UNCLASSIFIED

AD NUMBER
ADB951774
LIMITATION CHANGES
TO: **Approved for public release; distribution is unlimited.**
FROM: **Distribution authorized to U.S. Gov't. agencies and their contractors; Administrative/Operational Use; 30 JUL 1980. Other requests shall be referred to Department of the Army, Attn: Public Affairs Office, Washington, DC 20310.**
AUTHORITY
HummRRo per ltr dtd 30 Jul 1980

THIS PAGE IS UNCLASSIFIED

THIS REPORT HAS BEEN DELIMITED AND CLEARED FOR PUBLIC RELEASE UNDER DOD DIRECTIVE 5200.20 AND NO RESTRICTIONS ARE IMPOSED UPON ITS USE AND DISCLOSURE.

DISTRIBUTION STATEMENT A

APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED.

UNANNOUNCED

[redacted]

E4 43

HumRRO

AD B951774

[redacted]

The George Washington University
HUMAN RESOURCES RESEARCH OFFICE
operating under contract with
THE DEPARTMENT OF THE ARMY

80 6 23 142

Approved for public release;
distribution unlimited

This material has been prepared for review by appropriate research or military agencies, or to record research information on an interim basis.

The contents do not necessarily reflect the official opinion or policy of either the Human Resources Research Office or the Department of the Army.

The Human Resources Research Office is a nongovernmental agency of The George Washington University, operating under contract with the Department of the Army. HumRRO's mission is to conduct research in the fields of training, motivation, and leadership.

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE

READ INSTRUCTIONS BEFORE COMPLETING FORM

1. REPORT NUMBER

2. GOVT ACCESSION NO. AD-B951774

3. RECIPIENT'S CATALOG NUMBER

4. TITLE (and Subtitle)
DETECTION AND AVOIDANCE OF MINES AND BOOBYTRAPS IN SOUTH VIETNAM -- Training and Tactical Procedures of the 9th Infantry Division

5. TYPE OF REPORT & PERIOD COVERED
Research By-Product

6. PERFORMING ORG. REPORT NUMBER

7. AUTHOR(s)
George J. Magner

8. CONTRACT OR GRANT NUMBER(s)
DA-44-188-ARO-2

9. PERFORMING ORGANIZATION NAME AND ADDRESS
Human Resources Research Organization
300 North Washington Street
Alexandria, Va. 22341

10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
2J024701A712 01

11. CONTROLLING OFFICE NAME AND ADDRESS
Department of the Army

12. REPORT DATE
March 1968

13. NUMBER OF PAGES
52

14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)

15. SECURITY CLASS. (of this report)
Unclassified

15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)
Approved for public release; distribution unlimited.

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

18. SUPPLEMENTARY NOTES

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)
Army training
mine detection
minesweepers
mine countermeasures
booby traps
South Vietnam

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)
This report describes interviews conducted in a project to: (1) evaluate prevailing training methods for detecting and avoiding mines and booby traps; (2) determine training requirements, especially for minesweepers; and (3) develop recommendations for improved training. This volume provides both summaries and transcripts of interviews from the 9th Infantry Division.

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

405250

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

[redacted]

Research By-Product

DETECTION AND AVOIDANCE OF MINES AND BOOBYTRAPS IN SOUTH VIETNAM

Training and Tactical Procedures
of the 9th Infantry Division

Collected and Compiled by George J. Magner

March 1968

Technical Advisory Services

This document does not represent official opinion
or policy of the Department of the Army.

HumRRO Division No. 4
(Infantry)

The George Washington University
HUMAN RESOURCES RESEARCH OFFICE
operating under contract with
THE DEPARTMENT OF THE ARMY

[redacted] Approved for public release; [redacted]
distribution unlimited

FOREWORD

In response to a requirement from the Army Concept Team in Vietnam (ACTIV), HumRRO Division No. 4 (Infantry) undertook, as a Technical Advisory Service, to assist in a project, Study and Evaluation of Countermine Activities (SECMA), proposed as a response to increased casualties from mines and boobytraps in Vietnam. HumRRO participation was designed to accomplish or assist in the accomplishment of three subtasks:

a. Evaluate present training for detection and avoidance of mines and boobytraps.

b. Determine training requirements, particularly for mine sweepers.

c. Develop recommendations for improvements in training, particularly for mine sweepers.

To accomplish the second of these objectives, a HumRRO representative conducted interviews in Vietnam during January and February 1968. Persons interviewed included engineer and infantry personnel, both officers and enlisted men. Interviews were conducted in five different major commands in Vietnam to develop a data base representative of conditions in all parts of Vietnam, and thus to provide a basis for improving training for soldiers assigned to any part of the country. The collection of data was markedly facilitated by extensive assistance provided by ACTIV, which included transportation and a project officer, which is gratefully acknowledged.

The present volume consists of transcriptions of tape-recorded interviews from one of the five major commands furnishing data. It is divided into two sections. The first section consists of interview summaries which contain the key points mentioned in each of the interviews. The second section contains the interviews themselves.

Subsequent work on this project will include analysis of quantitative data extracted from the interviews and from data forms completed by the units contacted, and the publication of a consulting report based on the findings.

This work is being done at HumRRO Division No. 4 (Infantry), Fort Benning, Georgia. The Director of Research of this Division is Dr. T. O. Jacobs. Military support for the study was provided by the U.S. Army Infantry Human Research Unit, with which HumRRO Division No. 4 is co-located. LTC Ferdinand O. Barger, Jr. was the Unit Chief at the time the research was performed.

HumRRO research is conducted under Army Contract DA 44-188-ARO-2, and under Army Project 2J024701A712 01, Training, Motivation and Leadership Research.

Meredith P. Crawford
Director
Human Resources Research Office

TABLE OF CONTENTS

SUMMARIES OF INTERVIEWS — Page

Instruction Given to Replacements Going Through the Mine and Boobytrap Reaction Course — 3

Interview with the Commandant, Two Officer and Four NCO Instructors of the Division Academy — 4

Interview with a Captain, Three Lieutenants, a Sergeant and Four Sp/4's of Company A, 15th Engineer Battalion — 6

Interview with Three Lieutenants from Company A, 2/47th Infantry Battalion (Mechanized) — 8

Interview with the Division C-2 — 9

INTERVIEWS

Instruction Given to Replacements Going Through the Mine and Boobytrap Reaction Course — 13

Interview with the Commandant, Two Officer and Four NCO Instructors of the Division Academy — 17

Interview with a Captain, Three Lieutenants, a Sergeant and Four Sp/4's of Company A, 15th Engineer Battalion — 34

Interview with Three Lieutenants from Company A, 2/47th Infantry Battalion (Mechanized) — 47

Interview with the Division C-2 — 50

SUMMARIES

INSTRUCTION GIVEN TO REPLACEMENTS GOING THROUGH
THE MINE AND BOOBYTRAP REACTION COURSE

The NCO instructor took the group of about 25 replacements through his booby-trap reaction course following his period of instruction on mines and booby-traps. They proceeded cautiously through the course but the lead element usually tripped a device and the instructor then would come up to explain how it was set up. If it wasn't tripped, an assistant instructor would blow it after the class went by. The devices were hooked to sizeable explosive charges off to the side and in some cases colored smoke or CS to make sure that the class knew something had been hit. The course included punji pits with bamboo and steel stakes, grenades used in various combinations, boobytrapped artillery rounds, boobytrapped graves and CS-type boobytraps which the VC were said to be using now. It featured the can lid initiating device where one lid is put down, a leaf is put in between and a serrated can lid is put on top. This is concealed in the trail and the weight of a man will usually push the serrated points through the leaf to make contact and blow the item it is connected to. Wires from the can lid to a power source and on to the explosive (usually a grenade) complete the circuit. These are placed at strategic points so that when you step over a log, for example, you will come down on it on the other side. There were a number of trip wires on the course, but since the path was rather open many of these were spotted. The course also featured VC signs that included the written type as found by the grave sites or the sticks and rocks put in the trail as warnings. A number of other booby-traps made from material U.S. forces might carelessly leave in the field were displayed. The cartridge traps using .50 caliber rounds, the helicopter trap, the Claymore, the turtle mine and many other devices were also shown and explained.

INTERVIEW WITH THE COMMANDANT, TWO OFFICER AND FOUR NCO INSTRUCTORS OF THE DIVISION ACADEMY

This interview with the cadre of the division's academy contains mixed reactions as the personnel involved were a major, a captain, a first lieutenant and four senior sergeants with varying backgrounds in the engineers, mechanized and straight infantry, and as ARVN advisors. Therefore, there are some conflicting comments depending on the men's backgrounds.

They estimated that 80% of the division's total casualties had been from mines and boobytraps. It would vary some with the type of unit, but the greatest percentage of these would be from boobytraps. The main type encountered was the grenade with a trip wire. Next was the multiple trigger pressure-type trap using various types of ordnance. Then following in order of frequency were the Chicom and homemade Claymores that were up to about 40 pounds, U.S. artillery duds with VC fuzes, the homemade box mine using TNT or C4 with multiple trip wires, and the toe poppers using .50 caliber or 20mm rounds and sowed by the thousands. Punji stakes are used very little except in some areas where they are used in conjunction with ambushes along the sides of the road. One item that has not been encountered much in this area but could be expected to be a major problem as they moved further south in the delta was the CBU bomblet. They had not been used much in this area by U.S. forces because of the high dud rate, but ARVN units further south had used them liberally.

Mines were found by the engineers primarily on the daily MSR road clearing operations. The engineers found most of them buried three to eight inches deep in the track of the road. The next largest number was on the shoulders. They would be about half pressure-and half command-detonated. The mech units run into mostly command-detonated types. The infantry hit mostly boobytraps on search and destroy or sweep missions and they will find them repeatedly in the same areas. They appear to be used as an early warning system in some areas. Boobytraps are usually encountered about 50 to 100 meters from enemy base camps on paths leading into them. They will be about 20 to 30 feet in depth. The following VC marking systems have been found: stakes boxing in a mine on a trail with the stakes being removed when the VC leave, a wreath of mines with the knot pointing to the mine, formations of sticks and stones, a bird's nest, cut bark, and written signs which are usually valid.

