

# DDAS Accident Report

## Accident details

<b>Report date:</b> 15/05/2006	<b>Accident number:</b> 205
<b>Accident time:</b> 10:25	<b>Accident Date:</b> 04/04/2001
<b>Where it occurred:</b> Fazenda Usoque, 12k N of Huambo	<b>Country:</b> Angola
<b>Primary cause:</b> Victim inattention (?)	<b>Secondary cause:</b> Inadequate training (?)
<b>Class:</b> Excavation accident	<b>Date of main report:</b> 10/04/2001
<b>ID original source:</b> DF	<b>Name of source:</b> HT (field)
<b>Organisation:</b> Name removed	
<b>Mine/device:</b> R2M2 AP blast	<b>Ground condition:</b> agricultural (recent) ditch/channel/trench
<b>Date record created:</b> 15/02/2004	<b>Date last modified:</b> 15/02/2004
<b>No of victims:</b> 1	<b>No of documents:</b> 1

## 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

no independent investigation available (?)  
incomplete detonation (?)  
inadequate training (?)  
mine/device found in "cleared" area (?)  
disciplinary action against victim (?)  
squatting/kneeling to excavate (?)

## Accident report

The following is the internal [Demining group] Accident report, edited for anonymity. No independent investigation was carried out.

### INTRODUCTION

1. On Wednesday 04 April 2001 at 1025 hours, [Demining group] deminer [the Victim] accidentally detonated an R2M2 anti-personnel landmine whilst working in minefield H186 (Fazenda Usoque) approximately 12 km north of Huambo. He escaped "virtually unscathed".
2. This report covers the investigation of the accident, including the background of the task and of the key personnel present, the events that took place prior to and after the accident, and conclusions that have been made as a result of these findings.
3. An initial lane inspection was carried out by the Country Operations Manager and the Provincial Operations Manager on the afternoon of 04 April. A full investigation was carried out on the afternoon of 09 April by ([Demining group] Angola Programme Manager) and [the Provincial Operations Manager] with the minefield supervisor, assistant supervisor and [the Victim] also present.

### BACKGROUND

Minefield (see large scale diagram, [not made available])

4. Task H186 is an area of agricultural land located at Usoque approximately 12 km north of Huambo. The task is adjacent to a Catholic mission which supports 107 families from surrounding areas. The area was formerly a FAPLA position until 1991 and is on the top of a hill which dominates the surrounding ground in all directions. FAPLA mined the position in 1986 in order to defend themselves from attack. In 1989 UNITA took and held the position for a short period before government forces retook it. In 1997 FAA returned and removed 12 of the 30 POMZ fragmentation mines that they said were laid there in the past. Last year three FAA engineers attached to the mission for road inspection duties found five more POMZs. However inside the military position's trench line on 09 November 2000 there was an accident when a man who was farming with a hoe initiated a PPM2 and sustained fatal shrapnel injuries.
5. [Demining group] began working here on 20 November 2000 at the request of the nuns from the Catholic mission when it became clear, as a result of the civilian accident that same month, that military engineers had failed to identify and remove the complete threat of AP mines from the area. It was concluded that there is an AP mine threat both inside and outside the former military position, the boundary of which is physically marked by a shallow trench and adjacent high parapet which run side by side and encircle the position.
6. Outside the former military position there are a suspected 13 remaining POMZs awaiting to be found. Inside the position it was judged that the most suspect area is the land closest to the trench/parapet. The civilian accident of last November occurred approximately three metres inside the trench and [name excised]'s accident occurred approximately five metres inside the trench/parapet. No mines had been found on this task up until this date, and deminers had recently been concentrating on the land just within the trench/parapet as a result of a decision taken by the Programme Manager, Deputy PM and Country Ops Manager on their most recent visit to the task on 27 March.

### PERSONNEL

7. Two manual mine clearance teams (comprising a total of 24 deminers) were working on this task on the day of the accident. [Supervisor No.1] was the supervisor who was responsible for the team working in the northern part of the task, and [Supervisor No.2] was the supervisor responsible for the team working in the southern part of the task, as well as being overall in charge. [The Victim] was a deminer in [Supervisor No.1]'s team. [Supervisor no.1] started work with [Demining group] as a deminer in August 1996 and has worked steadily and well. He has been a supervisor for ten months and was transferred to this minefield on 28 February.

8. The assistant supervisor responsible for [the Victim]'s lane was [Assistant supervisor]. He started work with [Demining group] as a deminer in June 1996, beginning training as an assistant supervisor in February 2000 and becoming confirmed in that position in May 2000. He was also transferred to this task on 28 February.

9. [The Victim] joined [Demining group] as a deminer in May last year. He started work at task H019 (Caala pylons) where he cleared eighty-four PPM2s until October. He was then transferred to task H179 (Cruzeiro) where he worked until that task was suspended in February. No mines were found at that task. On 06 June last year [the Victim] was fined \$25 and given a written warning for missed metal in his lane.

