

# DDAS Accident Report

## Accident details

<b>Report date:</b> 15/06/2008	<b>Accident number:</b> 580
<b>Accident time:</b> 13:00	<b>Accident Date:</b> 20/06/2004
<b>Where it occurred:</b> DA 45, Nr Um Serdiba village, Kadugli, South Kordofan	<b>Country:</b> Sudan
<b>Primary cause:</b> Other (?)	<b>Secondary cause:</b> Other (?)
<b>Class:</b> Handling accident	<b>Date of main report:</b> 21/06/2004
<b>ID original source:</b> KD-1	<b>Name of source:</b> UNMAO Sudan
<b>Organisation:</b> [Name removed]	
<b>Mine/device:</b> No.4 Israel AP blast / frag	<b>Ground condition:</b> hard rocks/stones steep slope
<b>Date record created:</b>	<b>Date last modified:</b> 15/06/2008
<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> Not recorded	<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

inadequate training (?)  
inconsistent statements (?)  
metal-detector not used (?)  
protective equipment not worn (?)  
visor not worn or worn raised (?)

## Accident report

Details of this accident were made available as a collection of files in June 2008. The conversion of these files to DDAS format has led to some original formatting being lost. The original files are held on record. Text in square brackets [ ] is editorial. No full Board of Inquiry

(Bol) was held because the accident occurred while the deminer was technically “off-duty”. The preliminary report and its Annexes are more informative than many full Bols and are reproduced in full below.

### **From IMSMA report**

[As is often the case in any country, the details of the IMSMA report entries conflict with those in the full investigation and add no useful information.] Off duty , No PPE no visor. Casualty sustained severed Left hand & wrist, Shrapnel wounded to chest upper left leg. AP Mine No.4.

Tick box entries: Amp hand, chest and lower limb injuries. 1.88 hours to first medical facility, JMC Tillo Madic.

Cause of accident: incorrect procedure.

### **Preliminary report**

Mine Accident Investigation on 20 June 2004

#### **Aim**

1. The aim of this report is to present the facts and summarize the events leading to the mine accident on 20 Jun 04 in Umm Serdiba, involving [the Victim], a [Demining NGO] deminer from OSIL 1 team, in accordance with Chapter 15, NTSG Ed 4, January 2004.

#### **Details of Accident**

2. Events leading up to the accident are outlined in Annex A. [The Victim] was involved in disarming a landmine on Umm Serdiba mountain without PPE or proper equipment when the landmine exploded.



[Umm Serdiba mountain.]

3. The site of the accident was a non-clearance site on a mountain near Umm Serdiba village. [The Victim] was involved with rendering safe No 4 landmine, reported by two children on the Umm Serdiba mountain, without authority or wearing adequate protection.
4. A secondary explosion occurred the same afternoon at approx 1520 hrs. A Mine Rescue Team was created from [Demining NGO] resources to investigate the explosion on the same mountain. A local villager threw rocks on a remaining

landmine, causing it to explode. There were no casualties resulting from this secondary explosion.

### **Statements**

5. Statements from all witnesses are contained in Annexes B through D.

### **Medical Treatment**

6. Initial stabilization was provided by the [Demining NGO] Doctor [Name removed]. The JMC Medical Team provided further stabilization of the casualty prior to returning to JMC Tillo by helicopter.
7. A medical assessment and report was completed by the JMC medical team at JMC Tillo and antibiotics and painkillers were administered to the casualty. Casualty severed left hand and sustained shrapnel wounds in abdomen and upper left leg.
8. The medics authorized an interview to obtain a statement – despite the medication administered. Statement provided by casualty (Annex B) conflicts with statements provided by witnesses (Annex D).
9. Arrangements were made by JMC Air Ops to casevac the casualty onward to Loki for further treatment.