The division operates in both the delta and jungle and must be alert to the situation in both areas. In some areas sniper fire is used to force troops to deploy in brushy areas where boobytraps are set. Quite a bit of ordnance has been found in VC-dominated villages. In many of these areas, boobytraps are prepared so the trip wires can be put out quickly as the U.S. units move in. VC storage facilities can usually be expected to be boobytrapped.

Most of the fuzes encountered have been instantaneous, but a delay type is sometimes used in a thickly vegetated area to permit more men to move into the kill zone before it goes off. There is also a double arming procedure used

whereby a point man may hit an instantaneous-fuze item and then, as others move up to his assistance, a larger delay-fuze item will go off in a nearby tree. They have encountered the daisy-chain-type boobytrap with the multiple charges and the multiple-trip-wired Claymore which is often placed in a tree. The main initiating action is the pull-type with the attached trip wire. Next would be the pressure-activated type, followed by the command-detonated electrical type.

Most mines are found on the road with the mine detector, but they are sometimes found visually by carefully checking suspected areas and looking for any unusual signs. Men are told to look for certain things that are characteristic of VC procedures in their specific area and to watch for any change in the natural environment. Dogs have been used but they were not sure of their value as yet. Chieu Hois had been used successfully to spot mines and boobytraps. Local villagers that volunteer can also be used to lead them through an area, as are attached ARVN and Popular Forces personnel. Mothers keeping their children close by is also a tipoff to a dangerous situation. Some recon by fire is used, but this is mostly indirect fire. C and C helicopters do assist in spotting command-detonated mine setups. In a mech unit they say there is seldom time to use the grappling hook technique. Fatigue which causes a lack of alertness is also a big problem. They do not do any night mine detecting but they hit less of them at night as the VC can't be planting ahead of them. Night vision devices are used to try to detect mines and boobytraps at night.

The infantry have trained their own demo men and blow the items they find in place. They do not attempt to disarm them, but do take polaroid pictures of unusual items.

Mines and boobytraps are reported immediately by radio by the units and a written form is submitted later. Information on unusual items is disseminated to the units rapidly by division and there is also a daily report which the units receive of all incidents.

One problem with replacements is that they don't believe the mine and boobytrap situation is really that bad until they get to Vietnam and see for themselves. The old experienced NCO's were good in this area and the junior officers were well-trained but just needed some experience. There is a problem in keeping the mine detector working in the wet delta conditions. A countermining procedure was recommended to prevent the VC from following and freely setting up on U.S. units. Some of the men had been trained on nonmetallic mine detectors, but they did not like them. There was no formal training at division level on the mine detector, but engineer units did give training in their company area followed by OJT. They were fairly confident in the metallic detector and thought they could detect mines with very little metal. The biggest problems noted with the P-153 detector were the heads breaking, a high mortality rate on the modules, and the threads stripping in the telescoping handles. It was felt that it would take up to five OJT sweeps for a man to become proficient on the mine detector. They normally waste about 20% of their time on chaff in the road and their sweep rate was eight miles in 6½ hours.

INTERVIEW WITH A CAPTAIN, THREE LIEUTENANTS, A SERGEANT AND FOUR SP/4's OF COMPANY A, 15th ENGINEER BATTALION

These officers and enlisted men all had considerable experience in Vietnam and were very cooperative. Their mines and boobytrap casualties had been very low during the past six months; they estimated that source had accounted for about four of their total casualties out of a total of about 20 people. Of these, three were from boobytraps and one from a mine.

The main type encountered was an artillery or mortar round with a boobytrap initiating device. Also found were 20 to 30 pound quantities of TNT packed into some kind of container with a pressure-type initiating device. There were also some command-detonated Claymores, which had been found primarily by Infantry. Punji stakes were no longer considered a problem in this area.

Most of their casualties had been suffered on road clearing operations. In areas where roads were hard topped the mines were found on the shoulders or in logical bivouac areas off the road, but on dirt roads they were in the road itself. They are not usually closer than two kilometers to villages. Boobytraps found in the jungle are usually on trails where a GI might be expected to walk or other places he may be expected to go. Most of the fuzes were instantaneous. The pressure-initiated electrically detonated device is the most common; pull type boobytrap device with trip wires and command detonated mines followed in that order.

Mines are usually detected by a combination of visual means and the mine detector. A clue to look for is freshly dug earth with no tracks nearby. Triggering devices are usually well camouflaged but the mine itself is spotted on occasion. Suspicious areas that are checked more carefully are stream crossings or places where the terrain channelizes movement. Dogs had been used by a unit but after three days the dogs became tired and they had to go back to the usual procedure of having the point man look for unnatural patterns and other indications. VC warning signs and markers have been found near mines. To detect and neutralize command detonated mines, they have been using a grappling hook to snag wires, and have been using personnel off to the sides of the road checking for wires. They do not usually recon by fire. They do not do any night mine detecting.

When a mine or boobytrap is found, it is reported by radio, checked and then blown in place. They are never disarmed nor are they ever by-passed. A written follow-up report is made later. Information on mines is disseminated periodically and also in a quarterly report. The S2's all have a book on the various types of mines.

New men are given classes on the types of mines they might run into, shown the difficulty of locating mines with very little metal and put with experienced men for OJT. Sweepers said they had had some mine detector training in the States but they needed the experience gained in-country. There was no mine detector training for replacements at division. It was

recommended that the actual VC devices be made available to training centers in the States so that men can get familiar with them. Also, more hours on the mine detector are needed, trying to locate the type of items encountered in Vietnam especially minimum metal mines. They said they do little searching with the bayonet but do use a long rod for probing when the ground is soft.

Tactical units often try to rush them when they are sweeping but only with mixed success. They wear their earphones over the helmet and out from the ears to avoid tone deafness and to allow the man to be aware of his surroundings in the event of snipers.

They had seen the PRS-4 but were not familiar with it and were unenthused. They felt the minimum metal mines could be picked up by an experienced man using a P-153 when buried six inches deep. They didn't think laterite roads had any effect on their metallic detector. Much of their time, two-thirds to five-sixths, was being spent picking up chaff in the road particularly when APC's recon by fire and dump the shells on the road. They liked the P-153 for its lightness but felt it was too easily damaged. Also, they felt that the modules come loose too easily and that a more foolproof system is needed.

At the end of the interview, information on sweep rates, etc., was elicited. They estimated that on their last operation they had moved about 1,000 meters per hour. Shortage of time was cited as one of their main problems.

INTERVIEW WITH THREE LIEUTENANTS FROM
COMPANY A, 2/47TH INFANTRY BATTALION (MECHANIZED)

This company was located at a field base camp with their battalion headquarters. The unit received emergency orders to move out on what proved to be the initial phase of the Tet offensive, so our interview time was limited. We were able to talk to two lieutenants from the company and an artillery forward observer attached to the company. Most of the information was provided by the Artillery lieutenant who had been with the company for some time and seemed well qualified.

They said that most of the mines in their area of operations were anti-tank rather than antipersonnel mines. Numerous animals in the area had tripped many of the trip wire type. Most of the mines found recently had been several 82mm mortar rounds wired together. However, they had not been too effective as generally only one of the rounds would go off. Mines were not usually encountered on well travelled roads, but were found when turning off on side trails. It was believed that some mines were missed because they were buried about 16 inches down and the detector could only go down to 14 inches. The VC put the mines right in the tracks where they expected the vehicles to go.

The company had three mine detectors but nobody was trained to use them. Engineers were taken along to do the mine sweeping in areas where mines were anticipated. They never use the engineers when in off-the-road operations. When they move into an area and clear the roads, they attempt to keep them clear by running APC's up and down the road at night to prevent mining by the VC. The battalion uses dogs, but they have been of limited help in the mine and boobytrap problem. However, dogs have been very good on ambushes. Night vision devices are used by night ambushes and are also mounted on the APC's in their night positions. The punji stakes have been encountered only around base camps and in conjunction with enemy ambushes and were no longer considered a big problem. Clues that men look for in spotting mines and boobytraps are fresh dirt, anything that looks uncommon, and marking signs made of sticks, rocks and bamboo. No written signs had been seen. The bulk of this unit's casualties had been from contact with well dug-in and concealed enemy other than from mines or boobytraps. They did use some recon by fire to help neutralize command-detonated mines.

INTERVIEW WITH THE DIVISION G-2

The use of mines and boobytraps increases when US forces move into an area. The VC set up boobytraps close to base camps in an attempt to get recon elements that patrol out from the base.

The division has four tracking teams using Labrador Retriever dogs to alert men to boobytraps. The dogs are highly successful except against things like command-detonated Claymores. Each tracking team consists of two trackers, two protectors, and the dog handlers.

INTERVIEWS

INSTRUCTION GIVEN TO REPLACEMENTS GOING THROUGH
THE MINE AND BOOBYTRAP REACTION COURSE

NOTE: The NCO instructor had completed his instruction on VC mines and boobytraps and was now taking the replacements through the boobytrap reaction course. This additional instruction is given as the group arrives at the various types of devices.

A. No imagination is necessary to see what these punji stakes could do to a man that fell down into that pit. They are far enough apart so that you could fall in feet first and miss the stakes or if you're pretty short you might hit these on the side. There is an NCO dummy there representing someone who fell in. Now I want you to go up this trail a ways where you will find a graveyard and wait for me there. (A short time later a large explosion is heard off to the side.) Somebody just blew up my graveyard.

Q. How was this done?

A. Well somebody triggered the explosion by stepping on one of my activating devices which is hooked up to a charge off here to the side. The explosion is like a canister round from a 90 or a 105.

Q. Do you use that activating device you showed me where you put down a coke can lid then a leaf over that and then a serrated can lid over the leaf so when somebody steps on it the serrations cut through the leaf and make contact?

