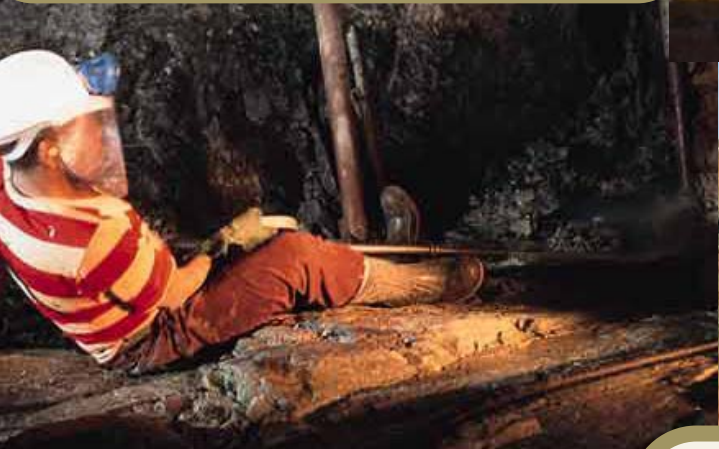




GOLD FIELDS



Accident at 38 Level Waste Tip

J.L. de Beer

Unit Manager Engineering

Main Shaft



GOLD FIELDS

CONTENTS

- Particulars of deceased
- Working History
- Responsible Persons
- Sequence of events
- Plans and Photos of accident scene
- Immediate and Basic causes
- Action plans
- Comments and Suggestions



GOLD FIELDS

Particulars of Deceased

- Name of Deceased : Antonio Manhica
- Designation : Shaft Timber Assistant
- Born : 08 March 1955
- Engaged : 27 February 1990
- Origin : Maputo, Mozambique

Working History

Antonio Manchica's Employment Record

- Engaged - 27/02/1990
- First Aid training - 21/08/2003
- Shaft Refresher - 22/08/2003
- Refresher training - 20/08/2003



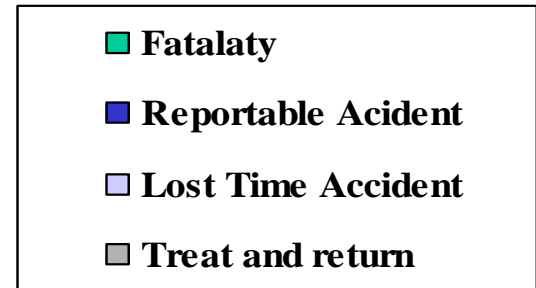
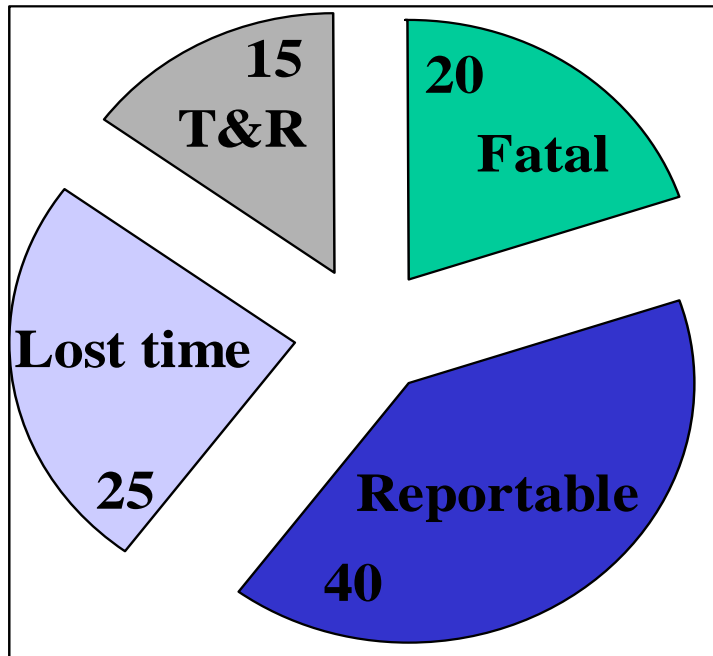
GOLD FIELDS

Responsible Persons

Names	Title	Years Experience
J Bartolo	Engineer	12
C van der Merwe	Mine Overseer	29
R.J. Nothnagel	N/S Shaft Foreman	25
L.T. Nkosi	Shaft Timber man / General Miner	9
L.C. Nel	Fitter Foreman	25
J.P. Kruger	Boilermaker Foreman	20



Safety Statistics



Sequence of events

- The waste pass system on 2 sub Vertical Shaft needed to be bled down to allow waste hoisting operations to take place.
- The waste pass was hanging up above 38 level and was blasted down by the Shaft Timber man and his assistant (the now deceased).
- now deceased then opened the chute to allow rock to run through the level.
- Whilst the waste pass was being drained, the onsetter arrived and all three persons stood on the tracks watching the rock run through the waste pass.
- The rock flow then stopped.
- The onsetter started to leave to go back to the station.

