DDAS Accident Report

Accident details

Report date:	04/04/2004	**Accident number:**	407
Accident time:	10:30	**Accident Date:**	13/02/2002
Where it occurred:	Shilalo, Lelei Gash, Gash Barka	**Country:**	Eritrea
Primary cause:	Field control inadequacy (?)	**Secondary cause:**	Inadequate training (?)
Class:	Handling accident	**Date of main report:**	18/02/2002
ID original source:	BK/PL	**Name of source:**	UNMEE MACC
Organisation:	Name removed		
Mine/device:	TM57 AT blast	**Ground condition:**	dry/dusty grass/grazing area
Date record created:	04/04/2004	**Date last modified:**	04/04/2004
No of victims:	2	**No of documents:**	2

Map details

Longitude:	37° 34' 18" E	**Latitude:**	14° 36' 38" N
Alt. coord. system:	SHILALO 37P 0346182 1615577	**Coordinates fixed by:**	
Map east:		**Map north:**	
Map scale:		**Map series:**	
Map edition:		**Map sheet:**	
Map name:			

Accident Notes

inadequate medical provision (?)

inadequate training (?)

safety distances ignored (?)

inconsistent statements (?)

partner's failure to "control" (?)

protective equipment not worn (?)

Accident report

The following report was made available in March 2004. It is a “preliminary report” that was intended to have been followed up with a Board of Inquiry report, but this may not have happened. The preliminary report is extensive, and some parts are reproduced under *Related papers* at the *Other documents* tab.

The following has been edited for anonymity.

UNMEE, Mine Action Coordination Centre

PRELIMINARY INVESTIGATION REPORT ON MINE INCIDENT AT SHILALO 13 FEBRUARY 2002

General

The Operations Officer and EOD/Training Officer were tasked to conduct a preliminary investigation report (PIR) into a mine incident that occurred at Shilalo at 10:30 hours on 13 February 2002. This report is to be tabled to the Program Manager UNMEE MACC not later than Monday, 18th February 2002.

Background

At approximately 10:40 hours on Wednesday 13 February 2002, the Operations Department received a radio transmission from International Team Supervisor (ITS) of [National Demining group] Team Two at Shilalo, stating that there had been a mine incident in the minefield and there was one member dead, with another being stabilized at the scene. The MEDEVAC Helicopter was underway at this time. The Operations Officer informed the PM, who immediately ordered a Preliminary Investigation team, consisting of the Operations Officer and the EOD/T raining Officer, to travel by air to Shilalo and conduct a preliminary investigation into the circumstances.

The Operations Officer contacted ITS of Team One and informed him to seal the site and to remove all personnel from the minefield. A subsequent request to re-enter the minefield to recover the remains of the dead member was granted by the PM, provided all work was under the direct supervision of the ITS Team One.

The Medevac request documentation was completed and together with signed MOPs for both members of the investigation team, was conveyed to UNMEE Air Operations to permit the team to move directly to Shilalo by air. The team moved to the Asmara Heli Port and awaited the aircraft, but was informed the flight had been cancelled and diverted to Barentu with the remains of the recently deceased deminer. While the MEDEVAC was executed smoothly and without difficulty, there were some problems experienced in obtaining a special air request for the Shilalo investigation team to fly to the incident site.

A second attempt to obtain flight passage to Shilalo at 16:00 resulted in the aircraft being cancelled (again). This was reinstated due to the direct personal intervention by the Force Commander at late notice and the team was able to depart to Shilalo at 17:00 hours.

Arrival at Site

After arrival at site, the team was met at the Shilalo helipad by both [Commercial demining company] ITS from [National Demining group – the group that suffered the accident]] Teams 1& 2 and conveyed to the incident site. Due to the lateness of the hour and the uncertainty of whether or not the team would arrive that day, the incident site had been cleared and all equipment had been removed. Unfortunately this action compromised the work of the investigators with regards to placement of items and their precise location. ITS Team One had taken digital photographs of the site and these will be used in the compilation of this report.

A site brief was given by both ITS into location of items of clothing and equipment and where the two victims had been found. Photographs of the Section Leader (who took the main force

of the blast), and deminer, are included in this report. Photographs are included at Annex 1 to this report. [Poor photocopies were made available and are held on file.]

Interviews
The Investigation team decided that due to the lateness of the hour and the fading light, interviews would be conducted that evening with follow up site investigation and interviews the following day. A transcript of interviews and statements taken from those members involved are contained at Annex 2 to this report. [See Related papers.]

Incident
From interviews and statements the incident is described as follows.

At approximately 10:30 hours on 13 February, the ITS and Team leader had just returned to the Control Point of Team Two, when they heard an explosion come from the minefield. The ITS and the Team leader made their way to the site where they also encountered the relief deminer of the demining pair involved. Upon moving forward they encountered the scene of the accident. This consisted of the remains of the Section Leader, who had been propelled 24 metres by the force of the blast and the critically injured deminer, who had been propelled 5 metres forward from the seat of the explosion into the minefield and was lying on his back, with his head facing back up towards the Control Point.

The ITS immediately took charge with the Team and Section Medics administering first aid to the injured deminer, after a path had been cleared into him.

With the assistance of the team members the injured person was carried to a point to the access lane and then stabilized with the aid of the [International demining NGO] medics, who had arrived with an ITS, [name excised] in a [International demining NGO] ambulance.

The injured deminer was transferred to the [International demining NGO] ambulance (which had oxygen) and transported to the Shilalo Helipad for evacuation to Asmara. The ambulance arrived at the helipad and after a period of some 30 minutes, the Medevac Helicopter arrived. The patient was transferred to the Helicopter with the Team Medic of Team Two, for transferral to Asmara. As the aircraft was about to lift off, the pilot signalled for the ITS Team Two to come back to the aircraft, where he informed the ITS the injured member had passed away.

Since nobody could verify the actions of the two members at the incident site at the time of the incident, it is possible to establish most of the incident through the course of interviews. The record of interviews is contained at Annex 2 to this report.

From what can be established through the interviews, a mine, or suspected mine was discovered at Number Three Section's area and the Section Leader ordered everyone from the section from the minefield. At this stage he moved forward and passed the deminer in the adjacent lane who was returning to the admin/rest area. The relief deminer was situated in a rest area to the rear of the minefield.

The attending deminer did not come out of the minefield and some fifteen minutes later, after the deminer in the adjacent lane had moved out, there was a sound of an explosion from the minefield.

Accident Site
Due to the delay imposed in travelling to the accident scene and the fact the scene had been disturbed by having everything removed from it, the reconstruction of events was made difficult. This was further compounded by the actions of the team members in burying the remains of the Section Leader before his remains could be examined by the investigation team. The only reliable evidence of the effects of the blast on him come from photographic evidence. From descriptions, photographic evidence and interviews the following has been established.