A. That's right and, of course, it's concealed in the loose dirt of the path. So it's pretty hard to spot. Now there are six people buried here with six AK47's at this gravesite. Two of these graves are completely empty, nothing in them, this one and this one. This one here has about six AK 47's in it. How do I know it is this grave? Charlie tells me. This grave right here is boobytrapped. Any time he puts ammunition or weapons in a grave, he will boobytrap it. Over here in this grave there are six VC buried. The reason why we have this gravesite here for you to check out is because on your operations in this division you will be digging up these graves, checking them out. We must have the weapons and ammunition that are buried in them; plus we must have a true body count. Now before a battle starts, Charlie will take villagers out here and make them dig as many graves as he thinks he is going to need for the number of men he is going to lose during that battle. This way he can get rid of his men real quick and the ammunition and weapons that these men had so he won't have to carry them. Pay attention to these signs and they will give you a message to save your life. This is similar to the way that you will find them out in the jungle. This sign right here says that this is a restricted area, meaning that there are mines and boobytraps in the area. This one right here states that this particular grave is a kill zone.

PRECEDING PAGE BLANK-NOT F

Over here is an ambush set up with their weapons pointed right at this grave. You bring a squad or a platoon in where this grave is and Charlie can wipe you out. That is a kill zone. It will be marked in this manner. This sign right here states that the area is boobytrapped. This one right here is the best one of them all: it says "Please don't go," meaning the same thing as a restricted area. Any questions on this? If not, continue on down the trail until you see my sergeant. I will meet you at that area.

Q. You say you have an ambush up the trail?

A. It's set up in a dummy spider hole. Now here is a bridge that's sawed through so you will fall down on the punji stakes that are under it. He puts them underneath the bridges. This is just one way that he does it. See it's always camouflaged. Charlie is an expert at camouflaging when he wants to. These are set up to show you some of the ways that he sets them up, and what the actual stakes look like. These are the steel ones in the bottom and the wooden ones in the top. You would probably never see the bamboo underneath one of these bridges because water will tend to soften the bamboo. Charlie uses steel because it will only get a little rusty. Also, it makes the infection set in just a little quicker. Now then, are there any questions on this? Now, let me warn you that one of the boobytraps up ahead is constructed with CS. The reason I use CS is because the VC now use it in some of their boobytraps.

NOTE: The students then went through the last part of the boobytrap course which included the CS boobytraps. Then they were given a critique of the course by the instructor. He used a chart layout of the course and talked them through the various points.

A. When you started on the course you moved up this path and here you hit your first explosive-type boobytrap. It was these soda can lids hidden in the path that were connected to a grenade attached to a tree. If you had looked in the tree you would have seen the grenade and right down from it the device that sets off the charge. These are the kinds of things you have to look for out there. Next moving up to the stake trap pit you can see what a man would look like if he fell into one of these pits. Also, off to the side there is an 8-inch shell that is set up to be electrically detonated. Coming up from the pit there is a soda can lying on the ground that is also electrically detonated. The detonator wire runs out and is hooked to a charger off of a Claymore. This is what sets it off. It operates the same way as a 90mm shell does when it is fired. It hurls these nails throughout the area just like a canister round.

Going on up the trail there is a bomb sitting in the trail. It has a pressure release device underneath it. This tells you that if you leave C-rations laying around out here in the field, Charlie will boobytrap them for you. He will also lay weapons on the ground with a hand grenade underneath them. This is what this is representing.

Just across this log you stepped on a mine. This is the kind of thing you have to be careful of out here in the jungle. If you step over a log you might hit a boobytrap or a mine. If you step down on the log, you will also hit one. You have to be careful. There is also a .50 caliber shell mounted in the ground just up past the log and it is a cartridge type boobytrap. Somebody stepped on it today and bent the projectile over, we have to get a new round.

Here is a trip wire. This trip wire was hit but it didn't go off because the pin caught inside it. Now when you don't get caught by one of these grenades that Charlie has out here for you, you are thanking God that it didn't go off. If mine don't go off here, I get a little nervous because I don't like you to hit a boobytrap that doesn't work.

Now you came to the graves. I told you what all those signs represented on the graves, and these signs might save your life here in the 9th division. You will see them mounted throughout the area. Just up from the graves there is a stake in the ground at a 45-degree angle which states there are mines and boobytraps 50 meters on up the trail. There is also a little ambush there; sitting off in a spider hole is Charlie in his little beanie and T-shirt. This is what these spider holes look like. They are very hard to detect.

Going on up you came to the punji pit. This is just another type that he uses. You will find them deployed in many ways. In the bottom of that is a steel punji stake and over it is a wooden punji stake. When Charlie sets these out, he camouflages every one of them.

Further up the course you ran into the bridge. I thought you were going to set off an explosion here because six people stepped on it, but I guess they just didn't have enough weight to push these points of the can lids down through the leaves. I was sitting down there hoping that you would set it off. You didn't. It is also boobytrapped electrically and the bridge itself is boobytrapped. The bridge has stakes below it in a pit. Moving on up from the bridge, there are wires on the trail. There is also an X on the trail. This X was placed on the ground this way and it means that there is a mine directly underneath it.

Then we went up to the helicopter trap and I showed you how easy it is to set it off. It is designed to be set off by the down-draft from the main rotor of a helicopter when it gets about 10 feet off the ground. Then I let you continue on around coming back down here. This is a bunker right there on the road with a LAW inside pointed out toward the road. There are also a few trip wires in that area. One of them was hooked to a CS grenade. This is to let you know that the boobytraps that Charlie is using over here now sometimes contain CS. Any questions on the course?

The "turtle" charge you see here is used in the river and also in the road. They use these as mines, putting them in the river so the boats can hit them. Then, of course, you've got your antipersonnel mines, and what is now being hit right here in the 9th Division, the "toe popper" with the 20mm round. Then you have the firing devices that are homemade and also manufactured right here on the board. There is also your small Claymore. I've g portion of it cut out and marked so you can see how many steel things are in this and what they look like on the inside. Is there any question on this? You will see these again when you get down to your unit. Also, when you get to your unit you will find that different areas have different markings; different units have different markings. That is the way they vary.

INTERVIEW WITH THE COMMANDANT, TWO OFFICER AND FOUR NCO INSTRUCTORS OF THE DIVISION ACADEMY

Q. I'd like to start by asking if you could give me the percentage of your total casualties that come from mines and boobytraps?

A. Something like 80 percent in the division, I believe. That's a layman's estimate, not an official figure.

Q. Okay, that's what we will take it for, just an estimate. Of this total, how many were from mines and how many were from boobytraps?

A. I think the best place to check for that is over in the medical battalion. They have a physical breakdown by cause and by, type of wound, upper torso, legs, arms, spine. It is actually broken down. However, most of them that I have run across have been from boobytraps.

Q. Would you be able to give me an estimate of what percentage of these are boobytraps and what percentage are mines?

A. Well, I was out most of the time on the road with a mech unit, but when we got off on foot we ran into every kind.

A2. Of the total number for this particular division, the largest percentage is foot operations, so the largest percentage would be boobytraps for the whole division.

Q. In a mech unit, probably your main problem would be mines; and if you are in a "leg" unit, perhaps it would be boobytraps. But overall, you think that the greatest percentage would be boobytraps. Now, can you give me some kind of a listing in priority of the type of mines and boobytraps you hit the most?

A. Mostly it's trip wired grenades.

A2. In the entire area around Highway 15, they have a lot of pressure-type boobytraps. They are not mines; they are boobytraps. They set up the thing like a cart wheel and you can step anywhere within about a meter around the thing. They place it over a stick and the stick has a nail on the end of it that sets it off. My company went on a lot of operations over there and we ran into many of them.

Q. Did the rest of you run into this pressure-type boobytrap fairly frequently, and do you think that would be the second most frequently encountered type?

A3. In our company, it's mostly trip wires, and in this particular area I would say the pressure-type was second.

Q. Pressure-type with what?

A. With multiple triggering devices. We set up several of these out there on our course.

Q. What type of ordnance would you be setting off?

A. Some of them are handmade. The last one that I helped set up was nothing more than a water pipe stuck in the ground. It had some kind of explosive in the bottom of it and it shot out the front of the pipe where it came out of the ground.

Q. So it could be any type of thing, U.S. ordnance or just explosives with nuts and bolts in that pipe. Anything else?

A. The ones you find hanging in trees are grenades with instantaneous fuzes.

Q. Could you give me another priority?

A. Next would probably be the command-detonated Claymores, Chicom Claymores.

Q. Incidentally, what kind of Claymores do you normally run into down here?

A. All sizes. They are primarily homemade. There are some captured American Claymores.

A2. They go up to about 40 pounds.

Q. Any others now that you can think of?

A. They also boobytrap artillery shells.

Q. Do you think that would be about the next most frequently encountered item?

A. Up in your first category where we talked about trip wires, there will be a fair number of them when you get down south of here hooked to the U.S. 105.

Q. Do you think the U.S. artillery would be about the next most frequently encountered?

A. These are mostly artillery duds that they pick up and use. They change the fuze to make them instantaneous.

Q. Any others that you hit often enough to mention?

A. Well, the makeshift homemade will be made of C4 or TNT and placed in a wooden box with multiple trips. It is very hard to detect if picked up. When the division begins to operate further south, in the Delta, we are going to run into the little toe popper mines. This will move up into

about the second or third category. They sow them by the thousands.

Q. Toe poppers using what?

A. They use mostly the 20mm rounds. When we operated in Kien Hoa before I came to the division, we began to run into those. This will be encountered frequently when we get further south. It's something you are bothered with more in the rice paddies.

Q. One of the things I was asking about was the use of punjis. Do you run into these very much?

A. Up in this area they have just about quit using them. We run into a lot of punji stake fields, banks, and ditches; but in the last three months about all we have hit are the old ones that the weather has done in.

A2. Last week I ran into a bunch of new ones about 15,000 meters from here. These were specially put in. This is something that we haven't dealt too much with in the past, but now it seems that punjis are coming back in, mostly in their kill zones or something of this nature. We have quite a few of them in one area, but that is the only area that we have run into them. In other words, they weren't all around; they were just in the area where they had set up an ambush and they were trying to get casualties from them.

