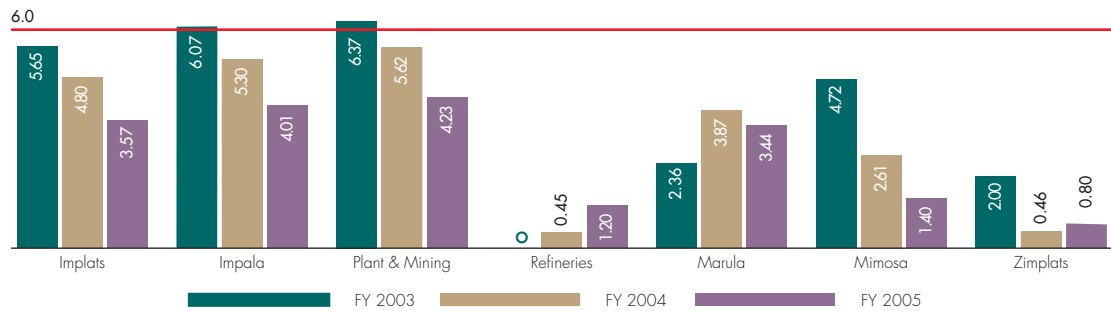


**Figure 5:** Fatality Agencies (%), FY2004 and FY2005.

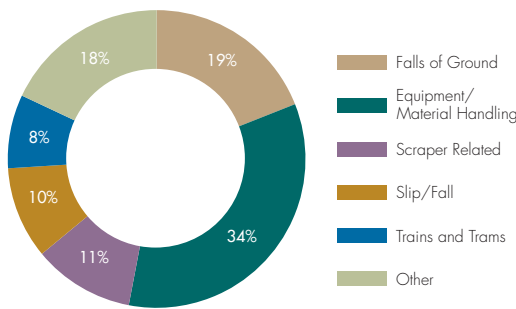


Safety is a top priority at all Implats' operations, especially with regard to deep level mining. Strategies have been put in place to eliminate workplace accidents and to cultivate a 'safety' mindset among our employees.

**Figure 6:** Lost Time Injury Frequency Rate (per million man hours worked), Implats total, FY2003 to FY 2005



**Figure 7:** Injury Agencies (%), FY 2005.



## IMPALA

### Rustenburg operations

Our Rustenburg operations regrettably reported four fatal injuries during FY2005, three of which were FOG incidents and the fourth the result of an underground locomotive collision. The resulting FIFR of 0.052 is, nevertheless, the best in the history of the Rustenburg operations and is a 50% improvement over FY2004.

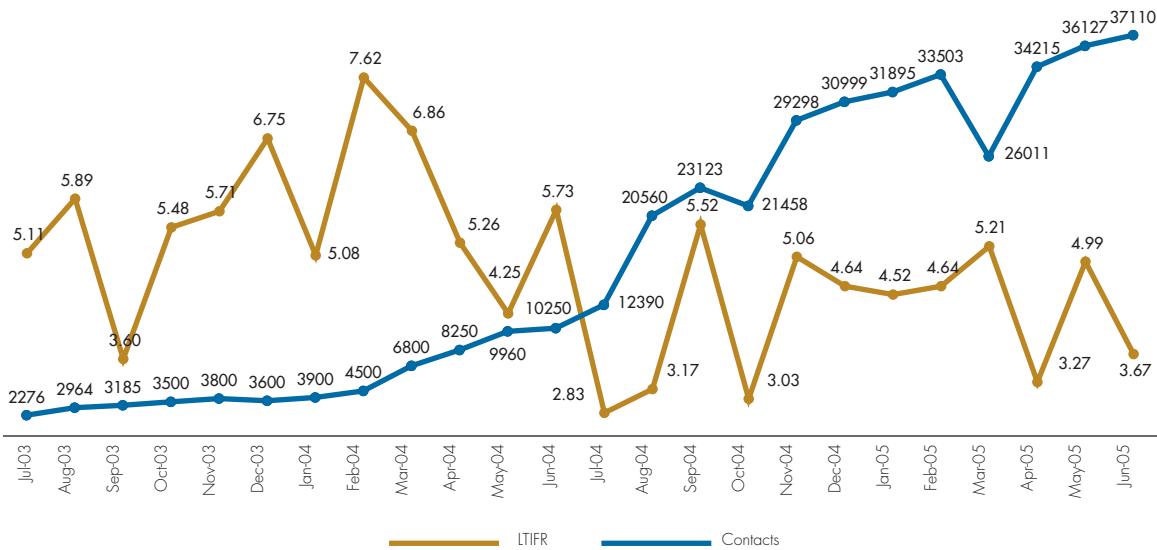
The in-stope bolting programme is now well established, having been implemented at 113 of the targeted 142 panels. Early indications suggest that the programme will be hugely successful, with much improved hangingwall conditions already recorded. This and other efforts to prevent falls-of-ground – such as the new scraper winch programme – resulted in a 20% improvement in the FOG injury rate.