### **Immediate Action Taken**

10. Refer to Annex E - Chronology of Events. [Name removed] requested casevac services from JMC at 1425 hrs, and a helo team with medics were airborne within 10 mins.
11. Demining operations were closed down.
12. Details of accident communicated to Chief Technical Advisor in Khartoum throughout 20 June as details became known. Chronology of Events send to UNNY 20 June.
13. JMC Air Ops arranged casevac to Loki for 1410 hrs on 21 June, via Tangal using OLS (Operation Lifeline Sudan).
14. Statements obtained from key witnesses and casualty on 20-21 June.
15. Preliminary Investigation completed 21 June.

### **Conclusions and Probable Cause**

16. [The Victim] left [Demining NGO] Camp to personally respond to the information provided by the two children regarding two No 4 anti-personnel landmines on the Umm Serdiba mountain. This was a known minefield and adjacent to a second known mountain also containing landmines in Umm Serdiba.
17. [The Victim] attempted to neutralize two landmines instead of marking and reporting the mines in accordance with established procedures.
18. [The Victim] was an experienced deminer with [Demining NGO] OSIL 1, and should know the correct procedures under these circumstances.
19. There was no immediate threat (ie injured person within the minefield requiring immediate response), yet he proceeded into a known mined area without adequate equipment (PPE, visor, detector, etc).
20. No notification was provided by [the Victim] to the [Demining NGO] chain of command prior to his departure from Umm Serdiba Base Camp.

21. The casevac procedures work well at both [Demining NGO] and JMC levels.
22. This Preliminary Investigation concludes the probable cause of this accident was due to extremely poor judgment by the individual ([the Victim]), who violated basic procedures.

### **Recommendations**

23. Due to circumstances and information gathered during this preliminary investigation, I recommend no Board of Inquiry be formed.
24. Recommend [Demining NGO] OSIL team reinforce MRE campaign in Umm Serdiba to prevent villagers from entering into known dangerous areas.
25. From a victim assistance perspective, recommend re-integration of [the Victim] into the broader demining community – perhaps MRE or a supportive role.
26. JMC Air Ops, [Demining NGO] and JMC medics responded admirably, promptly and efficiently during this accident.
27. Recommend similar casevac procedures be adapted under DPKO mission.

Prepared by: [Name removed] Technical Advisor, Nuba Region Mine Action Office, Kadugli, Sudan

### **List of Annexes**

- Annex A – Report from [Name removed]
- Annex B – Statement from [the Victim] (Casualty)
- Annex C – Statement from [Name removed] (Team Leader)
- Annex D – Statement from Children
- Annex E – Chronology of Events

### **ANNEX A To Preliminary Investigation on 20 June 2004**

Report from UNMAS QA/Ops O on 21 June 2004, 1630 hrs

[Name removed] heard an explosion from the Umm Serdiba direction from the [Demining NGO] Base Camp around 1300 hrs, 20 Jun.

Approximately 20 mins after the explosion, [Name removed] ([a second Demining NGO] Team Leader) entered the [Demining NGO] Camp (1320 hrs).

[Two names removed] and I went to the [Demining NGO] Camp after conducting a Suspension QA on the Al Baro minefield task (1335 hrs).

A Mine Rescue Team was formed in the [Demining NGO] Camp, consisting of OSIL 1 deminers, a Technical Advisor [Name removed], [Demining NGO] Ops O [Name removed], [Demining NGO] Medical Doctor [Name removed], an ambulance, [Name removed] (UNMAS) and myself. The Mine Rescue Team departed approximately 1350 hrs, from [Demining NGO] Camp.

The first vehicle with [Name removed] and [Name removed] met the casualty coming from Umm Serdiba carried on a local bed, halfway between [Demining NGO] Camp and JMC Camp Umm Serdiba. The team stopped, the [Demining NGO] Doctor [Name removed] and

the medic stabilized the casualty. An assessment was completed, requiring helo support to evac the casualty. I informed JMC Ops to dispatch a helo with medical support to casevac a mine strike casualty to the helipad at JMC Umm Serdiba.

At his point in time the following personnel were involved or observing the situation: OSIL 1 deminers; OSIL 1 Tech Advisor [Name removed]; [Name removed] ([Demining NGO] Ops O); UNMAS Team ([Three names removed]); [second Demining NGO] Team 1 (including Team Leader [Name removed]); LMA Country Director with BBC TV crew; an estimated 50-75 villagers.