1. The Section Leader was kneeling, or squatting, over the mine. When it exploded, his body took the full impact of the blast from a very close proximity. This is substantiated by the

extensive blast damage to his remains and extensive burning of the remains from the blast. The Section Leader's remains were propelled 24 metres from the seat of the explosion, to his left rear into the minefield, to land just outside the left hand edge of this clearance lane. This area was 18 metres to the rear of the front edge of the clearance lane.

2. The Deminer, who was also in close proximity to the blast, was thrown 5.2 metres forward to land on his back in the minefield forward of the explosion. When found, his head was facing back towards the crater, indicating he had turned a somersault in being propelled forward. From the extensive injuries to his left side and burns to the body, it is more than likely he was standing directly behind the Section Leader and more than likely looking over his left shoulder, with his body inclined to the left, when the mine exploded. It is presumed the Section Leader's body assumed the full force of the blast, with the impact turning the Deminer over and forward with its power.

3. Both members visors could not be located or any fragments of these, so it is not possible to speculate as to whether or not the visors were being worn, or worn correctly.

4. The tools being used by the deminer are not damaged, including the mine detector, indicating none of these were in use at the time of the incident. This leads to the contention that both members had their hands free during the events leading to the explosion.

5. The notebook and radio used by the Section Leader were also found a short distance from the crater. The investigating team was not shown these items, however photographic evidence shows them to be intact.

6. The paintbrush and mine detector are similarly undamaged. Unfortunately, again, the detector had been dismantled with the battery being used at the time removed and mixed up with the others from the team. Tests with a charged battery indicate that it functioned correctly. This again was a compromise of evidence. required by the investigating team.

7. Photographs were taken of the incident site by the ITS and these are contained at Annex 1 to this report.

Crater Analysis

A detailed analysis of the crater was conducted, including measurements. From examination of the crater and its measurements, it has been concluded the mine was a cylindrical, metal cased anti tank mine. The shape of the crater is consistent with a cylindrical mine. The measurements are as follows.

Top Diameter	Half Depth Diameter	Depth
44 cm	87 cm	62 cm

A quantity of metal fragments were removed from the crater.

Members involved

The following members were involved in the incident.

Name: [Victim no.1], Position: Section Leader, Section 3, [National Demining group] Team 2. Injuries: Severe blast injuries. Severe burns to extensive areas of body. Dead.

Name: [Victim no.2], Position: Deminer, Section 3, [National Demining group] Team 2. Injuries: Blast injuries. Fracture of left lower jaw; Fracture on the left upper cheek. Fracture on the forehead. Burn wounds on the upper left arm. Burns on the front of the upper legs. Scattered small bums over the body. Dead on arrival at Barentu Hospital.

Photographs of the remains of the two members involved are contained at Annex I. Other members involved and their background are as follows:

[Name excised]: International Team Supervisor for [National Demining group] Team 2. Contracted from [Commercial demining company]. Four years experience in Humanitarian Demining.

[Team Leader, Team 2]: Team Leader, [National Demining group] Team 2. ID No: 101. Passed the Team Leaders course in Asha Golgol in June 2001. Experience from military demining operations.

[Deputy Team Leader, Team 2]: Deputy Team Leader, [National Demining group] Team 2. ID No: 52. Passed the Team Leaders course in Asha Golgol in June 2001. Experience from military demining operations.

[Name excised]: Deputy Section Leader, Section 3, [National Demining group] Team 2. ID No: 36 Deputy to deceased Section Leader. Passed the Demining course at Asha Golgol in May 2001. Experience in military demining operations.

[Name excised]: Deminer, Section 3, [National Demining group] Team 2. ID No:95 The deceased deminer's relief deminer. Passed the Demining course at Asha Golgol in May 2001. 3 years experience in military demining operations.

[Name excised]: Team Medic, [National Demining group] Team 2, ID No: 121. Trained as a Health Assistant. Been working as a health assistant since 1985.

[Name excised]: Deminer, Section 3, [National Demining group] Team 2. ID No: 50 Cleared up to and around the deceased deminer.

[Name excised]: [International demining NGO] International Supervisor. ID No: S14. Assisted during the casualty evacuation to the Shilalo Helipad. Drove [International demining NGO] Ambulance.

[Name excised]: [International demining NGO] Senior Medic ID No: M2 Involved in the treatment of the injured deminer.

[Name excised]: [International demining NGO] Medic. ID No: M9. Involved in the treatment of the injured deminer

Equipment Damaged or Lost

The following items were damaged/lost as a result of the incident.

Protective Vest (2); Destroyed due to the blast. One recovered, one partially recovered. [Pictures showed they were ROFI frontal aprons.]

Visors (2): Destroyed due to the blast. No pieces found.

Chronology of Sequence of Events

As a result of the investigation, the following is a chronology of the sequence of events that occurred during this incident.

SERIAL	INCIDENT	ACTOR	REMARKS
1.	Team Supervisor and Team Leader are in Control Point when message is given that a suspected mine has been found.	Team Supervisor Team Leader Section Leader	Message passed by radio.
2.	Section Leader orders section from the minefield lanes and moves forward to the lane where suspected mine has been located.	Section Leader Deminers in Section Three.	Deminers in lanes commence to move back to rest area.
3.	The deminer [name excised] exits the minefield along his lane and acknowledges the Section Leader making his way towards the deminer in the lane where the suspected mine has been located.	Section Leader. Deminer [name excised]	Section Leader is walking down the lane. Deminer is walking back up his adjacent lane towards the rest area.

4. After a period of some 15 minutes (?), a loud explosion is heard in the vicinity of the lane where the section leader has gone.	Message to Asmara- Mine Incident. Asmara Operations acknowledges call.	According to the ITS statement this time was approximately five minutes.
5. The ITS and Team Leader move towards the sound of the explosion and engage the Team Medic to come to render assistance. At this same time [Name excised], travelling to the [International demining NGO] minefield hears the explosion and calls UNMO Team Shilalo site requesting information on the explosion.	ITS Team 2 Team Leader Team Medic [name excised]. UNMO Team Site Shilalo.	On moving to the incident site the members are confronted with the accident scene. [name excised] calls his Head Medic, closes his site and travels to the [National Demining group] Team Sites.
6. Rescue Members are confronted with one dead section leader and one critically injured deminer. They immediately commence recovery of the injured deminer and attempt to stabilize him at the scene.	ITS Team 2 Team Leader Team Medic Section Medic Deminers	Deminers cleared around the body of injured deminer. Medics recovered him to the safe lane. Radio Message to request MEDEVAC.
7. Member is carried to the access lane and vomits blood with low pulse. Medics attempt to stabilize further. The [International demining NGO] ambulance arrives with [name excised] and medics.	Team Medic ITS [International demining demining NGO]	Member is stabilized and carried to [International demining NGO] Ambulance.
8. Injured member is transported to the Shilalo Helipad for MEDEVAC to Asmara.	[Name excised] ITS Team 2 Team Leader Head Medic [International demining NGO] Medics.	Ambulance is at Shilalo Helipad for approx. 30 mins.
9. MEDEVAC Helicopter arrives after collecting UNMEE Medical Team at Barentu.	UNMEE Medical Team.	Helicopter arrives and patient is transferred to Helicopter.
10. Pilot attempts to lift off then calls ITS to aircraft and informs him patient has just died.		Aircraft then diverts to Barentu with dead deminer.
11. Radio message to Asmara. Instructions to seal site and await investigation team.	Ops Officer UNMEE MACC EOD/Training Officer UNMEE MACC ITS Team 1 Air Ops UNMEE	The investigation team assemble and travel to Asmara helipad. Informed flight is cancelled.
12. Investigation Team finally depart Asmara at 17:00.		Arrive Shilalo at approx 18:00.
13. Investigation commences.		Investigation Team arrive back in Asmara 19:00 hr. 14 Feb02.