Our behaviour-based safety management programme, Tsiboga, has been entrenched throughout the operations and has resulted in a significant decline in Rustenburg operations' Lost Time Injury Frequency Rate (LTIFR), as depicted in Figure 6. Much of the year was spent in training front line supervisors (shift supervisors and foremen) in the principles of Tsiboga and gaining commitment from employees to work safely. Coaching management and supervisors to conduct an effective health and safety audit in the workplace is ongoing.



The first women appointed in underground operational environment were at No. 1 Shaft at our Rustenburg operations.

**Figure 8:** LTIFR improvements versus Tsiboga contacts, Rustenburg operations, FY2004 and FY2005

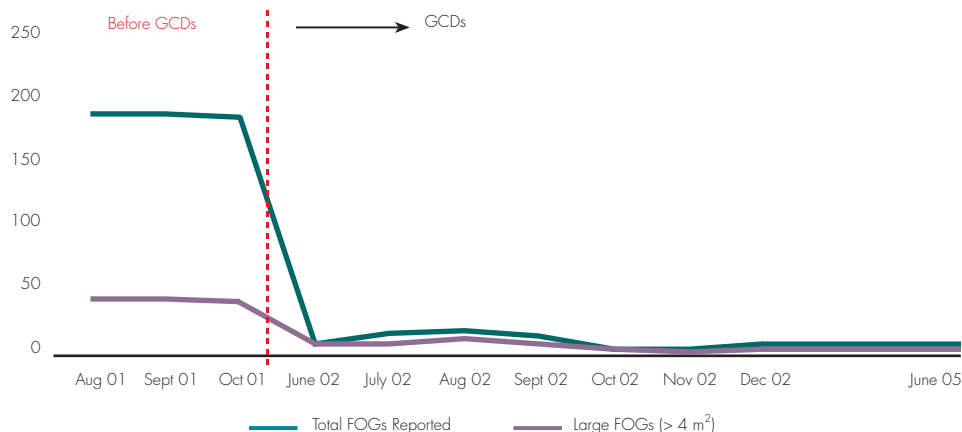


The combination of the in-stope bolting programme's hydraulically pumpable steel bolts and "Strocam" yielding support units has also contributed meaningfully to our ground and strata control programmes. All development ends now use the hydraulic expanda bolts, as do a significant number of stope panels, as mentioned earlier.

The Ground Control District (GCD) system, introduced at our Rustenburg operations in May 2002, has been extended to include support and management systems where there is greater potential for seismic activity. Substantial benefits have already been experienced at No. 10 Shaft.

The implementation of the in-stope bolting programme has coincided with the introduction of drill jigs, which are suspended from the bolts to give a controlled and accurate drill hole for blasting. This methodology is expected to improve the quality of the blast and cause less damage to the stope-hanging wall. Eleven panels were equipped with drill jigs by the end of FY2005, with a further 50 to be equipped by the end of the calendar year to give a total of 48.

**Figure 9:** Large Falls-of-Ground versus Implementation of Ground Control Districts programme, Rustenburg operations.



No. 4 Shaft achieved a remarkable 5 million Fatality Free Shifts (FFS) in FY2005. This is not only a recognised record in the industry, but also a proud achievement, which was, regrettably, marred by a fatal incident later in the year. The Rustenburg operations as a whole achieved 3 million FFS twice during the year under review and ended the year with a record 4 million FFS – the first time in the history of Impala that the entire operations has achieved this milestone.

The internationally acclaimed Occupational Safety and Health Accreditation System (OSHAS 18000) has been introduced at Mineral Processes as part of the SAP implementation project at the Rustenburg operations, and includes an all-encompassing Safety Management system (i.e. inclusive of health issues).