Dr [Name removed] stabilized the patient and prepared him for transport to JMC Umm Serdiba. [Names removed] received parts of a fuze to a No 4 mine from the casualty. The casualty extracted these items from his trouser pockets. The casualty was questioned if there were more wounded people at the accident site. He said "No".

Suddenly, a second explosion was heard. I informed JMC Ops of the explosion.

[Name removed] returned to the [Demining NGO] Camp to get more deminers and equipment. The Team Leader of OSIL 1 [Name removed] was dispatched to go to the base of the mountain in order to prevent people from going up the mountain. [Name removed] returned with extra deminers and prepared a Mine Rescue Team on standby at the base of the mountain.

The casualty was transported to JMC Umm Serdiba in the ambulance. [Name removed] and I followed the ambulance.

The helicopter stayed on the ground until further casualties could be assessed from the second explosion. Meanwhile, the patient was stabilized by three JMC medics at JMC Umm Serdiba Camp.

The [Demining NGO] Medical Doctor [Name removed] gave the JMC Medical Team a de-brief on the action taken. The ambulance returned to the medical point at the base of the mountain to provide medical support to the Mine Rescue Team. [Name removed] prepared the Mine Rescue Team to search the accident site on the mountain. The villagers reported the second explosion was caused by children throwing rocks on the mine and there were no further casualties.

I returned to the first medical point to give them direction to move forward – closer to the mountain.

The Mine Rescue Team was organized by [Name removed] and team members were sent out around the base of the mountain to collect information from the villagers. Information was received that a 4-man team proceeded up the mountain. Composition unknown. Later, information revealed the team composition consisted of 3 villagers and [Name removed]

I informed JMC Ops no further casualties were on the mountain. [Name removed] and his team returned with parts of a No 4 anti-personnel landmine. It started to rain heavily and operations ceased at approximately 16:45 hrs. The UNMAS team and [Demining NGO] returned back to [Demining NGO] Base Camp.

I called [Name removed] to provide an update.

A plan was developed to secure all information:

- [Three names removed] reviewed the sequence of events
- OSIL 1 conducted a de-brief including the [Demining NGO] medical team
- The UNMAS team [three names removed] conducted a de-brief

- [Two names removed] are sent to Umm Serdiba in order to inform the local community that statements will be taken at 0830 hrs 21 Jun (the following day)

Signed: UNMAS Ops QA O

#### **ANNEX B To Preliminary Investigation on 20 June 2004**

Statement Obtained from [the Victim], Deminer OSIL 1 on 20 June 2004, 1730 hrs

Two small children reported a landmine on Umm Serdiba mountain and led [the Victim] to the location on the afternoon of 20 June. When he arrived at the site, he noticed the mine as an Israeli No 4, partially covered by small stones and sticks. He attempted to investigate the mine without touching it, by sitting on a rock nearby and removing the smaller stones and sticks. It was while he was removing these items the mine detonated.

Statement summarized by [Name removed], at JMC Medical Facility, Tillo, Sudan

Notes:

1. Casualty administered morphine, however JMC medics authorized interview.
2. Questions translated through [Demining NGO] medic, in presence of personnel listed below.
3. Casualty beginning to roll and turn away from us – I ceased the interview.
4. Statement taken in presence of: [Names removed]

UNMAS TA; [Demining NGO] TA JASMAR 1; UNMAS IT; [Demining NGO] Medic; Wife of [the Victim]

[Name removed] indicates post-interview that leading questions were posed by [Name removed], the [Demining NGO] Medic, such as “You didn’t touch the mine, right?”

#### **ANNEX C To Preliminary Investigation on 20 June 2004**

Statement Obtained from [Name removed] [Demining NGO] Team Leader, OSIL 1, on 20 June 2004, 1620 hrs

Two children came and said that they had found a mine. The injured person then went with them to have “a look”, without talking to anybody about this before. The location is one of the mountains that UNMAS have been looking at, as a future task. (The one given to [Name removed] 1, according to him?)