Casualty Care Undertaken
The casualty care undertaken is detailed in the statement by the [National Demining group] Team 2 Medic for the injured deminer. Nothing could be done to assist the Section Leader.

Recovery of Equipment
Due to the late arrival of the investigation team, all equipment had been recovered and bagged. This was presented to the investigating team at the Team 2 campsite, together with the mine detector. All equipment, except for the protective vests and visors were recovered intact.

Possible Causes
Due to the fact that no one was able to witness the events leading up to the explosion, it is difficult to determine the exact cause of the incident. The possible causes are as follows.

a. The Section Leader and the deminer, on investigating the mine accidentally disturbed a booby trapped mine and initiated it.

b. The Section Leader and the deminer in uncovering the mine accidentally activated the fuzing system.

c. The Section Leader and deminer attempted to disarm the mine after uncovering it, and initiated the mine.

Subsequent examination of the site and equipment used by the deminers reveal all items intact with no damage, or evidence of explosive residue. This has led to the conclusion that no tools contributed to the mine detonating. It is presumed that for some reason, the Section Leader made a conscious decision to either uncover the mine by hand, or disarm it. It was these actions, coupled with the failure to order the deminer to retire to the waiting area with his relief that contributed to the double fatality. Why the Section Leader did not follow procedures and inform the Team Leader and ITS of the situation prior to further action taking place, can only be speculated upon. The condition of the mine and possible attachments, or variations to the fuzing mechanism, can also only be speculated upon. A request to gather further information from former members who purportedly laid these mines is being pursued to gain insight into these questions.

Recommendations
In the aftermath of this incident the following recommendations are made.

1. Safety distances were not being adhered to during the clearance operation. The distance between the deminer and the Section leader was not according to SOPs. See [National Demining group] 01, Technical Standards and Safety, 1.3.7 *"Work will stop if anyone encroaches upon the safety distance."* Also safety distances between the clearance lanes were not being adhered to, the distance measured to the working lane to the right of the working lane where the accident happened was measured to be only 14.9 metres and the distance to the working lane to the left was measured to be 22.9 metres. The next working lane to the left of this was measured to be 25 metres. A Mine Action Technical Working Group conducted in November of last year agreed to lowering the safety distance for Anti-tank mines to 25 metres between lanes. Although all representatives were in agreement to this distance, it is uncertain as to whether this has been formally ratified. In the light of this incident, it is recommended these distances be returned to their former working distances with immediate effect.

Recommendation: Safety distances are to be adhered to as directed by SOPs. Distances for Anti-tank mines be reinstated to former distances immediately by former written amendment.

2. The One Man drill (working in pairs) was not being adhered to. The number two deminer was not observing the working deminer and was too far back to be effective, and was painting stones in the resting area. See SOP 1, Technical Standards and Safety, 1.3.3 Mine

Clearance Techniques: *"Demining operations will be based on the one-man drill working in pairs. One man will be working in the clearance lane and the other will be observing from a minimum distance of 25 metres, depending on the mine types present, or resting in a designated area.*

Recommendation: The [National Demining group] SOP should be changed to read: *"Demining operations will be based upon the one man drill working in pairs. One man will be working in the clearance lane and the other will be observing from a minimum distance of 25 metres, depending on the mine types present."* This will prevent any confusion.

3. The accident site was cleared of all equipment prior to the arrival of the UNMEE MACC Investigation Team, although orders were given on the radio not to do so.

Recommendation: UNMEE MACC Directives following a mine incident are to be adhered to.

4. The battery from the mine detector that was used by the deceased deminer was removed from the detector and mixed up with all other batteries from the team. Also the mine detector was dismantled and switched off, disturbing the controls. SOP 21 Emergency Operating Procedures, 21.33 Post Accident Routine: *"1f a mine detector was being used then it must be isolated without adjusting the controls. The senior person present will then remove the batteries of the detector and seal them in a marked bag. When batteries are removed careful note should be made of their orientation in the mine detector. The detector will be sealed in a suitable container, preferably a rigid box then sealed and marked. The mine detector is not to be dismantled or adjusted in any way."*

Recommendation: SOPs are to be adhered to. All batteries used by [National Demining group] Team 2 are to be checked prior to commencing operations again.

5. Oxygen was not available on the [National Demining group] site.

Recommendation: The [National Demining group] Teams should be provided with oxygen for all work sites.

6. One of the bodies, the body of the deceased Section Leader, was buried before the arrival of the investigating team. Telephone instructions relayed from PM UNMEE MACC were that the bodies were to be recovered to Asmara for transportation to the families. The body was buried with the protective vest of the deceased deminer.

Recommendation: Instructions relayed from PM UNMEE MACC are to be complied with. [National Demining group] SOP 21, Emergency Operating Procedures, 21.3.3 also state: "*The casualty's safety equipment is to be bagged and marked."*

7. The mine must have been moved or somehow affected to initiate it. [National Demining group] SOP 0l Technical and Safety Standards, 1.3.7 Safety precautions: *"No mine or UXO is to be moved without the permission of the Supervisor/Team Leader."*

Recommendation: SOPs are to be adhered to.

8. The procedures on finding a mine were not followed. SOP 07 Manual Demining, 7.3.14-7.3.14.3:
Actions on the discovery of a mine: *If a mine is located it will be marked, left and the lane closed with closure sticks until the end of the day for destruction. It is UNMEE MACC policy that no deminer ever works past a confirmed or suspected mine/UXO. If there is a mine in a safe lane, then the lane is not safe.*

Informing the supervisor: *when an object being uncovered is confirmed as being a mine or UXO the supervisor/team leader must be informed immediately. The supervisor, with protective equipment, should then approach the object and decide on the next appropriate action.*

Investigation: *To assist in identification of the object the supervisor may need to spend time on further excavation to get a better view.*

Recommendation: *SOPs are to be adhered to.*

9. The fact that all the excavation equipment was intact and undamaged, with no visible signs of explosive residue appears to indicate that any excavation that had taken place was conducted without the correct tools.

Recommendation: No excavation should be permitted without the authorization of the ITS or Team Leader. Excavation is only to be conducted with the correct equipment.