Q. Any other items, you would like to mention?

A. The river mines are becoming a nuisance, and a danger exists down in the Mekong Delta.

Q. Do you get these pretty often in the canals?

A. No, not yet. They are there, but we don't get a chance to see them.

Q. What type of operation do you encounter these on mostly?

A. You hit them all the time. Take where I clear the road. I am on the MSR every day, and the ones we hit are the pressure mines and sometimes command-detonated mines. You hit the mines on the road and you find grenade trip wires on the side of the road.

Q. So, for the engineers, road clearing will probably be where you hit most of yours?

A. Yes, except when I send people out with the infantry.

Q. How about for the infantry and for the mech unit?

A. The ones I've encountered are mostly command-detonated. I haven't seen the pressure-type in the Delta.

Q. Where do the straight infantry usually find them, on search and destroy operations or what?

A. We find them in specific locations, the same locations just about all the time. Now, I mentioned this place over here across Highway 15. If we go in there and clear it today, we're going to hit them. If we go back tomorrow, they've got them there again. If we go back the next day, they're there again. Evidently they use them for an early warning system. That area is right on the river and they must have used it for a supply base or something. We hit it three days straight.

Q. What type of operations were you on?

A. Well, we're on search and destroy missions. We search the place out and sweep it today, and we find a few snipers. Tomorrow, if they send us back, we'll find the same thing again. They set them up overnight.

Q. Where, exactly, did you find them? For example, on the road-clearing operation, were they in the road or on the shoulders?

A. The ones we always found were buried anywhere from three to about eight inches underneath the ground in the road. It was a 1½ lane road, so they were buried where the tracks were, where you could almost say for sure that the vehicle would run over it.

Q. Where would they be next most frequently?

A. On the shoulders of the road.

Q. What is the most common type of initiating action, the pressure-type or command-detonated?

A. I would say it was 50-50. There's no set pattern. Lots of times you will find a pressure mine that is command-detonated at the same time.

Q. Do you find them in the vicinity of enemy base camps?

A. Sure, any time you hit a base camp.

Q. Where are they located in the base camp?

A. Just about every time they have them completely around on the way in and out. They just set them there and they will be 50 to 100 meters away from the base camp.

Q. So they will be on the path leading to the base camp. Do you hit many of them at the entrance or in the base camp?

A. Most of them are right along as you go in. Maybe they would be from 20 to 30 feet in depth.

Q. Do they have any kind of marking system around them?

A. I have run across that in the base camp they set up a square around the boobytrap. It will be just a series of little stakes, four forks with stakes running on all four sides boxing it in. They can travel daily on the path and they know when they see the boxed-in area to stay away. When they pull out of the base camp they remove these stakes. Also, when they pull out they will hang instantaneous grenades inside the bunkers. We have to go in and clear the bunkers.

Q. Do you have any jungle here to be concerned with?

A. This is all jungle. North of Saigon is jungle; south of Saigon is rice paddies.

Q. I was thinking you were operating mostly south. In the jungle, then, where do you run into them?

A. I keep mentioning this one place over here. We lost most of our people in that area over a period of six months. They don't set any on the roads because they want you to see the roads. Then they will have snipers or ambushes set up where they can fire at you on the road. You run off into the bushes, and there they've got all these boobytraps.

Q. In this case, then, it's along the sides?

A. Well, all over the area. The area is not that big. From the road to the river, the widest point is about 700 meters, I think. All that gives you is between the road and the river. If you walk down the road, they'll shoot at you. If you get off into the bushes to sweep the area, then they've got all these boobytraps set up.

Q. How about in the villages themselves? Do you run into many in there?

A. Likewise. In the same area they had a village. We were clearing it and we made heavy contact in this one area. We had destroyed a few buildings which the VC had run into. So about a week later, after everything had been taken care of and they could destroy these buildings that were a hindrance to the operations, they found VC-type Claymores in the village and several weapons. It was considered that the village was more or less aiding the VC and they had channelized this village so that coming in from either flank they had access to the waterways to get out of the village. In other words, the river ran right behind the village. This was one of their ways of getting out of the village when they were hit by land.

Q. So, whenever you run into what is pretty much a VC village, you can expect to find quite a bit of stuff there when they pull out?

A. It would be hard to say this was standard practice. This is one example I cited. There is a direct relationship, however, between the frequency of U.S. operations in an area and the number of mines and boobytraps in the area. You go into an area the first time and you will encounter an average number of mines and boobytraps, but continue to operate in this area repeatedly and you will find more. The more we sweep an area, the more we come up with when the VC realize that we are operating there. The mines are a hindrance to a VC, too, so in the base camps and villages, you will often find the mines with the trip wire rolled up and the pin inside the grenade. If they get time they will run the wire out and put it across the trail.

Q. In a village like that where do you find them?

A. In storage, out in these storage facilities.

Q. They are not in the houses then? What type of fuze do you run into mostly here, instantaneous or delay?

A. Most of them are instantaneous.

Q. About what percentage are instantaneous and what delay?

A. That would depend on the area. If it is a thickly vegetated area, they will put a slow fuze on it. In other words, they want to move a majority of the platoon, or whatever size element it is, into this kill zone before the point man hits it and it is finally detonated. If it's an easy area to get through, there will be more or less an instantaneous fuze on it.

Q. But overall you think most of them are instantaneous?

A. Yes, sir.

A2. Yes. This may not be the right paragraph, but they have done this: They double-arm them, put in two mines. When your point man gets boobytrapped instantaneously, people go up to help him. A minute or so later the projectile in the tree goes off. We found the slow fuze and we were pretty definite on it. When we recovered it there was a two-minute delay on it. The grenade went off and then the 105 shell followed it.

Q. Then they have wires going out in different directions?

A. I found one with 15 different boobytraps connected to it. A daisy chain they call it.

Q. Were they all leading to a separate explosive or all leading to the same one?

A. They are separate in themselves; but one would set off the second, the second would set off the third and so on.

Q. I know the daisy chain is a series of them, but do you ever have these multiple trip wires?

A. You can find one boobytrap with multiple trip wires. I've found some of these Claymores with 23 trips; you can set them off in 23 different places.

Q. The VC sets up the area to make sure you hit it no matter which way you go? I guess that Claymore is particularly devastating, isn't it?

A. Especially when it's up in a tree.

A2. A common practice the VC have now, particularly in this one area, is to put them up in a tree.

Q. How is this detonated?

A. It has a trip wire coming down from the tree and the trip wire has mostly a pull-type initiating action.

Q. Then you think that would be No. 1, the trip wire with a pull-type device? What do you think would be the next most common initiating action?

A. The pressure-type.

Q. Do you run into any friction or chemical types here?

A. They have some of these as initiating devices on Chicom grenades.

Q. Is that fairly common?

A. We find they often use one explosive to detonate another.

Q. What's the primary way that you detect these things?

A. Along the road itself, with mine detectors. In the area I was in, that's the only way we found them.

A2. It depends mostly on the way they plant them.

Q. How do you do it visually?

A. It is only by reconning suspected areas, checking logical search areas.

Q. When you go to this logical area, what do you look for?

A. For the best clues. You look at the side of the road. Also you may have a little abnormal bump or twigs disturbed.

Q. That's your most common clue, then?

A. Yes, that's our most common clue.

Q. Do you ever see these warning signs that they talk about?

A. They will put up a sign that tells you something.

Q. Is this fairly common?

A. Yes, normally around a heavily populated area where they use these trails that they are mining, they will use a wreath made of twigs. It will be a round wreath. If the trail is passable, there's no boobytraps in it, then it will be a plain wreath. But if it's a trail that is boobytrapped, it will be a wreath with a knot in it, and the knot will be pointing toward the boobytrap. Sometimes they will just make an arrow in the dirt pointing to the boobytrap.

Q. What's this wreath made of?

A. The wreath is made out of vines. I've always seen vines because most of the wood here is so soft you can't bend it and make a good wreath.

Q. Do you have any sticks or stones as markers?

A. They will take three sticks and tie the top of them to look like an arrow pointing toward the boobytrap. It is three sticks stuck in the ground and tied at the top with the long end pointing toward the boobytrap.

Q. And you said awhile ago that they had sort of a fence arrangement boxing them in?

A. That's for their own use.

A2. This is inside the base areas. They will use it for their own safety. When they get ready to move out, they will pick them up and throw them aside.

Q. So you don't often run into that unless you get there before they move them?

A. Just walking along under trees they will take grass and use it to make it look like a bird nest.

A2. You will find an awful lot of signs in the paddies or in the paddy areas. What they try to do is keep you out of the area, detour you around it.

Q. When you come across these signs, are they usually legitimate or do you sometimes find out they are just misleading?

A. In areas where Americans have not been, more often than not the signs will be legitimate.

Q. Are there any written signs or any other markings that you can think of?

A. They cut the bark on the trees.

Q. I realize this is only one area, but how do you teach a man who is coming over here to recognize these things?

A. Each battalion has to train its men on the signs in its area.

Q. In training, you can't tell the men the exact things that apply to each of your areas, but what can you tell them?

A. They could teach them to watch for any change in the natural environment and pick out any disturbances in it.

A2. We teach them that here at the academy; we have a class set up especially for that purpose.

Q. Is there any assistance for the infantry point man to detect mines and boobytraps, like dogs or mechanical equipment?

A. We were starting to use dogs in December. They have a scout dog team on hand that is supposed to be able to alert us to a trip wire, but we did not have enough experience, really, to know whether they were or not. The other thing we used was a Chieu Hoi up front. That's a VC who has turned himself in. Actually, they have been picking up a good number of them lately.

Q. Is there any other assistance in spotting them?

A. There's another--the local population of the area.

Q. Would you give me a rundown on that? Do you mean the way they act when you come into the area?

A. Well, that's definitely one thing. They can lead you to any place you want to go.

Q. Do you use them in leading you through local areas?

A. If they volunteer, you can employ them.

A2. Also occasionally you will have various types of ARVN attached to you--like combat propaganda teams, field police, popular forces--and they normally end up out on point. They dig up an occasional boobytrap.