The team member that I talked to, (Team leader?), says that he thinks that the accident happened because of the injured picking the item up. When asked what type of item he thinks it was, he says, “type-4”.

The team member that I talked to was at the time of the accident at [Demining NGO] HQ, and when they went to have a look, they met the injured being carried by local village people.

Statement summarized by [Demining NGO Team Leader], at JMC Medical Facility, Tillo, Sudan.

#### **ANNEX D To Preliminary Investigation on 20 June 2004**

Combined Statement Obtained from [Two names removed] Children Accompanying Casualty on 21 June 2004, 0830 hrs

Yesterday the boys were herding goats. The goats went up the mountain and the boys chased the goats to retrieve them. The boys found two mines on the mountain. The boys walked to the [Demining NGO] Base Camp in Kurera to inform [the Victim], ([Demining NGO] OSIL 1 deminer). [The Victim] and the boys returned to the mountain. [The Victim] told the boys to walk down the mountain. This was the first time the boys saw a landmine. They claimed they never climbed this mountain previously, however, the boys were aware of landmines on the mountain.

The boys indicated to [the Victim] the location of the first mine. [The Victim] told the boys to walk away and took care of the first mine (disarm). The boys hid 50m away behind a large rock. [The Victim] returned to the boys and showed them a mine fuze.

The boys showed [the Victim] the second landmine. The boys hid in a new location when [the Victim] started to work on the second mine, an estimated 100m between both mines. The mines were close to large rocks. The second mine was close to a defensive position. Both mines were of the same type – gray, green and square shaped (No 4).

The boys heard an explosion and ran towards [the Victim]. [The Victim] told [one boy] to run to the village to get help, while [the other boy] stayed behind with [the Victim]. [The boy going for help] reached halfway down the mountain and rested for awhile. He called for help to some of the other villagers in Umm Serdiba.

[The Victim] walked down from the accident site before the villagers are were able to reach him. [The Victim] walked off the mountain on a different path than the boys. [The Victim], both boys and some villagers met at the base of the mountain. [The Victim] came straight from the mountain, holding his stump arm with his other hand. He rested under a tree for a while.

The villagers placed [the Victim] on a bed and started off to [Demining NGO] Base Camp to seek help. The boys returned to look after their animals.

The boys knew the mines were very dangerous.

Notes:

1. Statement summarized by [Name removed], at Umm Serdiba village, Sudan.
2. Others present to witness account of statement included: [Name removed] (UNMAS QA/Ops Associate), [Name removed] (UNMAS SPLA LO), [Name removed] ([Demining NGO] Ops O) and 3-5 villagers.
3. Both boys are from Moro tribe, who do not fully understand Arabic – but speak Moro. This necessitated translation from [Name removed] (English) to [Name removed] (Arabic) to [Name removed] (Moro).
4. According to the villagers, a man [Name removed], went to the accident location and threw rocks on another mine. This mine exploded.
5. When [Name removed] went up the mountain, he found two blast locations. He did not see the disarmed mine (first mine). He saw a 82 mm mortar close to the location.
6. The remains of a No 4 (plastic and fuze) were recovered.

Signed by representatives of: UNMAS and [Demining NGO].

## **ANNEX E to Preliminary Investigation on 20 June 2004**

Chronology of Events Initial Mine/UXO Accident Report – 20 Jun 04

**1425 hrs:** Reported by C/S MN2 [Name removed] to JMC Ops, 1x casualty in Umm Serdiba. Helo support requested; JMC Air Ops scrambled helo and medic sp within 10 mins; Demining operations suspended; Secondary explosion reported on nearby hill; AN 28 on standby

**1430 hrs:** NMAO/Chief Tech Advisor notified

**1435 hrs:** JMC helo departed Tillo

**1520 hrs (approx):** Details below provided by JMC Umm Serdiba (Sector 3):

- Casualty [Demining NGO] national deminer [the Victim], OSIL 1)
- Casualty severed left hand, sustained shrapnel wounds to chest and left leg
- JMC medics stabilized patient.
- [Name removed] and [Name removed] ([Demining NGO] Ops O) investigating secondary explosion.