10. In the statements and interviews is was said that animals have been grazing in the minefield. This fact was also noted during the PIR visit to Shilalo. The [National Demining group] SOP 21,21.3.5 Action on animal(s) in the minefield: *"All demining is to stop on the site and personnel move to a safe area."*

Recommendation: SOPs are to be adhered to.

11. The ability to obtain a special air request for the purpose of investigation teams appears to be burdened with too many bureaucratic and administrative steps prior to gaining approval.

Recommendation: The system must be streamlined with an ability to execute an executive decision based upon such situations.

12. The hand over procedures as per SOP was not carried out between the ceased deminer and the deminer number two. See SOP 07 Manual demining, 7.3.4 *One-man drill/Working in pairs: During all clearance deminers' work in pairs and in the kneeling position. Number one working at the front of the lane, with the number two as safety observer. The basic principle of this method is that the deminers work in pairs with one man working and one man observing and/or resting. If observing the Number Two is to be in a position where he can remove his visor and may use an umbrella for shade. When working in a minefield with a 50m distance for example the No.2 may approach to 25m if his line of site is restricted at 50m but he must wear full protective equipment. He must remain alert for the following points:*

- He is to observe the clearance drills of his partner and ensure that he is carrying out the correct procedures and is being methodical and safe.
- He is to ensure that the deminer is observing the requirement to overlap the cleared area with a safety cordon and that the marking represents what has actually been cleared.
- He is to ensure that the working deminer is wearing" protective clothing correctly and that the visor remains down at all times.
- If anyone approaches the deminer, the observer is to warn the approaching person that there is a man working in the area. The approaching person must either move away or the observer must warn 'the working deminer to stop work.

Where the team has been working for more than six months and an external QA team determines that the team is capable of moving to a full one man drill the drill may be modified to where each deminer operates independently, unsupervised by a number 2.

Partners are to change over every 20-30 minutes depending upon conditions. The timing of the change over is to be decided by the site supervisor/team leader. The change over is to be controlled by the section leader (SL) and the deputy section leader (DSL). They are to stagger the changeovers with in the section so that the SL and DSL control each change over. The procedure must be efficient and not waste time. The procedure for change over is as follows.

a. The number two checks his PPE is correctly fitted and moves forward with the SL or DSL to the number one.

b. The number one ensures his work area is safe and moves back to a point five metres from the work point.

c. The number two and the SL or DSL are not to approach inside the safety distance until the number one has withdrawn five metres.

d. The number one briefs the number two and describes his work left to right and the front to the rear since the last change over. This is to cover:

L Soil conditions
II Equipment performance and problems.
III Finds and indications
IV. Level of fragmentation

e. Once completed the number two will assume the number one work role and the new number two will move back to the safe observer/rest area with the SL and DSL. The new number one does not commence work until the new number two and the SL or DSL are back in the observer/rest area.

Recommendation: Change over procedures according to SOP 07 must be followed. The SOP also needs to be clarified concerning the meaning of the SOP sentence saying: *The basic principle of this method is that the deminers work in pairs with one man working and one man observing and/or resting. The term 'resting' must be clarified in the context of operational capacities, or the term deleted from this paragraph.*

13. Due to the close proximity of these mines to one another, other mines, when subsequently discovered are to be treated with the utmost care since they may have become sensitized due to the blast of the mine involved in this incident.

Recommendation: Uncover all remaining mines with due care and dispose in situ.

14. Due to the inability to arrive a positive conclusion as to the series of events and reasons for this incident, it is recommended a Board of Inquiry (1301) be convened to ascertain the circumstances.

Signed:
B. Kudyba, Operations Officer, Investigating Officer, UNMEE MACC
P. Lodhammar, EOD/Training Officer, Investigating Officer, UNMEE MACC

PROGRAM MANAGER'S COMMENTS

Comments:

1. This disregard for authorised SOPs is disturbing, as is the very poor command and control procedure in effect at the time of the incident.

2. The "irregularities" in the various statements require clarification.

3. Timings and distances require more specific definition.

4. The MACC and Movements Sections of UNMEE need to establish procedures for priority movement requests.

Action:

1. All operations with [National Demining group] Teams under [Commercial demining company] supervision suspended until further notice.
2. [National Demining group] Teams 1-3 will undergo intensive and extensive refresher training with emphasis on SOPs.
3. UNMEE MACC will completely review [National Demining group] SOPs.
4. A BOI is convened to investigate in further detail the circumstances surrounding the incident.

Signed: Programme Manager, UNMEE MACC, Date: 18-02-02

Annexes:

Annex 1 - Photo Log [Pictures not made available/ poor photocopies only.]

Picture 1. Equipment and Crater in working lane.
Picture 2. The dead deminer's flak jacket.
Picture 3. The dead Section Leader.
Picture 4. Lane cleared to be able to remove the deminer.
Picture 5. Picture of clearance lane.
Picture 6. Lane cleared to enable removal of dead Section
Picture 7. The mine detector used by the demining pair.

Picture 8. Equipment used by the demining pair.
Picture 9. The dead deminer.
Picture 10. The dead deminer's flak jacket.

Annex 2 - Hearings and Statements

Assistance and involvement of [International demining NGO] members.
Questions asked to the Doctor at Barentu Hospital.
Statement/interview: International Team Supervisor [National Demining group] Team 2.
Statement/Interview with [name excised] Team Leader [National Demining group] Team 2.
Statement/Interview with [name excised] Deputy Team Leader [National Demining group] Team 2.
Statement/Interview with [name excised] - Team Medic [National Demining group] Team 2.
Statement/Interview with [name excised] - Deputy Section Leader Section 3.
Statement/Interview with [name excised] - Deminer Section 3.
Statement/Interview with [name excised] - Deminer Section 3.

Annex 3 - Site Sketch

Sketch of Incident site.

Annex 4 - UNMO Reports

Initial Report
Air MEDEVAC/CASEVAC Request.
Mine/UXO Accident/Incident Report.

Annex 5 - Tasking Order

Tasking Order 04/01 [National Demining group] Cover Sheet. Tasking Order 04/01.

Victim Report

Victim number: 533

Name: **Name removed**

Age:

Gender: Male

Status: supervisory

Fit for work: DECEASED

Compensation: not made available

Time to hospital: not taken to hospital

Protection issued: Frontal apron

Long visor

Protection used: frontal apron

Summary of injuries:

INJURIES

severe Body

severe Head

AMPUTATION/LOSS

Arm

Arm

Leg

Leg

FATAL

COMMENT

See medical report.

Medical report

The Victim's injuries were recorded as: "Severe blast injuries. Severe burns to extensive areas of body. Dead."

The victim was buried before the investigation team arrived (on the same day). One photograph of the victim was included in the report. A poor photocopy, it showed what appeared to be a head a trunk with tattered clothing lying among dry grass under a small bush. The damage was catastrophic, which conflicts with the photograph of the victim's armour apron which had apparently separated from the corpse and was relatively undamaged.