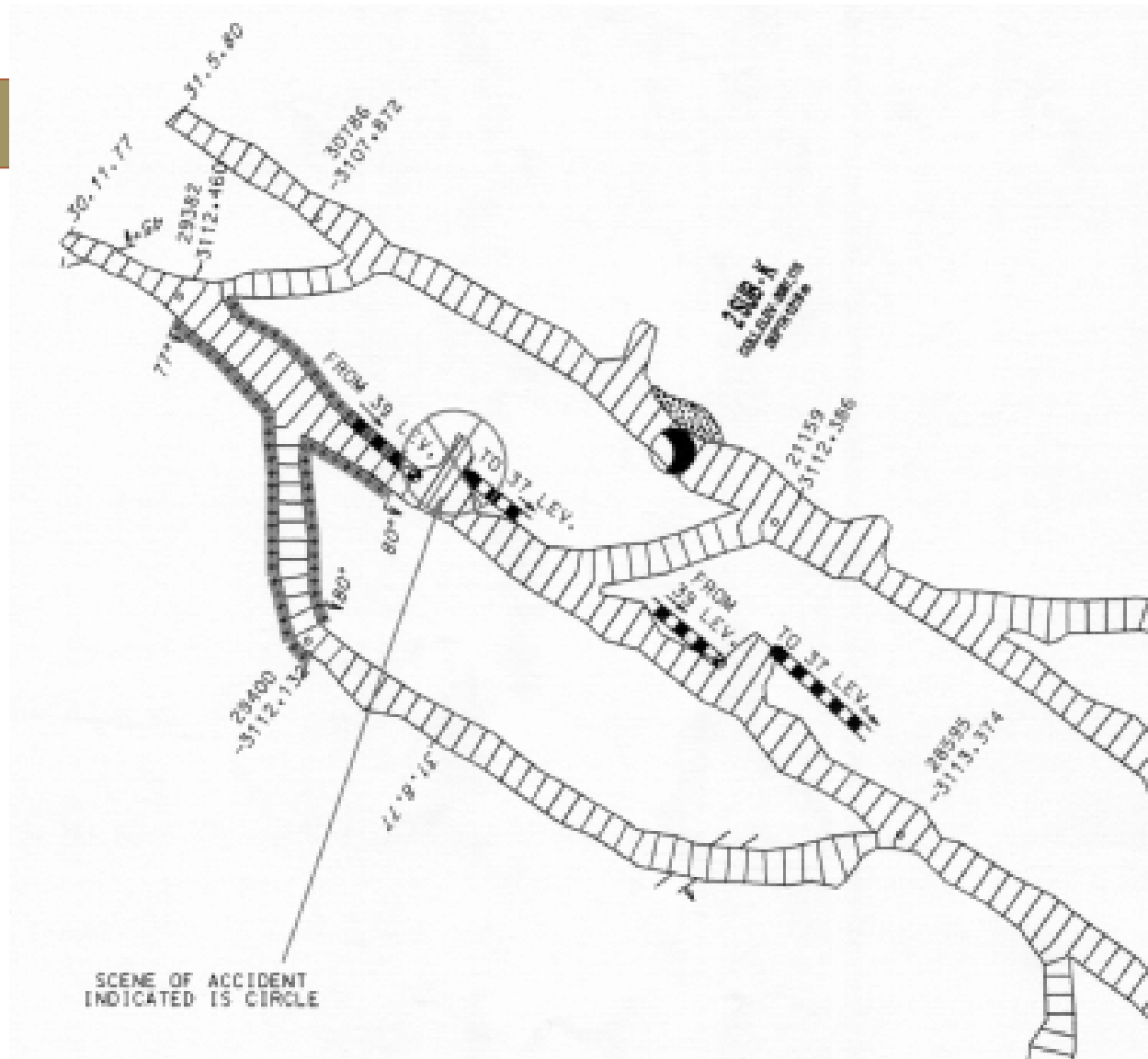
Sequence of events



- The now deceased said he was going to have a look why the rock has stopped running.
- At the same time it is alleged the Shaft Timber man proceeded to the controls and closed the door.
- It is also alleged that the now deceased went to the chute and it is assumed he looked up into the ore pass by positioning himself between the waste pass chute and the radial door, which was then closed, fatally injuring him.



