

DDAS Accident Report

Accident details

Report date: 22/01/2008	Accident number: 499
Accident time: 12:00	Accident Date: 11/02/2007
Where it occurred: MF No. 0073, Kalata-l-Nayeb Ghafoor Village, Kohsan District, Herat Province	Country: Afghanistan
Primary cause: Inadequate survey (?)	Secondary cause: Inadequate training (?)
Class: Missed-mine accident	Date of main report: 12/02/2007
ID original source: MDU-06/MCT-17	Name of source: UNMACA
Organisation: [Name removed]	
Mine/device: PMN-2 AP blast	Ground condition: dry/dusty hard rocks/stones
Date record created:	Date last modified: 22/01/2008
No of victims: 0	No of documents: 2

Map details

Longitude:	Latitude:
Alt. coord. system: WGS 84	Coordinates fixed by: GPS
Map east: E=061 03 28.9	Map north: N=34 46 56.5
Map scale:	Map series:
Map edition:	Map sheet:
Map name:	

Accident Notes

inadequate equipment (?)
inadequate metal-detector (?)
inadequate training (?)
mechanical detonation (?)
mechanical follow-up (?)
non-injurious accident(?)

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. Text in [] is editorial. MDU stands for Mechanical Demining Unit.

Cover letter

File: 01101/06/0710100

To: Chief of Operations UNMACA Kabul

From: Operations Assistant UNAMAC Herat

Date: 20 February 2007

Subject: [National demining NGO] Missed Mine Investigation Report

Enclosed attached please find the Missed mine investigation report of [National demining NGO] MDU-06/MCT-17, which was occurred on 11th February-2007 at Minefield No- 0073 at Kalata-I-Nayeb Ghafoor village of Kohsan district of Hirat Province.

Forward to you for your information.

IMSMA Investigation Report

Missed Mine Accident Occurred on a [National demining NGO] MDU-06 on 12 Feb-2007

Accident/Incident Location: WGS-84: E=061 03 28.9: N=34 46 56.5: GPS

MCT-17 had been working at the site from 23/01/2007 up to date. They had processed 7270 sqm area covering 19.5% of work (Manual and Mechanical [Backhoe]. The detector used was the Mil-D1. AMAC QMIT team has conducted 1 QA Inspection and the result was good.

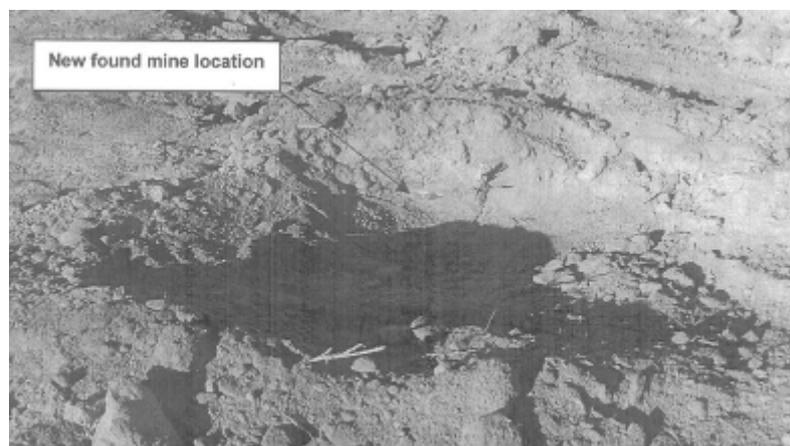
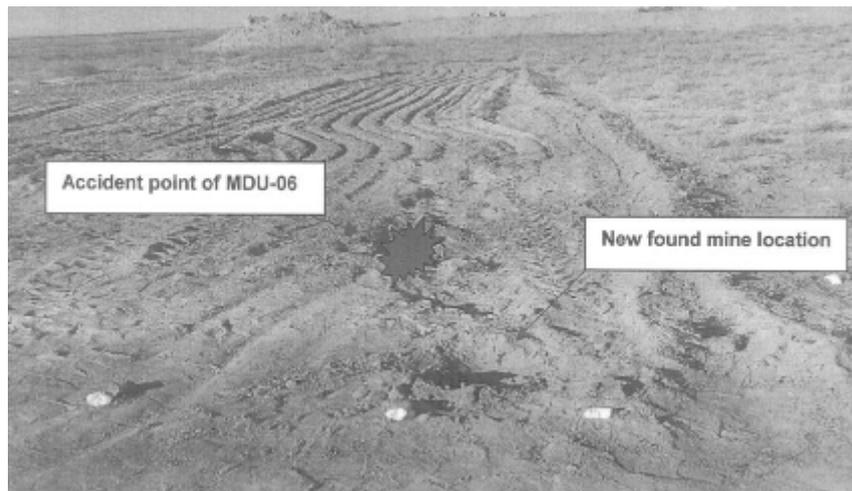
History of the Minefield: The Kalat-e-Nayab Ghafor village is about 18 kilometres away to the north site of Islam Qala city. There is a security post by the name of Cholongai. which is located near to Iran border and the villages are located on vicinity of that area and during Russian invasion many AP mines planted all around the post as belt for preventing Mujahidin attacks. Meanwhile, Mujahidin planted antitank mines in this large desert area and according to LIAT confirmation assessment approximately (7,200,000) sqm area contaminated by AT mines and according to information obtained from the local residents of the area, many accidents happened to local people and animals in the area.