Victim Report

Victim number:	534	**Name:**	**Name removed**
Age:		**Gender:**	Male
Status:	deminer	**Fit for work:**	DECEASED
Compensation:	not made available	**Time to hospital:**	more than 1 hour 30 minutes
Protection issued:	Frontal apron Long visor	**Protection used:**	frontal apron

Summary of injuries:

INJURIES

minor Body

severe Arm

severe Eye

severe Face

severe Head

severe Legs

FATAL

COMMENT

See medical report.

Medical report

The following is an extract from a statement made by the supporting NGO. It has been edited for anonymity.

"[Name excised] and [Name excised, ITS] arrived with patient at the HLS at approx 11.25. The senior [International demining NGO] medic and ambulance where already there, the

patient arrived in a bad condition. Unconscious, no breathing, weak slow pulse. Manual ventilation by AMBU bag was administered, simultaneously blood was removed from the throat by suction and COR was administrated by [International demining NGO] medics. The condition of the patient was not good and there was little improvement on his condition. Helicopter arrived, necessary waivers where ready transported patient to chopper. Patient with one senior [International demining group] medic and one [National Demining group] medic where transported by air to BARENTU HLS. Senior Medic [Name excised] informed to me that the patient died in the helicopter on route to BARENTU. From BARENTU Jordanian Ambulance transported patient to local civilian hospital."

The following is extracted from the demining group's medic's statement. It has been edited for anonymity.

"I first checked his breathing and then I gave him mouth to mouth breathing and IV-Cannula in cooperation with section medics. At that time the [International demining NGO] medics with Their ambulance with oxygen came to help us, and both medics gave to the victim mouth-to-mouth breathing and took him to the airport within 16 minutes. The helicopter was not in the there, and we waited for 45 mm. when the helicopter came, immediately we headed to Barentu. Being in the helicopter we measured his pulse and it was found to be max 75-72 and mm 60-67. We were also removing the blood and other things that were troubling him in his mouth from breathing."

"I was listening to the heart took the pulse and stopped the bleeding on the arm. From the lane to the ambulance it just took a few minutes. The section medic was putting the bandages and I gave him intravenous in both arms. We were checking if he was alive or not. We took him to the helipad. He was bleeding from the mouth and was unconscious. We gave him Oxygen in the CP. Me and the [International demining NGO] medic intubated into the throat. The ambulance and the oxygen belonged to [International demining NGO]. [International demining NGO] offered their help. I remove blood from the mouth and then the [International demining NGO] ambulance arrived. From the CP to the Helipad it took 16 minutes."

"Left side of the face was injured; the eye had been blown away. He had a wound on his left upper arm and small burns on the front of the upper legs."

The following report was in ANNEX 8 of the investigation. It has been edited for anonymity.

"Those are the statements made from UNMEE MACC, Medical officer, [name excised] after looking at photos of the deceased deminer:

Due to the explosion the casualty sustained the following injuries:

Open skull fracture sinister.
Massive cerebral laceration.
Multiple fractures jawbone.
Multiple fractures mandibula.
Laceration of left eye.
Major laceration left over arm.
Burn injuries on upper front of the legs 1 degree

Most likely the casualty also sustained the following injuries:

Massive lung contusions of both lungs.
Neck/back injuries.
Massive intra abdominal bleedings.

The above-mentioned injuries have not been confirmed. An autopsy has not been carried out."

Analysis

The primary cause of this incident is listed as a *"Field control inadequacy"* because one of the victim's was a field supervisor and several important SOPs were being broken. Because he

was in very close proximity and had no tools with him, it seems that Victim no.1 was handling the device.

The demining group members seemed unaware of some of the SOPs they were breaking, significantly the requirement that the 2nd deminer in a pair watch and control his partner as he works. This implies inadequate training at all levels, from that of the International supervisor to the deminer. As a result, the secondary cause is listed as *"Inadequate training"*. The MACC's suspension of accreditation until extensive refresher training had been undertaken seems to support this view.

It is strange that Victim no.1's body was buried with a few hours of the incident and before the investigators could see it. One of the photocopied photographs in the file showed the Victim's frontal body armour. The straps were torn but the armour and its cover did not appear damaged. The fact that this armour was buried along with the victim raises the suspicion that the victim was not wearing his armour at the time and that the premature burial of body and armour was because the senior site supervisors sought to conceal this.

Related papers

The file included photocopies of photographs of the site, a large scale map, the radio log, a QA brief and statements from those involved. The statements are reproduced below, edited for anonymity.

ANNEX No 2 - Hearings and Statements 1

Statement of Mine Accident [National Demining group] Mine Site 12/02/2002

Re: Assistance and involvement of [International demining NGO] members

I, Supervisor, [Name excised] , [International demining NGO], heard an explosion while at [International Demining NGO] mine site, was heading back to SHILALO mine site, ER 245, explosion was heard around +-10.50. Switched to channel 15 and communicated with UNMOS and informed them I heard an explosion could they give me some information. They informed me they would inform me as soon as they knew received any information.

Then on channel 15 I heard Mike Tango 1 instruct and inform the UNMOS they had a detonation and must stand by. I immediately instructed my team leader to stop demining at ER 245 mine site. With two medics, team leader [Name excised], and [Name excised], and myself made my way to the [National Demining group] mine site in the ambulance. Mike Tango 1 informed me at his control point, that they had a mine detonation at Mike Tango 2 mine site. I offered assistance and he informed me that I could make my way down to Mike Tango 2's mine site and give assistance. We arrived at the location my medics with necessary medical equipment assisted the [National Demining group] medics.

Medic [Name excised] helped in assisting the [National Demining group] medic with intravenous fluid and oxygen ventilation. The medics then transferred the patient on stretcher to the [International demining NGO] ambulance, was put in the ambulance and myself, [Name excised, ITS] and 2 [International demining NGO] medics and 1 [National Demining group] medic made their way to the SHILALO HLS. At all times we where in radio communications with Mike Tango 1 and UNMOS. [Name excised] discussed with [Name excised] that if we had to transport the patient by road we would use the proper ambulance and use my vehicle as a back up vehicle, this would only be the case if we would not get air assistance. I then instructed the Senior Medic [Name excised], and medic [Name excised], to leave the HABELA water well, mine site and meet me at the HLS. [Name excised] and [Name excised, ITS] arrived with patient at the HLS at approx 11.25. The senior [International demining NGO] medic and ambulance were already there, the patient arrived in a bad condition. Unconscious, no breathing, weak slow pulse. Manual ventilation by AMBU bag was administered, simultaneously blood was removed from the throat by suction and COR was administrated by [International demining NGO] medics. The condition of the patient was not good and there was little improvement on his condition. Helicopter arrived, necessary waivers where ready, transported patient to chopper. Patient with one senior [International demining group] medic and one [National Demining group] medic were transported by air to BARENTU

HLS. Senior Medic [Name excised] informed to me that the patient died in the helicopter on route to BARENTU. From BARENTU Jordanian Ambulance transported patient to local civilian hospital. [National Demining group] Medic remained with victim and photos where taken by [International demining NGO] Supervisor [Name excised] an will forward them to investigating officer [Name excised]. Transportation of the dead victim will be made by [National Demining group] authorities.