**Fire prevention**

The old fire station within the Mineral Processes plant was demolished and a new one was built adjacent to the new Mineral Processes entrance during FY2005. A new reticulation pipeline was also installed throughout Mineral Processes and came into operation after year-end.

**Refineries**

Refineries recorded seven lost time injuries during FY2005, resulting in the overall LTIFR deteriorating to 1.20 (FY2004: 0.45), with that for Refineries personnel being 0.81 at year-end.

Following a lost time injury incident involving a standard concrete mixer, a case study on the safety aspects of this type of machinery was communicated to fellow stakeholders in the industry.

A zero fatality rate was maintained, bringing the record for this performance to nine years and four months (currently at 4,840,730 man-hours).

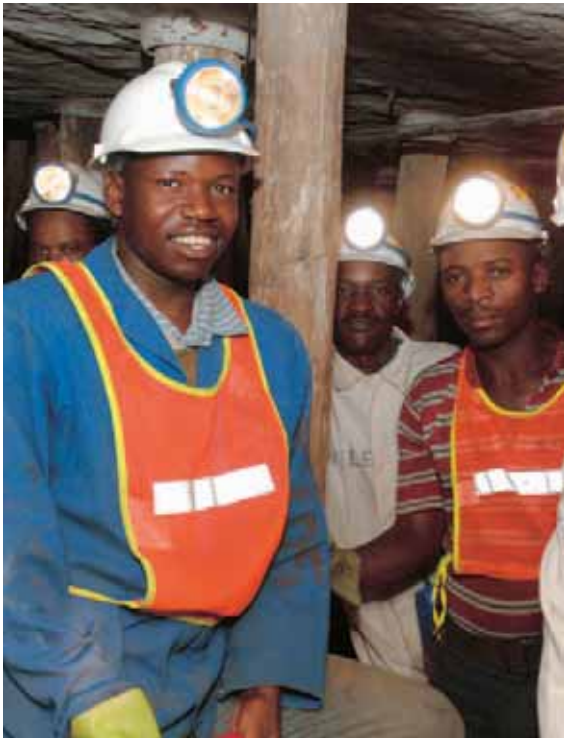
During the review period, Refineries conducted 2,334 Behaviour-Based Safety (BBS) Audits, involving 13,112 interactions between representatives of management and employees and/or contractors. This equates to an average of six people reached per audit throughout the course of the year.



Members of the Luka community, who have been employed by Platinum Waste Resources, the company responsible for operating the landfill site at the Rustenburg operations.



A culture of safety is encouraged at all our operations, as is the wearing of personal protective equipment such as safety glasses.



The development of a 'safety culture' receives priority at all Implats' operations, driven through ongoing training, both via formal sessions out of the workplace and informal on-the-job training.

### MARULA PLATINUM

Regrettably, there were two fatal accidents at Marula Platinum during the year, one on the surface at Driekop Shaft where a contractor's worker fell onto a moving conveyor belt and was drawn under the tipping arrangement; and the second underground at Clapham Shaft where a load-haul-dumper operator was fatally injured while he was underground during blasting operations in the stopes, which had been initiated from the surface. In consequence, the FIFR increased from 0.20 to 0.49, a year-on-year increase of 141%.

During December 2004, the mining contract was terminated and Marula Platinum recruited labour from workers who were working for the mining contractor and novice labour from the local community. This required substantial re-training and restructuring so as to ensure business continuity in a safe manner, a process that enabled the overall operation to achieve an 11% improvement in its LTIFR over the prior year to 3.44 (FY2004: 3.87).

The associated increase in production has necessitated an increase in the number of workers underground. Regular safety meetings with members of middle management, who have to pass the facts on to their workers, coupled with renewed drives on changing the behaviour of the workers with regular safety behaviour interventions by the supervisors, is yielding improvements in safety levels.



No. 4 Shaft at our Rustenburg operations achieved a remarkable 5 million Fatality Free Shifts in FY2005.

### ZIMPLATS

The Total Injury Frequency Rate, one of our key safety performance indicators, improved by 56% year-on-year. Regrettably, one Zimplats employee lost his life when a surface dump truck fell down the slope of rock dump, bringing the FIFR for the year to 0.13 (FY2004: 0). Although Zimplats' LTIFR deteriorated to 0.80 (FY2004: 0.46), this rate remains the best of any operation in the Implats group and is largely attributable to the BBS programme that was implemented during the year under review.