Minefield No-AF-2008/1835510073 was surveyed on 26/06/1997 with a total marked area 37754 sqm and again resurveyed on 11/12/2006 with total marked area 37092 sqm and on 23/01/2007 the minefield was tasked to [National demining NGO] MCT-17 for clearance.

They have found and destroyed 18 AP mines during clearance activity in this minefield.

Description of the accident: On 11 Feb-2007 about 12:00 PM [National demining NGO] MDU-06 was working as a supporter with [National demining NGO] MCT-17, a PMN-2 missed mine accident occurred on MDU-06 machine in the cleared area, while the mentioned MDU was busy in preparation of minefield hazard area for MCT-17 breaching parties of section No-1. In the result backside right tire of Backhoe got damaged and no human casualty.

Photo of accident point on Backhoe Machine in Minefield No- AF-2008/18355/0073.



This portion of minefield No-AF-2008/18355/0073 where the accident of an anti personal PMN-2 mine occurred by [National demining NGO] MDU-06, was prepared by the mentioned MDU for the manual breaching party of section-1 of MCT-17, and was also searched and detected by the mentioned section party about 20 m long and 10 m wide. But when the MDU machine was getting ready for the preparation of another unclear portion for the mention party, when the MDU entered in this cleared area an anti personnel mine was blown up and in the result right backside tire of MDU has been damaged.

After the mentioned accident the party rechecked the area located backside of accident point, they have found another PMN-2 missed mine 1 meter back side of the accident point.

But during our investigation when we checked the second found mine by mine detector the depth of mine was about 15 cm, out of 13 cm cleared already. The mine detector did not give signal on the mine. It means that these mines were in depth of about 30 cm. Because more than 13 cm in depth of the area was prepared/cleared by MDU and breaching party already.

Site conditions: The ground was flat. The soil was "medium". The weather was clear. There was no vegetation.

Conclusions:

According to my physical observation these two mine were missed from MDU and breaching manual party of section No-1 MCT-17.

One mine was exploded by MDU machine and another mine was found by party.

As per my investigation the depth of the second discovered mine was about 15 cm from the surface of cleared area and the MDU and manual party has already prepared or checked 13 cm of the area.

The backside right tire of MDU was damaged.

The MDU has repaired back and the tire has been changed and now it is ready for work in the field.

Recommendations:

The entire minefield should be prepared by MDU more than 30 cm because the depth of mine is too much.

The Deminers are advised to detect properly MDU prepared area by mine detector.

A refresher training of mine detector is advised for the Deminers of this team.

The mine detector skill of the Deminers should be improved.

The batteries of mine detector should be fully charged.

The Deminers of this team are advised to reset the sensitivity of mine detector time by time.

Attachments: [Held on file]

STATEMENTS

Statement and Witness Report 1: deminer

Date: 07/02/2007

Question-1: What was the cause of accident?