Signed: [Name excised] , [International demining NGO] Supervisor; [Name excised], [International demining NGO] Senior medic; [Name excised] [International demining NGO] Medic.

ANNEX No 2 - Hearings and Statements 2
Name: [Name excised]
Position: International Team Supervisor (ITS), [National Demining group] Team 2.
Location: SHILALO
Date: 2002-02-13

Statement

I [Name excised] state the following with regards to the mine accident in SHILALO on 13th February 2002.

At approximately 10.25 the team leader informed me that Section 3. had found a mine, as to my question what type of mine had been found answer was that he did not know as the mine had just been found and not completely uncovered.

Within approximately 5 minutes of the report being made to me by the Team leader a loud explosion was heard. I enquired, from the team leader what had caused the explosion, but he answered that he did not know.

I then get into my vehicle and drove from the control point, where I had been to the Section 3 access lane into the minefield. I entered the minefield and was informed that an accident had occurred and that the Section leader [Victim no.1], and a deminer [Victim no.2], was injured.

I approached the scene of the accident where a deminer was clearing a lane towards [Victim no.2], who was alive at that point. I saw the remains of the Section leader lying approximately 20m from the site of the explosion.

After the area around the injured deminer had been cleared, the deminer was placed on a stretcher and moved to the access lane where he was attended to by the medical orderlies. At this point medical orderlies from [International demining NGO] arrived on the scene and assisted with stabilising the patient.

I then proceeded to inform the UNMACC of the accident and requested Team 1 ITS to inform the local UNMO Team site that we required a Medevac.

After the patient had been stabilised, he was taken to SHILALO HLS. The ambulance arrived at the HLS at approximately 11.30 and the helicopter arrived at approximately 12.05. While the patient was at the HLS awaiting the arrival of the helicopter he was attended to by [International demining NGO] and [National Demining group] medical orderlies. After the patient had been loaded into the helicopter, the crew called back the [International demining NGO] ITS and he was informed that the patient had died. After the helicopter left for BARENTU I returned to the minefield preliminary investigations were underway.

In regards to my questions as to the procedures that were followed, the answers I received indicated that all the correct drills and procedures up the finding of the mine had been followed.

The reason why the Section leader was so close to the deminer during the uncovering of the mine is unknown to me and the reason for the initiation of the explosion is also unknown to me.

Hearing with [ITS]

1. *What is your name, section number and team number?*

My name is [Name excised] and I am the ITS for [National Demining group] team number 2.

2. *How long have you been working in demining and how many live mines and UXOs have you personally dealt with?*

I have been working with demining for about four years.

3. *When did you pass the Demining course/Team leaders course?*

N/A

4. Name all the personnel who witnessed the accident?

I can't the deminer and the section leader was there but the rest of the people was back at the base lane.

5. *What was the ground like at the accident site?*

Hard.

6. *What was the weather like on the day of the accident site?*

Hot, no clouds.

7. *Where were you and what were you doing immediately before the explosion?*

I was in the CP drinking coffee and I was told that they had found a mine and were uncovering it.

8. *How did the mine explode? What was the cause of the accident?*

I do not know.

9. *What were the actions after the explosion?*

It was the fifth mine but I thought that it was the fourth being pulled. The team leader was with me and I asked him if they were pulling a mine and he said no.

10. *Explain the treatment, sequence and timing of the evacuation of the injured personnel?*

All the deminers were coming out and the Deputy section leader, one deminer and one clearing deminer was there. I went to the ambulance and I called the MACC. When I saw the deminer I thought he was dead and reported two dead to [Name excised] but then I had to change that. About the medical treatment I do not know. Then [Name excised] and the two medics arrived and we moved to the helipad. The helicopter was in SHIRARO and would fly to SHILALO: I was told that the helicopter would land at 12.05. They lost the pulse on the way to the helipad. They were trying to bring him back. I asked my medic if he was dead and the [National Demining group] medics said yes but the [International demining NGO] medics said no. Then he was put in the helicopter, but the pilot called us and said that he was dead. Then the helicopter took him to BARENTU. The deminer had wounds on the left side of the head.

11. *Were there any actions that could have been taken to prevent this accident from occurring?*

It is speculations but it seem like the Section Leader have taken the blast in the chest and must have *been leaning over the mine.*

12. *Because of this accident, do the drills or equipment need improving?*

I do not think that the [National Demining group] medics were as good as the [International demining NGO] medics.

ANNEX No 2 - Hearings and Statements 3
Name: [Name excised]
Position: Team Leader [National Demining group] Team 2.
Location: SHILALO

Date: 2002-02-13

Statement

The mine accident happened at 10.30AM on February 13th, 2002. The mine accident happened is in section 3 of team 2. A deminer called [Name excised] when he found a mine, he informed his section leader. The section leader also informed the team leader. Then the team leader informed the team supervisor. When the mine was found we stopped work and all the deminers went out of the minefield. Just few seconds after the team leader informed the team supervisor the accident happened. When this accident was happening both team leaders and team supervisors were in their command post.

[Victim no.1] (Section leader), passed away immediately . After all the deminers have gone out of the minefield the area around the injured person (deminer [Victim no.2]) have been, was cleared and the injured person was taken out. Then after doing first aid he was taken by ambulance to a helicopter. Equipments which have been with [Victim no.1] (section leader) are radio, flack jacket and visor. We say the cause of the accident could be since normally cattles move in the area, where the accident happened, they had pressed the mine and endanger (made sensitive) to the mine. As additional information this morning this section had found 4 mines. The first 3 mines were taken out successfully but with this 4th mine an accident happened.

People who have visited to the area after the accident happened are:

1. (Team 1. - Local supervisor)
2. [Name excised, local]
3. [Name excised, international]
4. [International demining NGO] members, Medics and Kelly

Hearing with [Team Leader, Team 2]

1. What is your name, section number and team number?

My name is [Name excised] and I am the team leader of [National Demining group] team 2.

2. How long have you been working in demining and how many live mines and UXOs have you personally dealt with?

With [National Demining group] I have removed 20 AT mines and a big number of UXOs. I have also removed mines during my time in the army.

3. When did you pass the Demining course/Team leaders course?

In ASHA GOL GOL in June 2001.

4. Name all the personnel who witnessed the accident?

After the mine was found all people was told to go out of the minefield so no one was there.

5. What was the ground like at the accident site?

Flat, with red soil and some grass.

6. What was the weather like on the day of the accident site?

Some clouds and cold.

7. Where were you and what were you doing immediately before the explosion?

Till 10:00h I was in the minefield then I went to the CP and had breakfast.

