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### DDASaccident473

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# DDAS Accident Report

## Accident details

<b>Report date:</b> 14/01/2008	<b>Accident number:</b> 473
<b>Accident time:</b> 09:25	<b>Accident Date:</b> 09/09/2007
<b>Where it occurred:</b> MF ID: NN 16, "Black Iris", Wadi Araba., North North Sector, Graygra	<b>Country:</b> Jordan
<b>Primary cause:</b> Field control inadequacy (?)	<b>Secondary cause:</b> Victim inattention (?)
<b>Class:</b> Excavation accident	<b>Date of main report:</b> 17/09/2007
<b>ID original source:</b> NN 16: 09/09/07	<b>Name of source:</b> [Name removed]
<b>Organisation:</b> [Name removed]	
<b>Mine/device:</b> No 10 AP blast	<b>Ground condition:</b> dry/dusty hard hard
<b>Date record created:</b> 14/01/2008	<b>Date last modified:</b> 14/01/2008
<b>No of victims:</b> 1	<b>No of documents:</b> 2

## Map details

<b>Longitude:</b>	<b>Latitude:</b>
<b>Alt. coord. system:</b>	<b>Coordinates fixed by:</b> GPS
<b>Map east:</b> E 35.2676	<b>Map north:</b> N 30.6682
<b>Map scale:</b>	<b>Map series:</b>
<b>Map edition:</b>	<b>Map sheet:</b>
<b>Map name:</b>	

## Accident Notes

vegetation clearance problem (?)  
no independent investigation available (?)  
non injurious accident (?)  
long handtool may have reduced injury (?)  
metal-detector not used (?)  
standing to excavate (?)  
use of rake (?)

## **Accident report**

The report of this accident was made available in August 2007 as a PDF file. Its conversion to a text file for editing means that some of the formatting has been lost. The substance of the report is reproduced below, edited for anonymity. The original PDF file is held on record. In this country, a "mine locator" is a "deminer".

ACCIDENT INVESTIGATION FOR [Demining group] – MINE ACTION TEAM - JORDAN  
ISRAELI MINEFIELD NO. (71390031), "Black Iris", Wadi Araba., North North Sector, Graygra  
GRID REF: N 30.6682: E 35.2676  
9 SEPTEMBER 2007

## **INCIDENT REPORT**

INVESTIGATION CONDUCTED BY: [Demining group] Sector Coordinator, [Name removed]  
DEMINER: [the Victim] DATE OF BIRTH: 02/08/1978  
SECTION COMMANDER and TEAM LEADER: [Names removed]  
TEAM: MANUAL TEAM TWO  
TIME OF ACCIDENT: 09:25 AM  
DATE OF ACCIDENT: 9 SEPTEMBER 2007  
NATURE OF INJURY: No Injury  
TYPE OF MINE : Israeli Anti Personnel No - 10

## **Narrative**

A mine blast accident occurred at 09:25 am on Sunday 09 Sep 2007 in the minefield 71390031. The Mine Locator working in the mine belt hit on the top of mine and resulted in mine blast. The deminer sustained no injuries.

The Victim was using his Heavy rake and wearing his Vest and goggles.

The wooden rake handle of the Heavy rake was broken.

The mine detonated while raking with Heavy Rake. The deminer was not injured. The crater depth was approx. 20cm and the crater width was approx. 40cm.

## **Site conditions**

The site was described as "medium, flat". The weather was clear and hot. There was "no" vegetation. [In fact the accident was partly caused by the presence of dry bush.]

Mine Blast Location



### **Team details**

The team had been working at the site for two weeks. On the day of the accident they had been working for two hours.

### **Medical & First Aid**

The Victim arrived at the Section Medical Point after two minutes and was treated for 10 minutes by the medic. The ambulance then took him to Risha Health Clinic in 28 minutes. The total evacuation time was 40 minutes. The Victim was checked at the clinic for 15 minutes. No injuries were sustained.

Medical treatment required yes no

### **Reporting procedures**

The investigation was conducted by Sector Coordinator. The report was compiled/translated by [Name removed].

Printed on 17/09/2007

### **Attachments:**

Statements by Injured Members

Statements by Witnesses

Copy of Medical Report [Not translated, so omitted.]

### **Observations and recommendations by Operations Manager**

#### **OBSERVATIONS:**

This accident may be avoided by taking more care and use of correct drill.

- (a) The Mine Locator is not followed the laid down drills.
- (b) The Mine Locator violated the laid down drill, he has to cut the bush before removing the mines but he tried to remove the mines without cutting the bush in front.
- (c) He has not approached the mines from the tray but he tried to remove the mine with a bush on top of the mine.
- (d) The Incident happened due to hacking on top of the mine.
- (e) The Mine Locator has to be blamed for this incident.

**RECOMMENDATIONS:**

It is recommended that this kind of violation of the safety rules and drills should not be tolerated. Those who are failing to adhere to the rules should be given severe punishments. The Mine Locator deserves for a strong warning order and further his [contract] extension should not be granted.