**1525 hrs:** Update to NMAO/Chief Tech Advisor; Directed to convene Preliminary Investigation

**1535 hrs:** Helo departs Umm Serdiba to JMC Tillo

**1552 hrs:** Casualty arrives at JMC Tillo, transferred to Medical Facility within JMC compound.

**1600 hrs (approx):** Team Leader and wife accompany casualty on helo. Potential insurance coverage complications – incident occurred off duty; No PPE, visor or demining eqpt; Seeking statement from Team Leader concerning circumstances; Initial reports concerning secondary explosion indicate children playing on mountain. No further details

**1620 hrs:** Verbal statement obtained from Team Leader accompanying casualty (through [Name removed]- [Demining NGO] TA JASMAR 1)

- Accident occurred on potential JASMAR 1 site in Umm Serdiba (mountain). Casualty was present with children.
- Suspect No 4 AP mine, and deminer may have handled device.
- No protection, villagers extracted casualty off mountain and was met by Team Leader enroute from [Demining NGO] base camp.

**1630 hrs:** [Name removed] reports no more casualties on mountain from secondary explosion; JMC Air Ops makes tentative arrangements to medevac casualty to Loki SPLA medical facility.

- Details of casualty:

[Name removed], 35 yrs old; Traumatic amputation left hand at wrist; Shrapnel wounds left upper leg and abdomen. Patient stable, antibiotics and painkillers administered by JMC medics.





[The victim being treated under a tree.]

**1710 hrs:** I spoke with [Name removed] by Thuraya, [Name removed] will stay in UMM Serdiba [Demining NGO] base camp since heavy rains prevent him from returning to NRMAO office

- [Name removed] will attempt to obtain statements tomorrow from villagers and children in Umm Serdiba
- [Name removed] confirmed casualty was off work, in a non-clearance site, and was not wearing PPE or visor.

**1730 hrs:** Conducted interview with [the Victim], in presence of [Name removed] (UNMAS IT – to validate translation), [Name removed] ([Demining NGO] TA), myself, [Name removed] ([Demining NGO] Medic) and [the Victim]'s wife. [The Victim] under morphine – interview very short and brief to determine events leading to accident.

**1800 hrs:** Back-briefed CTA. Instructed to transmit chronology of events to CTA and UNNY.

Key factors:

- Casualty in stable condition, medevac to follow tomorrow (Mi-8 at 1257 hrs to Tangal to meet OLS “Operation Lifeline Sudan”, operating a Buffalo aircraft).
- AP Israeli No.4 mine involved
- Accident occurred off duty, member not wearing PPE or visor
- No further casualties resulting from secondary explosion
- Preliminary investigation to follow, key statements gathered, medical reports collected.

Prepared by [Name removed], Technical Advisor, Kadugli, Sudan, 1820 hrs 20 Jun

## Victim Report

<b>Victim number:</b> 756	<b>Name:</b> [Name removed]
<b>Age:</b> 35	<b>Gender:</b> Male
<b>Status:</b> deminer	<b>Fit for work:</b> not known
<b>Compensation:</b> Not made available	<b>Time to hospital:</b> 2 hrs 52 minutes
<b>Protection issued:</b> Not recorded	<b>Protection used:</b> None

### Summary of injuries:

minor Leg

severe Abdomen

AMPUTATION/LOSS: Hand

COMMENT: No Medical report was made available.

### Analysis

The primary and secondary causes of this accident are listed as "Other" because the Victim acted independently of his employers and in breach of normal procedures. The fact that he did not tell others where he was going implies that they would have stopped him going. The immediate response to the accident was professional although the impromptu survey up the mountain by one NGO staff member with three villagers after the event seems pointless (the presence of mines was already known) and raises issues about whether there was a clear command chain in place.

With a mine this size, the Victim was very lucky not to suffer face and eye injury and to only lose one hand. See DDAS accidents 0378, 0383 and 0569 as examples. Disarming the No.4 has been stopped in other countries because of the risks involved.