8. How did the mine explode? What was the cause of the accident?

The area where the accident happened is normally used by cattle and Shepherds. The cattle might have walked on the mine making it more dangerous.

9. What were the actions after the explosion?

All operations were stopped and all deminers were taken out of the minefield. One deminer cleared around the injured deminer and first aid was given by the section medic, one of the [International demining NGO] medics and our team medic. Then the ambulance took the deminer to the Helipad together with two medics from [International demining NGO] and our team medic.

10. Explain the treatment, sequence and timing of the evacuation of the injured personnel?

We put a bandage around his head and on the left upper arm. He was also given infusion and Oxygen. The Oxygen came from [International demining NGO]. At 11:00h he was brought out of the minefield into the ambulance.

11. Were there any actions that could have been taken to prevent this accident from occurring?

The safety briefing was given in the morning together with a brief on what to do when finding a mine. That the deminer must report to the section leader and the section leader to the team leader.

12. Because of this accident, do the drills or equipment need improving?

I cannot say that we should change anything because I am surprised that the accident happened, because we are working carefully.

ANNEX No 2 - Hearings and Statements 4
Name: [Name excised]
Position: Deputy team leader, [National Demining group] Team 2.
Location: SHILALO
Date: 2002-02-13

Statement

Time of accident 10:30. The time he has been loaded on the ambulance was around 11:00. The medics who made treatment are [Name excised], team medic [Name excised] second Medic of [International demining NGO]. [Name excised] and the second medic of [International demining NGO] went with the victim.

Hearing with [Name excised]

1. What is your name, section number and team number?

My name is [Name excised] and I am the deputy team leader of [National Demining group] team 2.

2. How long have you been working in demining and how many live mines and UXOs have you personally dealt with?

Before joining [National Demining group] I did 8 years with the army and removed mines and UXOs but I don't remember how many I did remove. The same thing with [National Demining group] but that you can find out.

3. When did you pass the Demining course/Team leaders course?

In June 2001 I passed the Team leaders course in ASHA GOL GOL.

4. Name all the personnel who witnessed the accident?

I was at the command post so I don't know.

5. What was the ground like at the accident site?

The soil was red with some grass.

6. What was the weather like on the day of the accident site?

It was cold without any clouds. Sooner it became hot.

7. Where were you and what were you doing immediately before the explosion?

Before the explosion I was eating breakfast.

8. How did the mine explode? What was the cause of the accident?

I don't know because I was in the control point.

9. What were the actions after the explosion?

Immediately I was told to organise for all the deminers to come out and bring them back to the camp in SHILALO.

10. Explain the treatment, sequence and timing of the evacuation of the injured personnel?

I was not there since I was back in the camp bringing all the people back there. But on the radio I could hear that it took around 30 minutes to bring the Injured from the minefield to the ambulance.

11. Were there any actions that could have been taken to prevent this accident from occurring?

In the morning the safety briefing was given so this should not have happened.

12. Because of this accident, do the drills or equipment need improving?

Till today we have had no equipment problems but we have had some problems with cutting tools and saws - this is not necessarily connected with the accident.

13. How do you feel now?

I am feeling frustrated.

ANNEX No 2 - Hearings and Statements 5
Name: [Name excised]
Position: Team medic [National Demining group] Team 2.
Location: BARENTU
Date: 2002-02-14

Statement

My name is [Name excised], I am working as a medic in team 2. I was in the control point when I heard the explosion at exactly 10.30. And immediately I saw a smoke coming from the accident area. So what I did was, I loaded my bags and stretcher in to the ambulance and was waiting for a call. After 3-4 minutes they asked me to come very quickly. When I arrived at the base lane, I started to go to the accident area carrying my bag and stretcher.

While I was going, I saw some people carrying the casualty back to me. When I reached to the area were the victim is, I first checked his breathing and then I gave him mouth to mouth breathing and IV-Cannula in cooperation with section medics. At that time the [International demining NGO] medics with Their ambulance with oxygen came to help us, and both medics gave to the victim mouth-to-mouth breathing and took him to the airport within 16 minutes. The helicopter was not in the there, and we waited for 45 mm. when the helicopter came, immediately we headed to Barentu. Being in the helicopter we measured his pulse and it was found to be max 75-72 and mm 60-67. We were also removing the blood and other things that were troubling him in his mouth from breathing.

We had the pulse until we were left 4 min to arrive Barentu but since then, we had no pulse. We arrived Barentu and the UNMME medics were trying to help but already the victim was gone. They took the body to the hospital Barentu; they put the body properly and gave him some medicine.

In the 14 of February at 13.30 Mr. Bob and Mr. Pehr came and asked me a lot of questions starting from the beginning up to when he died. And I explained them every thing that we did in detail. Some of the questions are the following.

What did you do first?
How was the condition?
What is your experience?
What do you suggest?
I am not a deminer. Thus I cannot say some thing about how they get him out from the minefield.

Hearing with [Name excised]

1. What is your name, section number and team number?

My name is [Name excised] and I am the team medic of [National Demining group] team number 4.

2. How long have you been working in demining and how many live mines and UXOs have you personally dealt with?

I have been a health assistant since 1985.

4. Name all the personnel who witnessed the accident?

I was in the CP and no one saw the accident.

5. What was the ground like at the accident site?

Black soil

6. What was the weather like on the day of the accident site?

Hot, no clouds and clear.

7. Where were you and what were you doing immediately before the explosion?

I was in the CP standing by.

6. Was the ITS and the team leader there?

[The ITS] and the team leader had just come back and it was 10.30.

9. How did the mine explode? What was the cause of the accident?

It does not make sense because it was a AT mine. I do not know.

10. What were the actions after the explosion?

As soon as the explosion happened I was standing by with my equipment by the ambulance.

11. Explain the treatment, sequence and timing of the evacuation of the injured personnel?

I was listening to the heart took the pulse and stopped the bleeding on the arm. From the lane to the ambulance it just took a few minutes. The section medic was putting the bandages and I gave him intravenous in both arms. We were checking if he was alive or not. We took him to the helipad. He was bleeding from the mouth and was unconscious. We gave him Oxygen in the CP. Me and the [International demining NGO] medic intubated into the throat. The ambulance and the oxygen belonged to [International demining NGO]. [International demining NGO] offered their help. I remove blood from the mouth and then the [International demining NGO] ambulance arrived. From the CP to the Helipad it took 16 minutes.

12. Did you get into the helicopter with the patient?

Yes I did.

13. Was the patient alive in the helicopter?

He died inside the helicopter.

14. What were the injuries the deminer had?

Left side of the face was injured; the eye had been blown away. He had a wound on his left upper arm and small burns on the front of the upper legs.

15. When did you start the CPR?

When the patient arrived to the CP

16. What kind of medication was the patient given?

Only ringar solution

17. What was the pulse when you checked it? Highest and lowest?

The pulse was low, between 60 and 70. When I first checked it at the CP the pulse was 72.