Q. Do they know the situation a little better than the U.S. type?

A. They do. They will detour you around every boobytrap in the area.

Q. Do you find out anything from the kids?

A. It's always a sign of danger if the mother grabs her children and holds them close, but it's safe if she lets them run free.

Q. Do you have any techniques for detecting and neutralizing command-detonated mines?

A. The way we did down in the delta was to walk along the edge of the road and hunt for wire. That was the only thing you could do.

Q. Do you ever use recon by fire?

A. Occasionally the 2d Brigade will recon by fire but they usually put artillery out ahead of them on the roads and in areas where we are going, like primarily for LZ's. They also use air strikes there.

Q. But do you use much recon by direct fire in an area where you suspect a VC is waiting with command-detonated mines?

A. Aerial observers give us some information on that. That's the S3 and the C and C ships.

Q. Do you use grappling hooks at all?

A. It depends on where you are and what your mission is. In a mech unit, missions vary and that's the big problem. When we make these contacts, we don't have the time. We had grappling hooks and a long nylon line, but the idea is to be mission oriented. You don't have time to use it.

Q. So time is your biggest problem sometimes?

A. Time and fatigue. After you carry about 900 rounds of ammunition for an M-60, four canteens, and a radio through the rice paddies all day, about 1300 to 1400, your alertness goes down. That includes me too. The physical exertion of just picking one foot up out of the mud and moving it forward, putting it down again, and picking the other one up out of the mud diminishes your alertness which might help you pick up this little boobytrap sign.

Q. Then do you find that more of your casualties happen late in the afternoon?

A. Something like this.

Q. Do you ever do any night mine detection?

A. When we move at night we are more successful indicating that Charlie often plants mines just before we come during the day.

Q. Do you think he sees you coming and then puts out his mines?

A. If he plants them earlier, he has the disadvantages caused by the weather. The rain soaks in and it might not detonate.

Q. Do you really attempt to detect them at night or is it just a matter of the VC not being able to set up for you at night?

A. We have this surveillance device that we use on patrols and we do try to scan ahead to locate mines or boobytraps.

Q. Do you have your own demo team or do you have the engineers attached, normally?

A. Sometimes we do and sometimes we don't.

A2. The 2d Brigade has a program of training every infantry squad to make one man in the squad capable of blowing minor mines and boobytraps. They carry C4, caps, and fuzes. I believe this is peculiar to our brigade because we had a shortage of engineers and a lot of mines. Further, the engineers couldn't carry them.

A3. They decided that they would orient the infantry with demo a little more.

Q. So if you have to blow your own you will probably use the C4 and blasting cap and blow it in place. Does anybody ever attempt to disarm them?

A. No, but sometimes they take pictures. We carry a polaroid camera and send the pictures to intelligence.

A2. With that system any new boobytrap is quickly made known.

A3. One mine that they are going to find a lot of as they get farther south is the CBU bomblet. It probably should be included in training. As the 2d Brigade gets farther south, they are going to find CBU's by the thousands.

Q. On this CBU, have you found a problem with the fuze being very touchy?

A. I would blow a CBU in place. There are three methods for the CBU: either tied to a tree (clover leaf), fastened to an iron stake about so long and set down close to the water, or with the pins taken off and a spike about five inches long put on the bottom and pushed down into the mud with a pressure release.

Q. I wonder why you don't find them in this area?

A. I don't think we've used the CBU as much here.

Q. Is that because it's a heavily populated area?

A. With the CBU, you get a significant number of duds and the commanders here haven't wanted us to use it because of the duds. The American commanders haven't; but further down in the delta where the ARVN operate, they use them and don't worry about the duds.

Q. Is there any time that you would just mark any mines or boobytraps and by-pass for any reason?

A. You might if you found one in a particular village, but on most operations when you are sweeping areas, you would normally blow it and not by-pass it.

Q. When you find a mine or boobytrap, do you pass the word back and report by radio or something to your next higher headquarters?

A. If I go down the road and find a grenade or a boobytrap, the first thing I do is radio the coordinates, what type it was, and how it was set up. The first thing the company commander does as soon as he gets my report is to radio back to battalion. Then we will send a follow-up written report that has to be in battalion the same day that we find the mine.

Q. Then you do have a written follow-up?

A. I know for a fact that the 15th Engineers have a written follow-up form that each platoon in the battalion has. Each platoon leader's regular form has many copies. As soon as he hits a mine, he radios back; and the next thing he does when he gets back to his CP is fill out that report and get it in the quickest way he can.

Q. What about the infantry units?

A2. We have a combined report that we send to the battalion. Any time a mine is found, a report has to go back by radio to the battalion. Then at the end of the day, we collect all of these and itemize them as to type of boobytrap, location, and what happened. If there was a multiple casualty, then a second report comes in. There has to be a narrative report on all multiple casualties caused by mines and boobytraps, including a statement by the witness, sketches, and photographs, if possible.

A. The 15th has records on all theirs. Speaking of the engineers and their channels, the engineer platoon leader that was attached to our battalion had to report concurrently with our reports.

Q. So the battalions as well as the engineers report. Do you include this in the after-action report?

A. It goes in daily.

Q. How is this type of information disseminated to you?

A. One time the engineers up here found a mine that we had never run into before. It was a stick-type mine that stuck out of the ground. An engineer tripped it, blew himself to pieces, and they never found him. And I think it was the next day that a written report came down to the battalion and each company on what had happened, what to look for in the mine, how much it weighed, and all this. And that got out to the platoon leaders. So, if anything new pops up in the engineers, it is immediately sent down to the company. Otherwise there is a report that comes out, I think it's every month, that goes to each company.

Q. Is that pretty much the way it is in the infantry?

A. Yes, once a month in the infantry. Also, daily we get an interim report from division that tells us what action has taken place within this division, where they made contact, what kind of contact it was--boobytrap, sniper, or whatever it was.

Q. That gives you a reading on the area?

A. Oh, it will give more than that! It tells everything that has taken place the preceding 24 hours.

Q. How about the adequacy of training in mines and boobytraps for the average enlisted replacement you get over here?

A. I think from what I've seen, from what came down to my platoon when I got replacements, they didn't believe it.

Q. They couldn't believe it was as bad as it was?

A. Right. They didn't believe what they were told back in the States until they saw how it really was here.

Q. You had Engineer AIT types, right?

A. Right, sir. They didn't actually believe until they came down. Like, in my platoon, the first thing I do is train them before they go out. And still nobody believes it until they have actually seen one. I don't know what they get in Leonard Wood, but if people would believe what they are told and wouldn't fool around with these things, they wouldn't get themselves in so much trouble.

Q. How about the infantry replacements, do you feel they are pretty well trained on mines and boobytraps?

A. I think they first have to get really interested in finding out about the problems we have here. Overall, these Fort Polk boys are a little better than anybody else.

Q. The NCO's you get over here, how well trained do you feel they are?

A. In the engineers, the only people we have gotten that are really NCO's are the E6's that come over from the States. Those are the people to believe because most of them, being engineers, have been to Korea. They have already fooled around with what they have in Korea, and they come here knowing just about the same thing. We hardly get any E5's, combat-engineer type, from the States; it's all E6's if they're NCO's.

Q. How about in the infantry?

A2. We get them now with some knowledge of what's going on.

Q. Are you actually pretty well under your grade and experience level in NCO's?

A2. My young NCO's still need a lot of motivation and confidence.

Q. But, generally speaking, you think they're okay?

A. I think they are motivated due to the fact that they are responsible for the men. They take a deep interest because of that.

Q. How about the officers?

A. I saw two or three lieutenants that saw a sign that said "This place is boobytrapped." They went up and looked at it themselves, tried to disarm it themselves and tried to set it off by shooting at it. Now this may be the exception, but they seemed to need more judgment or experience.

A2. I feel the average junior officer coming over here is a well-trained and motivated individual. The basic problem is that he doesn't have the seasoning. I think immaturity is the wrong word, but this approaches it. After one or two operations in the field where he runs into contact and has people hurt, he slows down. He first sizes up the situation a little bit more.

Q. What about the formal training they get here? That's a two-hour block on mines and boobytraps, isn't it?

A. Yes, that's by division.

Q. Then there is a certain amount of training down in the unit before he goes out and the rest is OJT, is that right?

A. Then there is also additional emphasis on mines and boobytraps in the VC tactics class, but we haven't had this in the last six weeks. This is

a class on the VC's most effective techniques. They will get that additionally when they go on a patrol where they have to watch for the signs.

Q. That's integrated in their patrolling instruction?

A. They go on patrols to investigate suspected locations and they have to check for mines and boobytraps, too.

A2. We have a regular five-day course here for all replacements, plus this three-day course for officers and NCO's. We try to put as much in that as we can. I agree with the major: try to teach them all that is possible. But most of them will not believe it until their first or second mission when they make contact with the VC. That's when they come awake.

Q. Do you give any training on mine detectors?

A. We have a problem in keeping the mine detectors working when we get down in the water. When we are walking the roads, they're fine; but when we get down in the Southern Delta, we run into a maintenance problem. The equipment may be waterproof, but the QMR was designed to be taken on a beachhead landing, this type of waterproofing, not to be operating day after day after day in a river environment.

Q. Do you have any recommendations for improving training either in the U.S. or over here?

A. We need to teach countermining. Put a mine where the VC are likely to mine. If you go in this direction, he knows you've got to come back, so he's always going to set one down behind you. You've got to kill him before he kills you. They stay behind our patrols.

Q. Have you tried this countermining?

A. Well, let me explain what we mean by countermining. The VC keys on our patterns. Knowing that, we can key on his patterns so he can't mine behind us. We do this by using stay-behind patrols and this type of thing, so we can be where he would most likely try to mine and kill us. Anyhow, it works.

Q. Have any of you had any experience with detectors themselves?

A. We had them in our mech unit and we cleared a road coming in and out because they normally mine the roads coming in.

Q. What type of detector do you use?

A. We tried the nonmetallic, but we couldn't use it. First, they gave four days of classes on it and then they set up a course inside the base camp

where you could use it. If you hadn't seen the course, the mines were well covered up, but nobody liked the detector. They would try to use it but nobody liked it.