Of concern, however, is that 80% of the lost-time injuries and the fatal accident that occurred were recorded among Zimplats' contractors. The strategy to manage contractor safety performance has therefore been intensified.

Moreover, Zimplats' safety performance was achieved against a background of increased activity at operations level. The following new projects were undertaken during the year, each of which included distinct safety challenges:

- Ngezi underground expansion;
- Ngezi weir construction;
- management village construction and commissioning;
- new plant site earth works; and
- Ngezi power-line construction.

In the year under review, Zimplats participated in the Zimbabwe Chamber of Mines, National Frequency Severity and Percentage Improvement competitions for the mining industry. SMC – which falls under the Smelters, Refineries and Coke Ovens Class 1 category – was awarded a trophy for winning the Frequency Severity Competition, after placing third in the prior year. Ngezi Mine – which falls under Mining Class 1 category – appeared for the first time in the Chamber's books, by placing fourth in the Most Improved category.

Zimplats adopted and improved several safety initiatives to promote safety during the year, including:

- Chengeta, Zimplats' behavioural intervention, was improved to ensure quality observations. This was achieved through the re-orientation of senior and frontline management with the overall aim of making Chengeta a way of life through observation and coaching.
- Sectionalised Platinum Rules were developed and launched for all disciplines within Zimplats (i.e. Open Pit, Underground, Laboratory, Process, and Engineering operations) and all employees have committed themselves to compliance with these safety guidelines.
- Several Risk Management activities were executed, including a loss prevention assessment for Zimplats, which was conducted by Risk Engineering Consultants from Zurich Risk Engineering who were accompanied by a representative from Alexander Forbes Risk Services Zimbabwe. All raised issues and recommendations are being addressed. CURA Risk Management software was commissioned during the year and the database input is in progress.
- Quarterly safety audits for the first three quarters of the financial year were conducted successfully so as to promote and formalise the safety system. Parameters such as Chengeta, the Platinum Rules and risks assessments audited to ensure that all operations have similar systems in place.

- A Zimplats' Standards Committee, comprising members from all disciplines, was formulated and is mandated to standardise all Zimplats' procedures, review and amend existing standards on a regular basis, and ensure all relevant procedures within the various departments are in place.

## MIMOSA

Mimosa's safety management programmes are geared to ensure that the safety of our employees, contractors and the community is not compromised. This is summed up in the maxim "nothing we do is so important that it cannot be done safely".

Our efforts during the year were duly rewarded by the following sterling performances:

- no fatal injuries occurred during the year and, in fact, the mine achieved 1 017 704 fatality free shifts; and
- the LTIFR decreased dramatically from 2.61 in FY2004 to 1.40 in FY2005, reflecting management and employee commitment to reduce workplace injuries to zero through the adoption of a zero tolerance approach to substandard working conditions and unsafe actions.

Every disabling Injury at Mimosa is thoroughly investigated to determine the root cause(s). The process entails extensive analysis (such as by task, time of day and so on), so as to identify appropriate training areas, system failures and tools and equipment that are required to minimise the injuries. Remedial action plans are then drawn up to prevent a recurrence of the same injury.

## Safety culture

Zero injuries is Mimosa's primary target. This is a huge challenge, given that the operation has between 500 and 1000 employees working underground, where ground conditions keep changing, on a daily basis. We are determined to cultivate a culture of safety at Mimosa through



Zimplats adopted several safety initiatives to promote safety during the year.

ongoing training, starting at induction and proceeding through formal training sessions out of the workplace and informal on-the-job training.

Several initiatives were pursued in FY2005 to further reduce and eventually prevent injuries in the workplace, including:

- Changing Behaviour – A programme to train all higher-level employees on BBS Management was initiated during the year and we expect to reap the benefits of the program from next year onwards.
- Risk Management – Risk management was introduced during FY2005 and every department has been tasked with identifying their specific risks and action plans to address these risks are being implemented.
- Quarterly SHE Motto – Every quarter, a new Safety, Health and Environment motto is adopted and a write-up is published. All employees are then trained on the motto, which is also displayed on all notice boards as well as on the three billboards that flank the major roads on the mine.
- Monthly Tailgate Topics – A tailgate topic is selected on a monthly basis and a write up on the topic produced. All employees are then trained on the topic for the month. The tailgate is also displayed on the three billboards and on all notice boards. The duration of the communication campaign for any one tailgate depends on whether every employee has been trained and when the expected behaviour change will have occurred. The operating sections are also expected to hold “toolbox talks” on issues specific to their areas of operation.
- Monthly Bonus – A monthly safety and production bonus was introduced to core process teams who are more vulnerable to injuries due to production pressures. The bonus is awarded to teams that meet their production and safety targets. This initiative has led to a drastic decline in injuries, without compromising production levels.