GOLD FIELDS

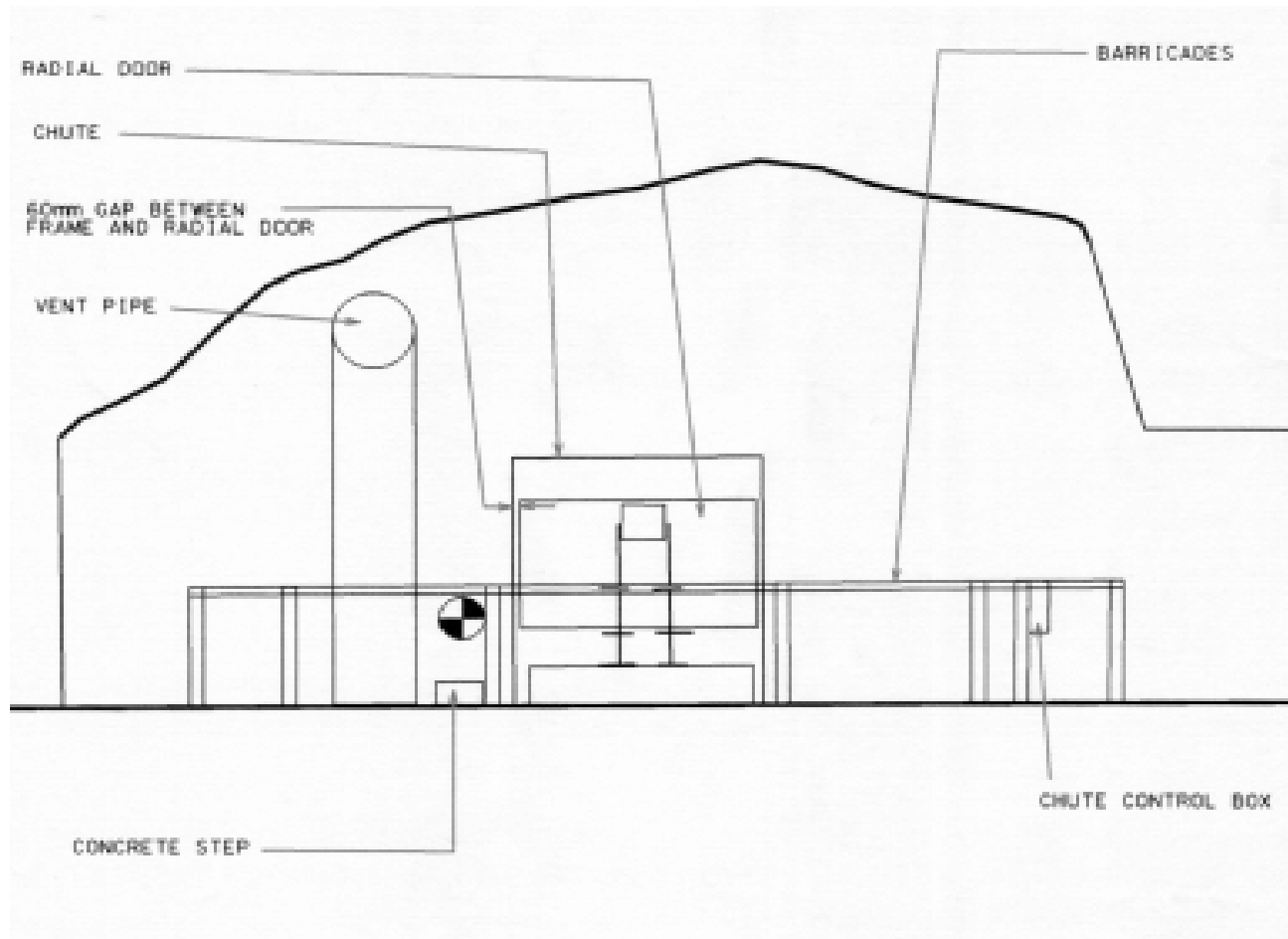


Scale 1:1000



GOLD FIELDS

Section

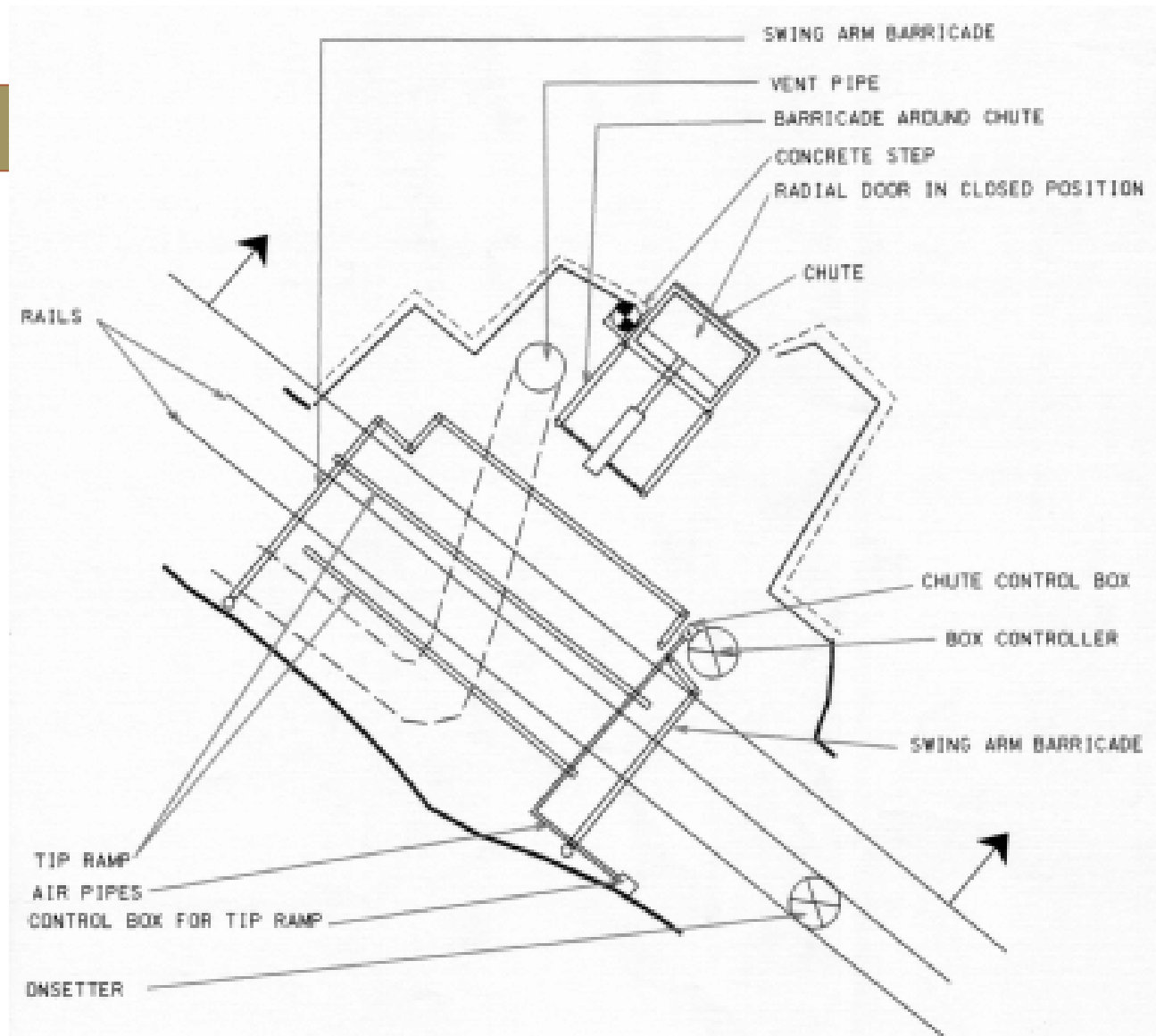


Scale 1:50



Accident Plan after Accident

GOLD FIELDS



Scale 1:100



GOLD FIELDS

Photos of accident scene



Photos of accident scene





GOLD FIELDS

Photos of accident scene



Photo of defective control



Photos of accident scene

Defective control



Correct control

4/2 way Norgren valve



Immediate Causes

- The Shaft Timber man failed to identify dangerous conditions and apply the 5 Steps to safety or the “Stop, Fix and Continue Working” safety program.
- The Shaft Timber man failed to ensure the area was clear of persons and safe before closing the radial door.
- The Radial door control valve was defective.
- The accident side of the chute could not be seen when the radial door was in the open position.
- Poor illumination in the area.