Q. Did any of your sweepers have training in the United States on this equipment?

A. We took a four-day course before we came down, and that's the only type of training we've had.

Q. When they come here, do you train them in the use of the detector?

A. No, we don't give them any training on it.

Q. On the metallic mine detector itself, have you found any bad effects caused by the VC wrapping their mines in plastic?

A. You can't pick up TNT put in plastic. But when they put that cap in it, I can pick that up. My engineer replacements don't go out on a road sweep mission for about a week after they come in the platoon. I let them practice with the detector. A man can use that thing for a year and still not be an expert at it, but a good man can tell the difference between, say, a little blasting cap that's a foot in the dirt, and a carbine round.

Q. Does the soil down here have any effect on the metallic detector?

A. Yes, it does. A laterite road affects it a lot because it has a lot of metal in it.

Q. How do you sweep normally in your battalion?

A. Two detectors staggered on the road.

Q. How about the infantry?

A. Mostly just one detector.

Q. How many detectors do you have on hand?

A. One per platoon.

Q. What would you say would be the amount of time you lost on chaff in the road?

A. This is what they plant in the road. If it takes me six hours to sweep this particular road, an hour of that is just checking out the chaff.

Q. What are the biggest problems you have with the detectors you are using?

A. The modules have a mortality rate that is unbelievable. This is on the transistorized job. The heads break. The people don't scrape them on the ground, they keep them level, but the plastic underneath wears out. If you get a new head on, you need a new one in about 10 days. It wears out. Like the major said, the salt water just eats right through these heads. And then the handles--this is the reason I turned in all of mine. The telescoping handles unscrew. The threads sometimes strip and not from improper use. The threads strip real easy. That's the big thing: the modules, the heads, and the threads that easily strip. The modules go out in nothing flat.

Q. Have you run into the pressure-type mines where they have pieces of bamboo cut with just wire on the top and bottom?

A. We ran into some of them three weeks ago.

Q. Can you pick them up with mine detectors?

A. Sure can.

Q. What would you recommend in the way of stateside training for a mine detector operator?

A. As an engineer, if I were to teach a guy how to use a mine detector, I'd have at least three hours of him actually using the thing. Now that's got to be spaced over a period of time. Probably by the end of the third hour he's going to be able to tell the difference between a big chunk of metal and a small bullet round.

A2. I found, with replacements I got, that I had to actually get them out there during the day when they weren't doing anything and just let them sweep the ground.

Q. Do the rest of you think three hours would do it?

A. He would have the basic idea of what he is looking for.

Q. Would you also recommend some training here for replacements in-country?

A. We find this is done; all of the battalions do this. In the 2/60th, all the replacements go out for three days, under normal circumstances. This is to get them accustomed and to teach them a few things.

Q. In combat, how long does it take a sweeper to become proficient?

A. About two sweeps, four sweeps. When they are sweeping a road, if you want a number on it, I'd say he'd have to go out five times.

Q. What's your normal sweep rate?

A. We covered eight miles in about 6½ hours.

INTERVIEW WITH A CAPTAIN, THREE LIEUTENANTS, A SERGEANT AND FOUR SP/4's
OF COMPANY A, 15th ENGINEER BATTALION

Q. First, could you give any kind of estimate of the percentage of total casualties that were from mines and boobytraps as far as your outfit is concerned?

A. We have only had one KIA in our unit in October, I believe.

Q. I was thinking more in terms of total casualties in the past six months from mines and boobytraps as opposed to other casualties?

A. Well, lately it has been very low. In the past six months I think we only had one incident. Prior to that I guess we were running about two or three a month for the first four months I was here.

Q. This represents about what percentage of the total?

A. It would be hard to say. Our casualties run about 10 percent from mines and boobytraps, I guess. The whole time. That's figuring about 20 people.

Q. Of this total of mine and boobytrap casualties, what percentage was from mines and what percentage was from boobytraps?

A. On mines--we are talking about antipersonnel and antitank mines. From a company standpoint we've had, what, one KIA from mines and about three wounded from boobytraps, and these have been over the last 7- or 8-month period.

Q. So about 75% were boobytraps. Now, could you list in priority the types of things that you come across?

A. I don't know, it depends on the area you are operating in. In this area here, I'd say it's about half and half. They use 4.2 inch and 105 mm dud rounds rigged with a pressure device and an electric firing cap. This kind of stuff they rig with boobytrap devices. They salvage these duds from the jungle. Also, up near the Cambodian Border, we occasionally run into about 20 or 30 pounds of TNT packed into some sort of container, perhaps a ceramic pot; this is usually pressure detonated. And we have found one tilt rod down in this area. This is a non-electric cap; they use a 5.56 round to set it off.

Q. So you think that the main two types would be these artillery-type duds with some type of boobytrap detonator, and next would be your packaged explosives--again with some kind of boobytrap pressure-type detonator?

A. The most common firing device is this pressure type. They take two sticks and they have a small gap; the lid and the nail are wired together, and if you step on it or a track rolls over it, it sets it off.

Q. You mentioned a tilt rod. Is this seen fairly frequently?

A. Actually, no. I have only run into the one. This was on an operation in March, in Akron 1.

Q. How about punji stakes and that sort of thing? Is that giving you a problem any more?

A. In this area it is really old-fashioned, I guess. We don't run into many in this area.

Q. Are you taking casualties from punji stakes?

A. I know none of the infantry units have taken casualties from punji stakes in this area of operation, that is, none that I know of.

Q. I'm also interested about when you attach people to the infantry as to what you might encounter as you are moving with them. Any other items that you think are worth mentioning?

A. Well, we should take the command-detonated Claymores into consideration, as quite a few infantry have hit them recently. We had one incident about two or three weeks ago. Most of these vehicular mines are usually pressure or non-command detonated types.

Q. On what type of operation do you get most of your casualties? On road clearing, search and destroy or what?

A. The one KIA that we had and most of the injuries were on road clearing operations. When you are running a road you are subject to boobytraps and also when you are clearing it. We have had very little incidence where people have gotten injured from boobytraps or mines or ambushes. The Claymores, yes, but the actual mines, no.

Q. Where did you encounter these things, for example, on road-clearing operations?

A. Well, it depends on your road type. For example, in the provinces north of here, in the First Division area, they have an asphalt road. The road itself was not mined at all, but if you got off on the shoulders, within 25 meters of the road, it was heavily mined. They were looking for and really expecting people to pull off and set up RON's. (Remain Over Night) This is what they would mine. They would mine large clearings off to the side of the road which would be an ideal spot for an artillery fire support base. These were often mined. In fact, they had one mined that was an old artillery fire support base. You could see that the troops had moved in and then had moved out and left it. It was about two or three months old. And this thing was heavily mined. As a matter of fact, the Cav lost about three or four tracks to 20 or 30 pound mines.

Q. In that area it was all on the shoulders. Is that typical?

A. Well, if you go down in the Akron AD, which is south of us, where you've got these laterite roads, the mines are in the middle of the road, usually. It is easy to do there but if you've got a very hard-surfaced road, then they usually mine the shoulders.

Q. Have you found any in the enemy base camps?

A. You can't get to the enemy base camps down in this area by road. It's all by trail and they are not in the immediate area of the base camp.

Q. How about around the villages?

A. I'd say normally not within a couple of klicks of the villages. I don't know what the deal is, but when you get down to about two klicks from the village, where the civilians travel a lot, they don't seem to mine them as much as where there is primarily military traffic.

Q. If you saw them at all where would they be?

A. Away from the village more or less.

Q. Do you operate in the jungle around here and, if so, where would you find them if you were in the jungle?

A. We've got a lot of jungles south of here in the Akron area of operations. Two of the four or five boobytraps were found down there; and in most cases they were right along the place that was being used to walk on.

Q. Pretty much on the trail?

A. Yes. They were right out in the center or the right hand lane of traffic which is probably set up this way by them for command-detonated mines. You would never find them before they were exploded.

A2. They put mines any place they think a GI will go. If you sit down in the shade by the trail, that's where they might have one.

Q. Do they use mostly instantaneous or delay fuzes?

A. Instantaneous. All the ones that I've seen were instantaneous--about 99 to 1.

Q. You said awhile ago that the pressure type is the most common initiating action. What would be the next most common type of initiating action?

A. On boobytraps it would be the pull-type with your trip wire.

Q. Do you run into many of these Chicom grenades or U.S. grenades with trip wires?

A. I haven't, but the Infantry, depending on where they go, run into a lot of them. On Route 15, down in there, they have a lot of boobytraps, anti-personnel and grenade type boobytraps.

Q. What would be the next most frequent type of initiating action?

A. Command-detonated. We have had quite a bit of trouble recently with command-detonated mines. We don't know on these pressure type actually, whether they're pressure with electrical contact or pressure, mechanical.

Q. What's the main method that you have of detecting mines and boobytraps?

A. It's really a combination of both visual means and mine detectors.

A2. The infantry uses dogs.

Q. How about the engineers?

A. Mine detectors, part of the time, and part of the time you will see a place where the ground is dry and you might detect a place that doesn't look just right so you check it out.

Q. Then if you use visual with the mine detectors, what is it you see that is a clue that the mine is there?

A. Usually, it's a heavily traveled trail. Then all of a sudden you've got this area where there are no tracks, and they have a two-foot square area that they've dug out and covered over with freshly dug earth. And off to the side you see where it's packed up and maybe a small mound of dirt. Something just looks out of place.

Q. Some unusual situation?

A. Right.

Q. Do you often see the triggering devices or the wire, for example?

A. Very seldom, unless you happen to come upon them before they've had time to emplace them. Usually they have them well covered.

Q. Do you often see the mine itself or traces of the mine?

A. Not usually but we have on occasion.

Q. Do you get any clues from the tactical situation, seeing a place that's a logical spot for one which causes you to focus on that place more carefully?