18. Where did you intubate the deminer?

At the helipad

19. How long did you wait at the helipad before the Helicopter arrived?

45 minutes

20. Were there any actions that could have been taken to prevent this accident from occurring?

What can I say? I am just wondering how this could happen. They had removed mines before.

21. Because of this accident, do the drills or equipment need improving?

No.

ANNEX No 2 - Hearings and Statements 6
Name: [Name excised]
Position: Deputy Section leader, Section 3. Team 2.
Location: SHILALO
Date: 2002-02-13

Cause of the accident.

At the time of accident I was not there, (meaning) since it was breakfast time I moved to have my breakfast. And the other members of the team were also informed to get out off the minefield due to the reason a mine is found. So in my point of view the accident was happened because there was much movement of cattle, which has caused the mine to be exposed to the surface.

Hearing with [Name excised]

1. What is your name, section number and team number?

My name is [Name excised] and I am the deputy section leader in the third section with [National Demining group] team four.

2. How long have you been working in demining and how many live mines and UXOs have you personally dealt with?

In the army before [National Demining group] I dealt with 10 mines and with [National Demining group] 13 mines. I have been working with demining for 4 years including my time in the army.

3. When did you pass the Demining course/Team leaders course?

I passed the demining course in ASHA GOL GOL in May 2001.

4 Name all the personnel who witnessed the accident?

Every one was outside the minefield during the accident.

5. What was the ground like at the accident site?

Red soil with some grass.

6. What was the weather like on the day of the accident site?

Average I would say - not cold and not warm.

7. Where were you and what were you doing immediately before the explosion?

Before the accident I was in the minefield but went to the resting area to have breakfast.

8. How did the mine explode? What was the cause of the accident?

Since I was not there I don't know - but the cattle might have affected the mine.

9. What were the actions after the explosion?

I informed the Deputy Team Leader and I sent one deminer and the section medic to the place (Deminer [Victim no.2]). The deminer and the medic were sent to the place of the accident.

10. Explain the treatment, sequence and timing of the evacuation of the injured personnel?

I took about 30 minutes to evacuate the wounded and I could see some bandages and infusion.

11. Were there any actions that could have been taken to prevent this accident from occurring?

Since I was not on the place for the accident I cannot say but the safety briefing was given in the morning.

12. Because of this accident, do the drills or equipment need improving?

The way we are working is the safest. We have no problems with equipment.

13. How do you feel now?

I feel angry and frustrated.

ANNEX No 2 - Hearings and Statements 7

Name: [Name excised]

Position: deminer Section 3. [National Demining group] team 2.

Location: SHILALO

Date: 2002-02-13

Statement

I am a member of Team Two, Section Three and Number 30. At that time they informed us that they have found a mine and they ordered us to get out of the minefield. And we were outside of the minefield.

In my point of view, cattle were moving in the field.

Hearing with [Name excised]

1. What is your name, section number and team number?

My name is [Name excised] I am a deminer in the 3rd section in [National Demining group] team 2.

2. How long have you been working in demining and how many live mines and UXOs have you personally dealt with?

I have found one mine with [National Demining group] and five with the army. I was in the army for five years.

3. When did you pass the Demining course/Team leaders course?

I passed the demining course in ASHA GOL GOL in June 2001.

4. Name all the personnel who witnessed the accident?

No one was there because everyone had been told to go outside the minefield.

5. What was the ground like at the accident site?

Red soil with some grass.

6. What was the weather like on the day of the accident site?

Cold and no clouds.

7. Where were you and what were you doing immediately before the explosion?

I was working in the minefield. When the mine was found everyone was ordered to go outside the minefield.

8. How did the mine explode? What was the cause of the accident?

I do not know because I was not at the place for the accident.

9. What were the actions after the explosion?

The Deputy Section leader for section three ordered me to clear around the injured deminer and did.

10. Explain the treatment, sequence and timing of the evacuation of the injured personnel?

He was given a bandage around his head and intravenous in his arm. They also gave him Oxygen. It took about 30 minutes to take him from the minefield to the ambulance.

11. Were there any actions that could have been taken to prevent this accident from occurring?

I cannot say because I was not there when the accident happened.

12. Because of this accident, do the drills or equipment need improving?

Like I said I was not there when the accident happened but our procedures and equipment is OK.

13. How do you feel now?

I am angry and this should not have happened.

14. What was the section leader doing in the lane when the explosion occurred?

I do not know.

15. What is the name of the deminer number two that was working in the lane where the accident happened?

His name is [Name excised].

16. You were working in the lane adjacent to the one where the explosion occurred. How long was it between when you were leaving your lane and the explosion occurred?

15 minutes

16. How long was the section leader in the lane before the accident happened?

He was coming in when I was leaving.

ANNEX No 2- Hearings and Statements 8

Name: [Name excised]

Position: Deminer, Section 3. [National Demining group] team 2.

Location: SHILALO

Date: 2002-02-13

Statement

I am a member of Team Two and Section Three. At the time of accident I was at the rest area (control point). When I was at that place, the members came and I asked them what has happened They replied me "One member of your section has got a mine". And I heard a bang after 15 minutes.

Hearing with [Name excised]

1. What is your name, section number and team number?

My name is [Name excised] and I am a deminer in Section 3.

2 How long have you been working in demining and how many live mines and UXOs have you personally dealt with?

I have been working with demining and UXOs for 3 years and I cannot remember how many mines and UXOs that I have found. With [National Demining group] I have found one AT mine.

3. When did you pass the Demining course/Team leaders course?

I passed the demining course in ASHA GOL GOL in May 2001.

4. Name all the personnel who witnessed the accident?

I do not know because I was in the resting area.

5. What was the ground like at the accident site?

The ground is with red soil and some grass

6. What was the weather like on the day of the accident site?

Cold and no clouds.

7. Where were you and what were you doing immediately before the explosion?

I was painting stones in the resting area.

8. How did the mine explode? What was the cause of the accident?

Because I was in the resting area I do not know.

9. What were the actions after the explosion?

I was staying in the resting area waiting for orders.

10. Explain the treatment, sequence and timing of the evacuation of the injured personnel?

I can't because I was in the resting area.

11. Were there any actions that could have been taken to prevent this accident from occurring?

All the safety briefings were given and that is all I can say.

12. Because of this accident, do the drills or equipment need improving?

No

13. Did you or your number two deminer (the deminer that was killed) find the mine?

He found the mine during his shift.

14. What tools did you use in the lane?

Prodder, paintbrush, trowel, tripwire feeler and my PPE.

15. How did you use the visor?

I had it down - closed

16. Who started today's work?

I did.

17. How long after the change over did the other deminer (the dead deminer) find the mine?

After about 15-20 minutes.

18. How long after the change over did you hear the explosion?

I can't say.

19. Did you brief the number two deminer when doing change over?

No there was nothing to inform him about.

20. How far away from the minefield is the resting area?

100 metres.

21. How long was the section out in the lane with the number two deminer (the dead deminer)?

I do not know.