Basic Causes

- System failure in that substandard equipment i.e. broken controls were not reported to maintenance crews through correct channels. “Stop, Fix and continue” instructions and the 5 steps to safety were ignored.
- Poor inspections / supervision and planned maintenance of chute, radial door and controls.
- Legal requirement failure in that areas of responsibility were not clearly defined.

Immediate action plan

- The 38 level waste tip area was barricaded off and all work in this area was stopped.
- A section 54 was issued by the Inspector of Machinery to stop all work in the 38 level tip area.
- A stop and fix notice was issued by the Engineer to endorse the inspectors instructions.
- A special instruction was issued to all relevant personnel regarding procedures to be followed when rock transfer takes place.
- Areas of responsibility appointments in progress



GOLD FIELDS

Medium term action plan



<u>ACTION</u>	<u>COMPLETION DATE</u>	<u>RESPONSIBLE PERSON</u>
The control valve was replaced	15/07/2004	Fitter
The illumination in the area was rectified.	15/07/2004	Electrician
Damaged grating on the walkway was replaced.	15/07/2004	Boilermaker
Monthly over inspections of the tip areas	Monthly	Foreman Fitter, Foreman Boilermaker, Shaft Foreman, Mine Overseer (3 Monthly)
Monthly inspections of all tipping arrangements as per Standard procedure	Monthly	Boilermaker



GOLD FIELDS

Long term action plan



<u>ACTION</u>	<u>COMPLETION DATE</u>	<u>RESPONSIBLE PERSON</u>
Investigate the possibility of a better locking out device and revise standards if required	October 2004	Engineer



GOLD FIELDS

Current box installations

- Action plan currently in place namely:
 - Maintenance schedules enforced
 - Standard inspections enforced
 - Lockable chute control
 - Safety pin on radial door
 - Area of responsibilities signed off by supervisors



GOLD FIELDS

Photos of current chute installations





GOLD FIELDS

Photos of current chute installations





GOLD FIELDS

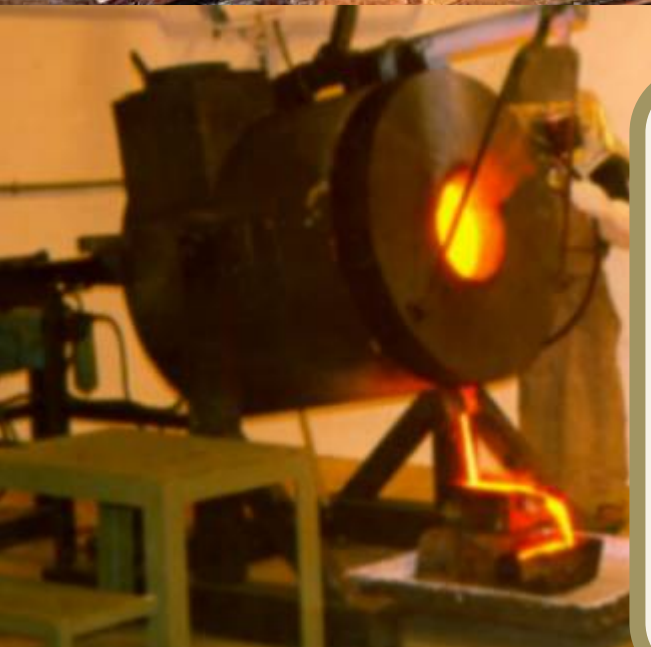
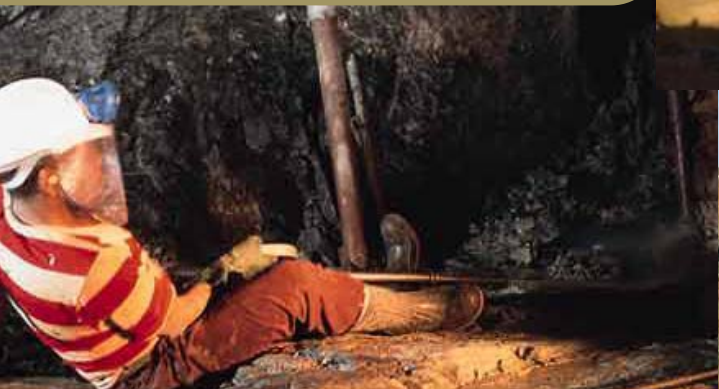
Photos of current chute installations





GOLD FIELDS

COMMENTS AND SUGGESTIONS



*For Value
Buy Gold
Buy Growth
Buy Gold Fields
www.goldfields.co.za*