## THE ACCIDENT

### EVENTS OF THE DAY prior to the accident

10. Because of the drive time to this task (between 60 and 80 minutes), work normally commences at 0800 hours. On 04 April work began at 0900 hours because an attack during the night at Mbove (approximately 14km NNE of Usoque) prompted police at a road checkpoint north of Huambo to stop traffic. Sporadic gunfire was still audible, but the [Demining group] vehicles were permitted to proceed when it became clear that the fighting, if indeed it was still continuing, was not in the Usoque area.

11. At 1000 hours the supervisor [No.1] checked [the Victim]'s lane. At 10:10 hours [the Victim] took his second ten minute break of the day and returned to work at 10:20 hours. Just two minutes after returning to work, the assistant supervisor inspected his lane for the second time that morning. [The Victim] was working with a 420H detector in an area of low metal contamination (he had not received any signals so far that morning) and medium vegetation. The grass was tall and reasonably thick but with little particularly stubborn undergrowth. He had cleared four square metres until his accident at 10:25 hours.

## THE ACCIDENT

12. With his front of lane marker 4.4 metres ahead of where he had started work that morning, [the Victim] had cut the vegetation to about 60cm in front of his front lane marker and begun to sweep the ground with his detector. He picked up two signals, both approximately 45 cm in front of his marker. The first was about 20 cm in from the right hand edge of his lane and the second was about 10cm in from the left hand edge of his lane. [The Victim] could see what appeared to be the eyelet from a boot lying on the ground where the right hand signal had emanated. He carefully picked it up and received no further signal from that area. At the point where the second signal had been received, [the Victim] could see what appeared to be a spent 7.62mm rifle ammunition cylinder protruding from the ground half-buried. He attempted to remove it by extracting it with his left hand but found it too firmly buried to do so. [The Victim] then proceeded to attempt to dig the cylinder out of the ground using his trowel, which he held in his right hand, when he detonated an R2M2 mine lying beneath the cylinder.

13. [The Victim]'s trowel was blown out of his hand but his visor (which received a light covering of dirt but shows no superficial sign of damage) remained on his head. He walked by himself out of his lane before being intercepted by the supervisor and led to the first aid post, showing no obvious signs of shock. His right hand was bleeding lightly from two small punctures on the inside of his thumb, and after bandaging he was driven to hospital in Huambo. An x-ray showed that there was no fracture or shrapnel within the wound and [the Victim] has complete and painless movement of his hand, with no swelling or bruising.

## THE INVESTIGATION

14. [The Country Operations manager and the Provincial Operations manager]'s initial lane inspection found no pieces of metal in the lane. [The Victim]'s tools were found in the positions shown on the diagram (except the trowel, which was blown into uncleared undergrowth), and fragments of the R2M2 which enabled its identification were found around

the seat of the blast. Also found were many small pieces of RDX explosive, indicating that the explosion was partial. It is estimated that no more than 75% of the 58g of RDX contained by the mine detonated. This is also consistent with the crater, which is a very shallow 5 cm deep and flat, approximately 20cm in diameter.

15. [The Country Programme manager and the Regional Operations manager]'s later investigation confirmed the initial findings and supplemented these with interview information which has made up this report.

## CONCLUSIONS

16. It is the opinion of the investigating staff that this accident was caused by a failure of [the Victim] to adhere to SOPs. [The Victim] began excavating at the site of the signal instead of at a point 20cm further back in safe ground. What led to this error was the assumption that the cylinder alone was responsible for giving a signal to the detector. Had the cylinder been lying on the surface (like the boot eyelet) and he had removed it by picking it up, his confirmatory sweep with the detector afterwards would have produced a signal in the same vicinity. An investigation as per SOPs would then have safely revealed the presence of the mine. [The Victim] broke SOPs because he took it upon himself to make presumptions.

17. The supervisory staff were doing their jobs properly and are not held to blame in any part for the accident. Their conduct both before and after the accident was without fault.

## ACTIONS TO BE TAKEN

18. [The Victim] will be dismissed as per [Demining group] Angola rules. These state that two incidents of missed metal in a twelve month period warrant termination of employment.

19. The details of the accident will be communicated to all staff in order to remind them that any taking of shortcuts with SOPs, regardless of appearances, is dangerous.

Signed: Programme Manager, 10 April 2001

## Victim Report

<b>Victim number:</b> 263	<b>Name:</b> Name removed
<b>Age:</b>	<b>Gender:</b> Male
<b>Status:</b> deminer	<b>Fit for work:</b> yes
<b>Compensation:</b> not made available	<b>Time to hospital:</b> not recorded
<b>Protection issued:</b> Long visor Short frontal vest	<b>Protection used:</b> Long visor, Short frontal vest

### Summary of injuries:

INJURIES

minor Hand

COMMENT

No medical report was made available.

## **Analysis**

The primary cause of this accident is listed as "*Victim inattention*" because the investigators found that the Victim had not excavated in the right way because he made assumptions about the safety of the detector reading.

The secondary cause is listed as "*Inadequate training*" because the Victim was working in a manner that is commonly seen and not corrected by field supervisors, so he may not have realized that he was breaching SOPs.

The decision of the management to dismiss the man for missing metal may seem a little unjust. He did not miss metal – he just found it in the wrong way! – but the enforcement of strict rules with dismissal as a final sanction has proved effective in imposing minefield discipline for some groups.