

# DDAS Accident Report

## Accident details

<b>Report date:</b> 04/01/2008	<b>Accident number:</b> 458
<b>Accident time:</b> 12:00	<b>Accident Date:</b> 07/03/2004
<b>Where it occurred:</b> MF ID 11161, Podhum, Mostar	<b>Country:</b> Bosnia Herzegovina
<b>Primary cause:</b> Victim inattention (?)	<b>Secondary cause:</b> Unavoidable (?)
<b>Class:</b> Victim inattention	<b>Date of main report:</b> 17/03/2004
<b>ID original source:</b> None	<b>Name of source:</b> BHMAC WL
<b>Organisation:</b> [Name removed]	<b>Ground condition:</b> leaf litter rocks/stones wet woodland
<b>Mine/device:</b> PMA-3 AP blast	
<b>Date record created:</b> 04/01/2008	<b>Date last modified:</b> 04/01/2008
<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>	<b>Map series:</b>
<b>Map edition:</b>	<b>Map sheet:</b>
<b>Map name:</b>	

## Accident Notes

visor not worn or worn raised (?)

inadequate investigation (?)

## Accident report

This report was made available in 2006 and translated in 2007 specifically for entry to the DDAS. The translated report has been edited for anonymity and is summarised below.

Based on an initial report delivered to BHMAC by the demining organisation on the 7<sup>th</sup> of March 2004 at 16:09, the director of BHMAC formed an investigative committee with the following members:[Name removed] (presiding), Ms [Name removed], and [Name removed]. This committee created a report which is the main information source for the DDAS. Another

document from BHMAL was available: "Lessons Learned from the Demining Accident on 7 March 2004", dated 17 March 2004, the same date as the accident report, signed by the BHMAL director, [Name removed]. This second document contains no new information and it adopts the recommendations of the investigative committee.

### **Conditions at the site**

Due to bad weather conditions, the investigation was conducted on 10th March 2004, three days after the accident.

The minefield (ID 11161) is in Podhum, a suburb of the town of Mostar. It is two km from the town centre, below a hill named "Hum", just above the houses in Podhum. The eastern border is a demined area (ID 10060), the western border is a suburb Panjevina. There were no available minefield records. The terrain is on a hillside, partially stony and partially grown with dry grass and bushes, there are some trees. There are visible traces of burning from the years before. The soil is clay mixed with stones and dry leaves. At the time of accident, the surface was soft due to rain, but inadequate for prodding, because of the stones and the thin layer of soil, below which there is only stone. The temperature was 15 degrees. Animals and previous fires had activated some mines in the past.



[The worksite was very steep through light woodland and over rocks.]

### **The work-site layout and marking**

The work-site had been properly marked.

### **Supervision and discipline on the work-site**

The team leader of team 1 in the organisation VILAKOL is [Name removed]. The next level of supervision was done by the work-site leader [Name removed], who organised and conducted the work. Internal quality control was conducted by [Name removed] every five days, according to the National Standard. An additional monitor, [Name removed], from the monitoring organisation [Other organisation] was present all the time. The work was well organised with the necessary discipline. All regulations (distance between deminers, working time...) were correctly followed.

### **Quality assurance**

Some irregularities had been recorded by the officer for QA/QC from BHMACH, which was conducted by an officer from RU Mostar. Some intolerable critical mistakes had occurred and a particular area could not pass the inspection. During the same visit, it was established that some visors were not adequate and should be immediately changed. The deminers had no contract with the demining organisation, but they had it on the next day. By the next visit of the BHMACH inspection, 6 March 2004, it has been established that the undergrowth removal was not entirely regular, which was corrected. An area of 42 m<sup>2</sup> was checked and there were no critical mistakes. Another irregularity was that many signals in the designated safe path (2-3 per m<sup>2</sup>) were not investigated.

### **Communication and connections**

The communications satisfy the National Standard, mostly by using mobile telephones. After receiving first aid, the injured deminer was transported to the hospital in Mostar, which is 1.5 km from the work-site.

### **The accident and the medical support**

The medical support was appropriate (equipment, vehicle and personnel). Deminer [Name removed] gave first aid to the injured deminer [the Victim].

[The Victim] was going away from the lane. At about 10 m distance from [Name removed], who approached the base line, he slipped with his left foot below the tape into a non-examined part of the minefield and activated a PMA-3. The working path was narrower there because of a larger rock. After the explosion, [the Victim] fell into the working path, but with his legs lying in the non-examined part. Deminer [Name removed] pulled him out into the cleared part. The tip of the left shoe was damaged. It was taken off.



[The Victim's right boot.]

Since the bleeding was not strong and the injured deminer could lean upon his leg, he walked with the help of [Name removed] towards the medical vehicle already approaching them. The paramedic established an injury of the left toe, a smaller injury above the upper lip and a small injury on the deminer's upper leg. The injuries were later described as light. After he received the first aid, he was taken to the Mostar hospital. The ride took 3 minutes. [The Victim] was sent home and proscribed rest and some medications. His hearing was checked 4-5 days later (results not available). He was insured according to the National Standard.

### **PPE and tools**

The Victim's equipment was: Metal-detector, prodder, a small shovel, shears, secateurs, a small saw, hammer, helmet with a visor [no helmet, long visor] and a frag jacket [frontal apron]; satisfying the National Standard for Bosnia and Herzegovina. The metal detector (Vallon VMH-1) was functional and its performance satisfied the Standard (UPMAH-3 detonator detectable at 10 cm [presumably in air]).



[The victim's PPE at the site. Showing no marks at all.]

### **The mine**

A PMA-3 was about 28 cm from the centre of the tape [parts were found and photographed]. There was a stone on the mine, which probably activated it. The main power of the blast was directed to a nearby tree, which was quite damaged.



[The seat of the explosion and the damaged tree.]

This implies that the position of the mine was tilted sideways, following the slope of the hill. It might have been placed horizontally and been moved with time. There was no crater: the mine was not buried in the ground, it was just masked with some soil, leaves and a stone. This conclusion is confirmed by some signs of burning.

### **Recommendations of the investigative committee**

It is recommended to perform regular additional training of deminers. All signals should be investigated – if not possible with a prodder, than they have to be excavated. It is recommended to use magnets to pick up metal fragments. More attention should be paid to internal quality control, especially by the team leader, who should return the deminers to clear the area in case of errors.

## Conclusion

The cause of the accident: lack of care of a deminer. He slipped on a narrow path and activated PMA-3.

## Victim Report

<b>Victim number:</b> 605	<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> Not made available	<b>Time to hospital:</b> Not recorded
<b>Protection issued:</b> Frontal apron Long visor	<b>Protection used:</b> Frontal apon, Long visor (worn raised) ?

## Summary of injuries:

minor Face

minor Foot

minor Hearing

minor Leg

COMMENT: No Medical report was made available.

## Analysis

The primary cause of this accident is listed as "Victim inattention" because it seems that the Victim slipped and his foot moved outside the cleared area. The secondary cause is listed as "unavoidable" because accidental loss of balance is probably inevitable, especially when working on steep slopes in woodland. The fact that the "safe" area had not been cleared of metal raises some concerns about the management of the site. The fact that the area was wet and with leaf litter raises questions about the safety of working when wet and the quality of the boots issued to the victim. The investigators might have considered the potential for using "leaf-rakes" (used elsewhere) to remove leaf-litter.

The Victim's face injury makes it likely that the Victim's visor was not worn or was worn raised. The cleanliness of the PPE shown in the photograph suggests that it may not been worn at the time.