**Victim Report**

<b>Victim number:</b> 633	<b>Name:</b> [Name removed]
<b>Age:</b> 29	<b>Gender:</b> Male
<b>Status:</b> deminer	<b>Fit for work:</b> yes
<b>Compensation:</b> Not applicable	<b>Time to hospital:</b> 40 minutes
<b>Protection issued:</b> Frontal apron Goggles	<b>Protection used:</b> Frontal apron, Goggles

**Summary of injuries:**

COMMENT: Non-injurious accident.

**STATEMENTS**

**Statement No.1: Victim**

Date: 09 September 2007

Position: Mine Locator (Cause of Blast) Date: 09 September 2007

I was locating the mines in for deminer [the Victim] using the light rake, I saw the mine but I couldn't continue using the light rake because I faced a small bush, so I used the heavy rake to locate the mine and identify the area, then I hit the mine and the blast occurred.

Question 1: Was you alone in the mine strip?

Answer: Yes, I was.

Question 2: Did you tried to free the mine by your self?

Answer: Yes, I did.

Question 3: Is your duty to expose the mines for deminers?

Answer: Yes, I do exposing the mines for deminers.

Question 4: Did you try using the plant pruner?

Answer: No, I didn't.

**Statement No.2: deminer**

Date: 09 September 2007

I was out of the minefield in the safe lane while the mine locator [the Victim] locating the mines for me and when he faced a small bush the blast occurred.

Question 1: Where was your location when the blast occurred?

Answer: I was outside minefield in the safe lane.

Question 2: Did the mine locator [the Victim] was using the heavy rake?

Answer: Yes he was.

**Statement No.3: Section Commander**

Date: 09 September 2007

The mine locator [the Victim] was using the light rake to clear the half meter, then he reached a small bush he locates the mine, but while he was trying to free the mine using the heavy rake the blast occurred.

Question 1: Did the mine locator [the Victim] use the light rake first?

Answer: Yes he did as the recommended instructions.

Question 2: Was the mine locator [the Victim] not following the recommended instructions?

Answer: No, he wasn't

Question 3: Did the mine locator [the Victim] use the plant pruner?

Answer: No, he didn't

Question 4: Did the mine locator [the Victim] inform you that he found a mine?

Answer: Yes, he did.

**Statement No.4: Team Leader**

Date: 09 September 2007

After the morning check with the sector coordinator I was going to the burning site and while I passing the control point I heard the blast and it was close to section number two. I walked to the blast location and supervised the evacuation and informed of the accident and stopped the other sections to stop the work.

Question 1: Was the mine locator [the Victim] not following the recommended instructions in your opinion?

Answer: No, he wasn't

Question 2: You were close to the mine locator?

Answer: No I was not.

Question 3: Is the mine locator duty to free the mine for deminer?

Answer: Yes, it's his duty as we trained.

#### **Statement No.5 Sector Coordinator**

Date: 09 September 2007

After the morning check with the team leader I came back to the control point and after three minutes I heard the blast and it was in front of us, then I walked to the blast location and checked the mine locator and ensured that all deminers went out the minefields, and then informed Risha base to inform Risha clinic, and then informed the operations manager.

Question 1: Was the mine locator [the Victim] fine after the blast?

Answer: Yes he was, and he walked out the minefield

Question 2: Did the mine locator [the Victim] use the plant pruner?

Answer: No, he didn't due to the distance.

Question 3: Is the mine locator duty to free the mine for deminer?

Answer: Yes, it's his duty

Question 3: Was the mine beside the bush?

Answer: Yes, it was as of the accident.

#### **Statement No.6: Sector Coordinator**

Date: 09 September 2007

I saw the mine locator [the Victim], he used to expose the mines by using the light rake and because there was a small bush in preventing him from using the light rake he used the heavy rake and hit the mine from the top resulting in a mine blast. But he should approach the bush from lower position and use the plant pruner to cut the bush and then use the heavy rake. According to the investigation I believe that there is no violation of clearance drill, but the violation is caused by the mine locator himself. As a conclusion it should be considered as a human error.

### **Analysis**

The primary cause of this accident is a "Field control inadequacy" because it seems that the deminer was working in breach of approved SOPs and his error was not corrected. The secondary cause is listed as "Victim inattention" because the Victim could have worked with the light rake in order to get close enough to cut the bush with his hand pruners but seems not to have thought about it.

The demining group had put in place the use of a long tool (rake) that kept the Victim far enough away from a blast to avoid injury, and his PPE was effective at protecting him from any risk remaining at that distance. Had he been using conventional short hand-tools, some injury would have been expected.

This demining group acknowledge the fact that stand-off (distance from the detonation) is the most effective PPE and their Rake Excavation system makes use of this fact. It is possible that the extreme length of the tool makes initiation of small AP blast mines with the Heavy rake more likely, but any increased risk of initiation is offset by the reduced chance of that initiation resulting in injury. The accident is a good example of balancing an effective demining process and PPE to result in a very low risk of injury.