Answer-1: The cause of accident is no signal of mine detector because the mines are laid in more depth.

Question-2: What was your activity when the accident occurred?

Answer-2: I was stand up away from the accident point and watching the work of MDU.

Question-3: How many mines have been found/destroyed by your party in this area?

Answer-3: Totally our party has found/destroyed 7 anti personal mines in this minefield.

Question-4: What was the depth of mines you have been found/destroyed in this minefield?

Answer-4: The depth of mines we have found/destroyed in this minefield is from 13 cm up to 15 cm and then up to 30 cm.

Question-5: Was this mine missed which has been exploded by Backhoe machine?

Answer-5: Yes this mine was missed from our party but the depth of mine is too much.

Question-6: What demining equipments you are using in this minefield?

Answer-6: We are using for the excavation in this area bayonet, prodder and pickaxe.

Statement and Witness Report 2: Section Leader

Date: 07/02/2007

Question-1: Where was your location when the accident occurred?

Answer-1: I was stand up 25 meters away in the backside of Backhoe machine.

Question-2: How the accident occurred?

Answer-2: When I decided to brief the Backhoe operator in the cleared area accident occurred and the tire has damaged.

Question-3: Have you checked this area already or not?

Answer-3: Yes this area where the accident took place on Backhoe machine I was checked it

Question-4: How much mines have been found/destroyed by your section-1 in this minefield?

Answer-4: Our section has found/destroyed 7 anti personal PMN-2 mines in the depth 12 cm, 17 cm and 18 cm.

Question-5: What was the depth of mines you have been found/destroyed?

Answer-5: In the cleared area mine, which has been blown up by Backhoe machine was in the depth of 30 cm and the other, mine we have found in the backside later was in the depth of 15 cm,

Question-6: What was the cause of accident?

Answer-6: The cause of accident the [Survey] team has recommended 13 cm depth for the clearance of this area, and the depth of that mine which was found in the cleared area was 15 cm. In fact the Deminer was removed/excavated about 8 cm soil from the surface of mine, again the mine detector hasn't detect that mine.

Statement and Witness Report 3: Team Leader

Date: 12/02/2007

Question-1: What was the cause of accident?

Answer-1: The cause of accident on Backhoe machine was that command group step by step checked the cleared area, but the mine, which has exploded by Backhoe machine, was 30 cm deep. This was the main reason of missed mine.

Question-2: Where was your location when the accident occurred?

Answer-2: I was stand up 70 meters away in the control point and controlling the work of Backhoe machine.

Question-3: Please name any equipment damaged during the accident?

Answer-3: The backside tire of Backhoe machine has destroyed no damaged to other parts of Backhoe.

Question-4: What time the accident occurred?

Answer-4: It was 12:00 PM when the accident took place.

Question-5: How many mines you have found/destroyed in this minefield?

Answer-5: Totally we have found/destroyed 18 anti personal PMN-2 mines in this minefield.

Question-6: What demining equipments are using in your section for excavations in the field please explain it?

Answer-6: Section No-1 of team No-17 are using the below equipment:

MIL-D-1 mine detector, PPE, Prodder, Shovel, Rope, Markers, Ground sheet, marking stick, tripwire feeler, gloves and backhoe if necessary.

Question-7: How much is the depth of mine in this area?

Answer- 7: The mine that we have been found/destroyed In this area the depth of mine was more then 15 cm.

Question-8: Was this mine missed from the breaching party?

Answer- 8: The mine, which was laid in depth of 25 cm the MIL-al mine detector, could not detect that.

Analysis

The primary cause of this accident is listed as “Inadequate survey” because the clearance requirement at the site was less than half the actual depth of the mines.

The secondary cause is listed as “Inadequate training” because the investigators found that the deminers were not using their detector in the best way and recommended a period of retraining. The CIEA-MIL-D1 is not the easiest detector to use but, in soils without severe electromagnetic properties, should be capable of detecting a PMN-2 at 15cm. If the machine removed the top 15cm and a thorough detector search followed, the mines should be found – but there is every chance that the wheels of the machine would initiate more mines ahead of the manual follow-up.