## Safety Schemes

SHE issues are key to Mimosa's operations and all employees are engaged in SHE initiatives. There is a SHE Steering Committee comprising employee representatives and management, which meets once a month to deliberate on SHE matters. Every department has SHE representatives who also meet once a month to report on progress of activities happening in their respective departments. These forums have given workers ownership of SHE matters.

Mimosa also runs a number of schemes designed to promote Safety, Health and Environment (SHE) awareness among our employees and thus improve our SHE management systems. The schemes currently running are:

- Suggestion Scheme – This gives employees the opportunity to submit suggestions that have the potential to improve aspects of our operations. Good and implementable suggestions have come forward and employees duly rewarded for their suggestions.
- Safety Posters – Employees are invited to draw posters with a Safety, Health or Environment theme every month. The top three posters are enlarged to at least A3 size and displayed on all notice boards and a financial reward is offered to the originators of the posters.

## Fire prevention

A complete fire risk assessment was conducted at Mimosa by fire engineering consultants, and the resulting corrective action plans are being implemented. A Fire Tender has been purchased and has been used on one occasion to put out a fire at a neighbouring mine. Water sprinklers have been installed to ameliorate the risk of fire along the main conveyer belts.

## Risk assessment

Risk assessment has been one of the major thrusts this year. As detailed earlier, each department has its own risk assessment and risk profile, and efforts are being made to complete and implement action plans to ameliorate the identified risks.



Far left: The despatch area in the BMR at Refineries.

Left: Analysis of process samples in the process laboratories.

## SAFETY OBJECTIVES

Our overall objective is to achieve a 50% reduction in LTIFR year-on-year; with a long-term objective of zero injuries.

### IMPALA

#### Rustenburg Operations

- Reinforce the Tsiboga safety programme and ensure visible leadership.
- Implement a BBS programme at the team level (Team Tsiboga).
- Inculcate the belief that operations can mine without injury.
- Conduct one cross-operational safety audit each quarter.
- Implement line management self audits starting with a formal Shift Supervisor's audit.

#### Refineries

- Manage incidents effectively and communicate to all stakeholders.
- Audit contractors before granting permission to come onto Refineries' sites.
- Maintain a world-class safety management system.
- Improve on the risk management system via CURA Risk Management software.

### MARULA PLATINUM

- Improve incident management, reporting and awareness.
- Include a formal employee behaviour audit as part of the Safety Officer's audit program.
- Reinforce the Meerkat programme with focus on quality observations, including the introduction of a reward scheme for the best Meerkat observation.
- Establish a development programme for learner Safety Officers and Safety Representatives.

### ZIMPLATS

- Create a management-driven safety culture based on international best practices.
- Entrench our BBS programme (Chengeta) as a way of life through senior management involvement and development of a Chengeta program at team level (C-Lower category).
- Strengthen the safety department and upgrade the skills of the Safety Officers.
- Continuously improve the occupational health and safety of employees.
- Support the safety programme through continuous training and risk assessments.
- Improve the effectiveness of the quarterly audits through management involvement.
- Upgrade our occupational hygiene/health skills through increased resources.
- Monitor all occupational hygiene risks.
- Implement fully the CURA Risk Management System with the aim of reducing insurance claims.
- Implement the 'green card system' as a way of promoting the platinum rules, Chengeta and standard procedures.
- Maintain 25% of the total workforce with valid first aid certification through refresher training.

### MIMOSA

- Implement enterprise-wide risk management methodology.
- Implement an emergency preparedness programme.
- Entrench the BBS programme in all departments.
- Maintain the contractor SHE training programme.
- Develop a SHE promotion and reward system.
- Achieve zero fatalities and a LTIFR of 0.70.



Employees place a ventilation pipe underground, wearing comprehensive personal protection equipment.