

# DDAS Accident Report

## Accident details

<b>Report date:</b> 11/03/2004	<b>Accident number:</b> 003
<b>Accident time:</b> 11:20	<b>Accident Date:</b> 07/03/1995
<b>Where it occurred:</b> Maganja da Costa, Zambezia Province	<b>Country:</b> Mozambique
<b>Primary cause:</b> Field control inadequacy (?)	<b>Secondary cause:</b> Management/control inadequacy (?)
<b>Class:</b> Excavation accident	<b>Date of main report:</b> 28/04/1995
<b>ID original source:</b> AC	<b>Name of source:</b> Other (consultants)
<b>Organisation:</b> Name removed	
<b>Mine/device:</b> PMN AP blast	<b>Ground condition:</b> not recorded
<b>Date record created:</b> 11/01/2004	<b>Date last modified:</b> 11/01/2004
<b>No of victims:</b> 2	<b>No of documents:</b> 2

## Map details

<b>Longitude:</b>	<b>Latitude:</b>
<b>Alt. coord. system:</b>	<b>Coordinates fixed by:</b>
<b>Map east:</b>	<b>Map north:</b>
<b>Map scale:</b> not recorded	<b>Map series:</b>
<b>Map edition:</b>	<b>Map sheet:</b>
<b>Map name:</b>	

## Accident Notes

partner's failure to "control" (?)  
handtool may have increased injury (?)  
protective equipment not worn (?)  
visor not worn or worn raised (?)  
safety distances ignored (?)  
inadequate medical provision (?)  
squatting/kneeling to excavate (?)  
inadequate investigation (?)

## Accident report

The demining NGO concerned are believed to have been using two-man teams with a two-man drill at the time. With this drill, one man uses the detector and marks the finds. The second man looks for tripwires, cuts undergrowth and excavates detector readings. The team member not working was meant to be "controlling" his partner, pointing out errors.

No accident report was found on file at the Country MAC or the UN controlled demining group. A brief "Interim Report" was made available. A full Accident report was made available by its author in July 1999. The author was a consultant representing the demining group's funder at the time. The later report included very similar text to the "Interim" report and the substance is summarised here.

The investigator visited the site on 23<sup>rd</sup> March 1995. The mined area was adjacent to an airstrip and a "quite substantial quantity" of PMN and M969 mines had been cleared.

At approximately 11:20 the victim discovered a mine. This was his third that day and the first day that he had found any at that site. Instead of informing his Section Leader as he was required to do, he investigated it on his own. "For some reason the mine (or perhaps mines) detonated leaving him very seriously injured". [See Medical report.]The victim was casevaced by helicopter to Quelimane hospital arriving one hour after the accident occurred. He died at 16:30 that day. The death certificate gave "haemorrhage" as the cause of death. The helicopter was deemed fortuitous, and some suggestions for improving reliable Medevac were made.

The victim's visor was torn from his head, leaving the head-frame in place. It was worn raised at the time of the accident. The victim's short vest armour was damaged [photograph unclear] but not penetrated. His handtools and detector were not damaged. The fact that he had both handtools and detector at the lane end was commented on as being unusual, but not explained.

The demining group had previously found PMNs reinforced with either a second PMN or a block of TNT, and the investigator thought this may have been the case again. The investigator also thought it possible that the victim had inadvertently leant on a second mine having found the first, or that the presence of trees nearby had led to roots tilting the mine so that he prodded onto the pressure plate.

**The Section Leader** said that the paramedics worked well but complained "about the delay of casevac".

**The victim's partner** said that he had been 10 metres away and had suffered mild hearing loss after the explosion. The casevac was delayed for fifteen minutes until the helicopter team were told the name of the group requiring help.

### Conclusion

The investigator concluded that it was "probable that the accident occurred due do a failure... to follow established procedures".

### Recommendations

The investigator recommended that supervisors be reminded to ensure that deminers wear their safety equipment properly, that future work at the site should be by excavation with especial attention paid to the possibility of encountering "unusual devices and, in particular, trip and/or pull wires".

## Victim Report

<b>Victim number:</b> 3	<b>Name:</b> Name removed
<b>Age:</b>	<b>Gender:</b> Male
<b>Status:</b> deminer	<b>Fit for work:</b> DECEASED
<b>Compensation:</b> US\$3000	<b>Time to hospital:</b> 1 hour
<b>Protection issued:</b> Long visor	<b>Protection used:</b> Short frontal vest

Short frontal vest

**Summary of injuries:**

severe Arms

severe Chest

severe Eyes

severe Head

severe Leg

AMPUTATION/LOSS

Fingers

FATAL

COMMENT: See medical report.

**Medical report**

A medic's report stated that Victim No.1 was:

"conscious when removed to a safe area. His right hand was severely damaged with injuries to his upper arm. Three of his fingers had been completely removed, leaving only his thumb and forefinger. His right leg was also very severely damaged from the knee downwards with a deep cut along the inner thigh. His eyes were damaged but the extent of the injury is unclear. Because his visor was (incorrectly) tilted forward it is suggested (but not confirmed) that he also suffered internal blast injuries".

[The parentheses are in the original.]

The leg injuries are taken to confirm that the victim was working in a squatting/kneeling position, which was normal practice in this demining group.

The medic could not get an ETA for Victim No.1. He gave Copromazine. He reported that the victim screamed when the mine went off but did not scream afterwards.

**Victim Report**

<b>Victim number:</b> 4	<b>Name:</b> Name removed
<b>Age:</b>	<b>Gender:</b> Male
<b>Status:</b> deminer	<b>Fit for work:</b> presumed
<b>Compensation:</b> none	<b>Time to hospital:</b> N/A
<b>Protection issued:</b> Short frontal vest Long visor	<b>Protection used:</b> Short frontal vest, Long visor

**Summary of injuries:**

minor Hearing

COMMENT: No medical report was made available.

## **Analysis**

While there was some confusion over the cause of death, it is generally accepted that Victim No.1's visor was raised as he excavated a mine.

The primary cause of this accident is listed as a "*Field control inadequacy*" because the victim was working in an unsafe manner and was not corrected by the field supervisors. The presence of both detector and handtools in the lane with the victim implies the use of a one-man drill that may not have been authorised (the type of detector was not identified).

The investigator failed to note that the distance between the deminer and his partner was inadequate, which was a further "*Field control inadequacy*". That failure coupled with a failure to record the second injury may be seen as "*Management control inadequacies*".

## **Related papers**

No Country MAC report was made available.

In an informal interview with the demining NGO's country Manager on 16<sup>th</sup> December 1998, he reported that the man's visor had been raised and channelled the blast onto his face. He died of head injuries. He confirmed the second victim's minor hearing loss, which was "temporary".

A senior ex-pat Technical Advisor with another demining group reported (January 1999) that the victim died of a chest wound caused by his trowel being driven into his chest. This has not been confirmed by others.

Despite agreeing to repeated requests over several years, this NGO's Head Office has not yet supplied data on this or any other of their accidents.