A. A mud hole or a place in the road where there are natural terrain obstacles, where all vehicles have to come to a main crossing point, such as a stream with one small crossing, or a ford across a stream; something like this would be this type of place.

Q. Where people might be forced to bunch up?

A. If they are forced to go through a certain area, they are channelized by the terrain.

Q. Did you say dogs were used by the infantry? Have you seen them operate?

A. They went on an operation about two weeks ago, and they had dogs with them, but they couldn't find anything.

Q. You mean he wasn't any good?

A. He got tired, and when he's tired he's not too good. They keep the same dog out there and after two or three days the dog gets tired.

Q. So it really wasn't too successful as far as you could tell? Do you have any other things that help the infantry with detection?

A. The only thing they've got, really, in the infantry is the point man.

Q. The experienced point man to know what he is looking for?

A. That's about it. He can't carry a detector through the jungle; there's no way to do it. The VC will mark most of the boobytraps with some sort of high grass or sticks in the trail, things that you just have to look for. Natural material placed in an unnatural pattern could possibly point to a boobytrap.

Q. Could you tell about any kind of markings that you have seen?

A. We've looked for them. When we've found a mine, we've looked in the area for a marker; but evidently the mine had been there too long and the marker had either been destroyed or taken away.

Q. So you actually haven't seen any, but you know they are supposed to be there?

A. Lots of times they are and they have found markers right with the mine. They will find the mine and then they will double back and look around. They know what they are looking for, and they will find it some place.

A2. In the area that we were in yesterday, they had a cardboard sign on a tree in Vietnamese. The interpreter told us it said there were mines, and there were mines!

Q. So they don't give you a bum steer, mislead you or anything?

A. I know it's a funny situation. The one the lieutenant stepped on was just a small charge of TNT. The one we found was a large one and the firing device was the same as we've got over here.

Q. Do you have any special techniques for detecting and neutralizing command-detonated mines?

A. We've talked about a lot of different methods, and one of the methods they've started using--I don't know how successful it's been so far--is taking a grappling hook and a long hunk of rope, throwing it alongside the road, and dragging it back, trying to catch the wire.

Q. Clearing as you go?

A. I noticed they've used this extensively up north with some success. I think it's just been started down here. It's the same idea. They tie the rope on the end of a very heavy grappling hook.

Q. Any other ideas you have for detecting these?

A. We also use a vee formation actually in front of the mine detector team. These people are off the sides of the road, off the shoulder, and their main purpose for being out there is to look on the ground for signs of either digging, where wire would be emplaced, or the wire itself on the ground. If there is wire there, he will more than likely find it; because Charlie might have to lay a couple of hundred meters of wire before he gets to the woodline and it takes quite a long time to dig a trench and actually lay that in the ground. And he will only bury it 20 or 30 feet from the road and after that just lay it on the ground. It's a very bright blue wire.

Q. Are the areas reconned by fire?

A. We usually don't. When we made the first trip down to the east here, we did recon by fire along the road.

Q. Do you ever do any night mine-boobytrap detecting?

A. Negative.

Q. When you are moving along on a search and destroy operation and the point man spots one of these things, what takes place then?

A. Well, if he sees it, we get the word and check it out. We rig it with a fuze and destroy it rather than take a chance with it. We don't mess with these boobytraps; we destroy them in place.

Q. So the chain of events is: he finds it, he passes the word back, and someone then comes up and blows it in place?

A. First you look at it; it might be something we haven't seen before. You check it but you don't want to be overly bold.

Q. Do you ever attempt to disarm them?

A. The only one we've disarmed was disarmed accidently. Maybe we fired an M79 or something at it.

Q. Is that a method that you use for blowing it rather than using some C4?

A. This isn't a regular method of blowing them.

Q. Do you ever by-pass these things because you don't have time, or you don't want to reveal your presence, or anything like that?

A. No.

Q. When you blow them just how do you do it?

A. We take a small security element and stay back in the back. We rig it, light it, and then move up and catch up with the column after it blows.

Q. Do you immediately report these items to higher headquarters?

A. Almost immediately; for one thing it's a good indication that the VC are in the area.

Q. And then is there a follow-up report that you must make?

A. Right. I'd get a report from the platoon leader that they'd found one. Also, we would send in with information of that type, how much explosive, and how it was detonated.

Q. Do you use a report form?

A. It's just a DF with a diagram of what we found and what we did.

Q. How does information on the mine and boobytrap situation get passed on to you?

A. There is no regularly distributed thing other than this Quarterly Report. From time to time, letters come down telling of the danger of the increasing presence of mines, warning everybody. And there is a lot of information that might be used, such as describing mine equipment. Then, they've got a small booklet on VC mine tactics; all the S2's have it. They have all the types that have been found in Vietnam.

Q. On mines and boobytraps training for replacements, how well do you think they are prepared to come in here and start operating?

A. Not too well for the type of mines we're finding. It is my understanding that he needs help. Usually, I'll attach one new man with two experienced men in a sweep team and let him watch them operate. If they find a mine, I want him to see what gave it away. Also, I have NCO's give classes on the types of mines you run into over here, because, with these firing devices they've got, often the only metallic object you have is a piece of tin lid and the cap itself. And if he's used to a big, loud, screaming reading on the detector from metallic antitank mines, this is harder to detect. He's liable to say, "Oh, this is nothing; it's probably some shells." And he won't know unless he's been shown.

Q. How much training did you get on the mine detector at Leonard Wood?

A. It was some time ago and I don't remember.

Q. When you finished your training, did you feel as though you'd had enough training to use the mine detector over here?

A. Back in the States, well, in a way I didn't; experience is still the main thing. They don't teach you the type of mines you find over here. They set them up in different ways and you have to use your imagination, you know. But it did give me a basis; it let me know what to look for. When you get here and get with the rest of the team, you are more qualified and more ready for learning the methods here.

Q. Do you other men feel the same way?

A. Pretty much so. At Leonard Wood, they teach you U.S. mines and that's all you're familiar with.

Q. How much actual training did you have in the United States on the mine detector itself?

A. Well, I'd say at least three or four hours.

A2. We had a class of about an hour or two hours, and then they took us out and showed us how to set it up; that was all.

Q. Did you have any training in other units prior to getting over here?

A. No sir.

Q. How about your training as new replacements?

A. In the division replacement school, I think we had about two classes on VC mines, about two or two-and-one-half hours. No mine detectors.

Q. How about NCO's; are they pretty well trained, or have you had any opportunity to get any special training?

A. When I came to division replacement center, I didn't take any training, but this is my second tour.

Q. Do you feel that the junior officers come over pretty well prepared from Basic or OCS?

A. They have some classes on it, but I didn't come over here well prepared. There is no way to prepare yourself other than just experience over here. You know how difficult it is to train someone on these odd ball things they come up with. The biggest help you have is someone who's been here five months or so. Anybody coming over here fresh has got to learn. Even if he has the basics, he must learn the finer points over here.

A2. We had a two-week jungle school that gave about eight hours on trip wires and stuff, including mock-up jungle trail, jungle boobytraps, and things of this nature. I haven't encountered any boobytraps over here, but, from what I understand, the training they give down there gives you a good idea of what to look for because it's in a jungle environment. Unfortunately, not everyone can go to the school; but a large number of officers and NCO's prior to coming to Vietnam, go down there and they get some real good training.

Q. I understand the replacements, when they get over here, get two hours on VC mines and boobytraps at division, which includes going through a boobytrapped path and that sort of thing. Is there any follow-up training when they get to their units?

A. When a new man comes into my squad, I take him aside and show him what to look for, let him go out with somebody that has already been out there four or five times.

Q. When do you let them take over on an OJT basis?

A. Most of the time he goes out with somebody that knows. It takes about two or three classes for the new men before they're ready.

Q. So they do have classes periodically when you can do it?

A. We have them whenever we feel the need.

Q. Is there any advanced or refresher training for NCO's or selected personnel?

A. There's periodic training and constant use of the equipment.

Q. Do you give training on mine detectors for the infantry?

A. No.

Q. Do they have qualified people?

A. They have some instruction for them up at the division school but it's just on mines, not detectors.

Q. Do you have any recommendations for improving the training on mines and boobytraps in the States?

A. Give them the actual devices, like the ones we've got right here, or make a mock-up of them like we had at Fort Polk. Our Day Room was set up with models of mines, VC villages, pictures, and things of this sort. This was in AIT. You got a chance to actually see pictures or models of these things. I was in a training unit in another training center that wasn't Vietnam oriented and they didn't get too much of this.

Q. I guess your point is to give them a chance to see these things at every opportunity so that they kind of get acquainted. Any other ideas?

A. In the hours they have on training with the mine detector, they should get an opportunity to find out what a mine with just a little metal sounds like, compared to a large mine.

A2. Also, they can cut out their baynnet searching; we do that very little here.

Q. What do you use? Do you use a long rod to help you in probing?

A. A rod is good sometimes in mud, but not in this hard packed ground.

Q. So you recommend more practical work on mine detector training? Now, how about in-country training recommendations?

A. Sometimes if you are near a rubber plantation you find they have a tendency to camouflage the top of the mines by putting rubber over them. This insulates them some and makes them hard to detect.

Q. Any other ideas for improving mine and boobytrap operations in the field?

A. I can't think of any others.

Q. When you are clearing a road, and an infantry unit is impatiently waiting behind you, do they try to get you to hurry it up?

A. They can try to. They attempt to rush it up but if they don't like it, they can get in front of me.

Q. But you do pick up your rate at times? Incidentally, when you are operating like that, do you put those earphones right over your ears, or do you put them over your helmet?

A. Over the helmet so they can hear, about an inch or two away from your ears.

Q. Does this help you keep from getting tone deaf?

A. We alternate after 20 minutes. I don't want to take the chance of someone getting tone deaf.

Q. Is this method of keeping that thing away from your ears acceptable?

A. Well, it's automatically away from your ears, so you can't really get tone deaf. But we rotate so much it's impossible to get tone deaf.

A2. There's something else in the situation over here. That mine detector shouldn't be the only thing you can hear. You might get some sniper rounds, and with those detectors on your ears you may not hear the first few initial shots and then it might be too late. The point is to keep your environment in the background where you're still a part of it, regardless of what goes on around you.

Q. I understand you have the P-153 metallic detector, but do you have any of the non-metallic type?

A. We don't have any.

Q. Have you ever tried them?

A. Yes, I think they've got one in the whole battalion. I really hadn't seen one before so I really didn't know how to operate it. They showed me but it picks up everything, the ground and everything. I think it would work if we had to use it, but I don't think it would be much help.

Q. Have you ever picked up any of these mines with a minimum of metal that was buried six inches deep?

A. Well, we've picked them up but, again, it's the combination of detector and experienced personnel.

Q. Do the laterite roads down here have any effect on the detector?

A. No.

Q. How many detectors do you have?

A. Three per platoon.

Q. How much time is lost on chaff in the road, you know, bottle caps and stuff like that, out of six hours?

A. Four or five hours out of six, especially when we recon by fire on the road and the APC's dump shells all over the road. I tell them to please put out the word, when they are reconning by fire, to keep the shells on the track and throw them off the road someplace. Then, of course, they will sometimes bring in artillery concentrations along the road and then you have shall fragments from 1/8th of an inch to four inches.

Q. What would you say are the advantages and disadvantages of the P-153 mine detector?

A. It has the advantage of being smaller and lighter but it has the disadvantage of being too delicate. It is all a matter of operator care; you have to be careful with it. If you get in a hurry, and put the thing together and take it out, then you'll damage it. You need to fold it back up and put it back in the case when you're not using it too.

Q. When you have to send it in for repairs, how long does it take you to get it back?

A. It is less than a week now. It was longer; it used to be three weeks or sometimes a month. On the electronic portion of the thing, I wish they could get some way of hooking a rubber band or a spring clip of some sort on these modules to hold them tightly in place. A man can be working with a mine detector and all of a sudden it stops working. You pull the box apart, tap on all the modules, work them back in place real fast, put it back together, and it will work. If we had a spring clip or something to hold these modules in place, we wouldn't get stopped right in the middle of a job.

Q. Any other recommendations on improving the equipment? How about a carrying strap?

A. You don't just lay it around; you take pretty good care of it. You don't need a carrying strap.

Q. How about a smaller head in addition to the large one for sweeping in brush for your night position?

A. I don't think so. I think the idea is good to be able to sweep in brushy areas, but if you make the head any smaller, it would cut down on the area it would cover.

Q. What is the method of sweeping in the company on,say, a normal two-lane road.

A. Two or three teams, preferably three--one for each side to include off on the shoulders, and one in the center of the road. On this last operation, lots of times my lead mine team detected the battery and the wires to the mine off the shoulder. Then, when they looked around the area, they found the actual explosive portion of the mine in the center of the road. They were using mortar rounds for the mines.

Q. What distance does a man sweep as he walks?

A. One man can sweep about a minimum of a five to six feet wide space.

Q. Can these sweepers pick up the VC pressure switches with just this little bit of metal in them?

A. Yes.

Q. What would you estimate would be the amount of time needed in the U.S. to train men to detect these VC mines?

A. I don't think they need over three or four hours, just familiarization with the mine detector.

A2. I'd say about ten hours.

Q. If they get this much training in the United States, how much training would be needed for engineer replacements over here?

A. Usually when they get over here they go through the mines and boobytrap training at division which is a couple of hours.

Q. How long do you think it would take a man to be proficient working with a unit in combat?

A. I would say it depends on the man.

A2. I'd say it depends on the operation. We have operations out for 30 days where we sweep every day. The people who started out on this operation brand new were proficient by the time they got back in. And then, again, you may be here four or five months before you go out like this; it depends on what we're doing.

Q. About how fast do you sweep?

A. On this operation, we moved about 500 feet in a half hour.

Q. If you are given a certain stretch of road and a limited amount of time to sweep it, can you do it?

A. Again, this depends on what type of situation it is. If it isn't too bad we'll move along and try to get it done as best we can. But if we have to go too fast, we can't be sure it's clear.

Q. Then would you say the biggest problem you have is the lack of time?

A. Definitely.

Q. What kind of maintenance do you pull on your detectors?

A. Just cleaning and checking--first echelon type maintenance.

INTERVIEW WITH THREE LIEUTENANTS FROM
COMPANY A, 2/47TH INFANTRY BATTALION (MECHANIZED)

Q. Would you start by telling me what you run into in the way of mines and boobytraps?

A. These mines that we have had up in the Akron area have all been employed in an antitank role. They haven't been antipersonnel mines like you find on down south because there are too many animals and everything that can trip over your wires. The mines that we found consisted of 82mm Chicom mortar rounds that were wired up, but in each case only one of the rounds went off. They had been out there for quite awhile and that probably had something to do with all the rounds not going off. We found one mine that consisted of 10 82mm rounds, but then, again, only one of them went off, and the recon elements found three of the round Chicom antitank mines. Those are all that we have encountered so far.

Q. Where do you usually run into these mines?

A2. Whenever we get off the main roads. We don't hit many if we stay on the well travelled roads. If we get off on one of these side trails, we're pretty sure to hit something. We would probably hit a lot more if it weren't for the animals. We've seen quite a few animals killed by them. We don't find all of these mines because sometimes they're buried too deep to detect.

Q. Would you explain this about the mines being buried too deep to find?

A2. This is with the detectors, I understand. I'm not familiar with them, but the engineers say they only go down 12 to 14 inches usually in detecting, and most of these mines have been buried about two inches lower. The general depth of the mines is about 16 inches. Like the lieutenant said, sometimes they will all be tied together. They tried to put a board across the top so the pressure would detonate all the points at once. But one goes at a time and it scatters the other ones. Therefore, the vehicles aren't really damaged by it. The pattern on Akron, when we went up there, was 1, 2, 3, 4, and 5, right down the middle of the trace. They just put them in the tracks, put their mines right along where they knew the vehicles had been before, and just hoped you would hit one. The company has three mine detectors but nobody is trained to use them.

Q. But when you get the engineers to go with you, do they sweep with their own equipment?

A. They might use ours. Whenever we go somewhere that we have an idea mines will be, we always take the engineers with us. They go ahead of us and sweep.

Q. They precede the column with their sweepers and you come along behind them. That's on a road. Do you ever use them if you're operating in the field off the road?

A2. We never take them out. If we hit a mine, we clear the area. Then after we get through an area and the mines have been cleared, they generally have those APC's make road runs at night up and down the trace so that the VC don't get another chance to put a mine down. There have been quite a few times when we caught them putting out some mines down there at night. They have those tracks running right in the middle of the road and the VC were trying to put the mines in from the side of the road.

Q. Does this battalion use dogs at all and do they help any?

A. I don't know if they can find these mines. Unless they are fresh, they can't. If they are planted, like overnight, they can't. In fact, there are two dogs right over there that we use.

Q. How are they trained, as scout dogs?

A. Right. Every time a platoon-size element goes out on any type of operation, the dogs go with them. They take them on ambush patrols at night, too. These dogs are very good at finding Charlie. They were out last night on an ambush patrol.

Q. How are they on an ambush patrol?

A. Very good! If the VC make a sound, his ears perk up and you know there's somebody coming. It's usually Charlie.

Q. So he can really detect them at a distance?

A. He can; he can!

Q. Incidentally, do they use night vision devices?

A. Right, they take them out on an ambush patrol. Then, also, at night each APC has one up on top with a man on it.

Q. Do the VC use any punji pits or anything like that anymore?

A. They always have them up around their base camps, but not too much in the situation up here. They always have them around their base camps. Also, they have the punji stakes at ambush sites along the trail.

Q. Have they been much of a problem to the company?

A. Only if you get hit so you have to take cover quickly, then they put them all over the place.

Q. Have they really had very many casualties in the company from them?

A. No, they've gone more to the explosive than nonexplosive stuff. The old punji stake, I think, has gone by the wayside. They know you can spot them now just like that. You can spot them quickly.

Q. What are the main clues that the men look for when they are looking for mines and boobytraps?

A. Any type of fresh dirt or anything that looks uncommon. Any trails that the VC have mines on will always be marked in some way. You've just got to figure out how they've got them marked. They use sticks, rocks, bamboo.

Q. You have spotted some marking systems that they use here?

A. Yes, sometimes quite a few.

Q. Do they use written signs, too?

A. If they do, I don't know about it. I haven't seen any. Sometimes he is really well set up and camouflaged, and you can't spot him. We really got kind of wiped up here for awhile.

Q. You mean, when he is all dug in and ready for you that it's pretty hard to get him?

A. It's almost impossible to get him out.

Q. Then the bulk of your casualties have not been from mines; they've been from normal contact?

A. Right, they've been from ordinary contact with them.

Q. The mines you have hit, are they normally the antivehicular-type mines or boobytraps?

A. The antivehicular type. We don't have too much trouble with antipersonnel mines.

Q. Is this characteristic of a mech unit, that they have more trouble with antivehicular mines than they do with boobytraps?

A. It's mostly mines and RPG's.

Q. Do you use any procedures for detecting and neutralizing command-detonated mines?

A. We do use some long rods for probing and some recon by fire with M79's and .50's, plus artillery and air.

INTERVIEW[1] WITH THE DIVISION G-2

Q. Would you give us some of your observations on the mine and booby-trap problem?

A. Mines and boobytraps are not heavily used in areas where US forces do not normally go, but when we move into an area they increase. An example of this is the way the VC set up outside of the Dong Tam base camp. They move in fairly close to the base camp and set up booby-traps, trying to get the recon elements that normally patrol out from the base.

The division does have these Labrador Retriever tracking dogs that are trained to alert on boobytraps. They are highly regarded and are quite successful except, of course, against something like a command-detonated Claymore that can hit them before they get close enough to detect it. These tracker teams, the men and the dogs, receive special training. The trackers' training emphasizes this Indian lore type of thing. There are four teams here and each has two trackers, two protectors and the dog handlers.

---

[1]Reproduced from notes.