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10770 P942 of 12 October 1971.

R. B. Tiffey

Signature/date

3/18/77

1st Engineer On Board Jul 1965
Command Chronology

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HEADQUARTERS
 1st Engineer Battalion
 1st Marine Division (Rein), FMF
 FPO, San Francisco, California 96601

5700
 3/JTK/aac
 19 Jan 1966
 Ser. No. 010-66

From: Commanding Officer
 To: Commanding General, 1st Marine Division (Rein), FMF

Subj: Command Chronology

Ref: (a) DivO 5750.2

Encl: (1) Command Chronology Report

1. In compliance with reference (a), enclosure (1) is submitted herewith.
2. This letter is unclassified upon removal of enclosure (1).

J. R. Aichele
 J. R. AICHELE

1ST ENGR BN
 CMCC NR 032-66
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 HEADQUARTERS
 1ST MARINE DIVISION, FMF
660145

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ENCLOSURE(10)

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HEADQUARTERS

1st Engineer Battalion

1st Marine Division (Rein), FMF

c/o FPO San Francisco, California 96601

3/CRG/gps

8000

23 Dec 1965

From: Commanding Officer

To: Commanding General, 1st Marine Division (Rein), FMF

Subj: Use of M18A1 Claymore on Vehicles

Encl: (1) Pictures depicting test results

1. Purpose. To promulgate information to all members of this command relative to expected results when the M18A1 Claymore anti-personnel mine is fired from a vehicle.

2. Background. Since initial introduction of the Claymore into our weapons system, certain people and schools throughout the Marine Corps have advocated its use in an offensive role, specifically mounted on the sides of vehicles for the immediate use to counter an ambush. Historically mines are a defensive weapon, and are not adaptable to offensive situations.

The M18A1 contains one and one-half ($1\frac{1}{2}$) pounds of C-4 explosive. It is configured in such a manner as to direct a hail of steel balls in a 60° arc or fan to the front. At the same time, due to the curvature, there is also a great deal of backblast to the sides and rear of the mine. This curvature also creates a shape charged effect as well as the amount of explosives in the mine that make it unfeasable to place any object directly behind the mine at the time of detonation.

3. Tests conducted. Specifically, to test the feasability of using the Claymore mounted on vehicles, the Officer in Charge of the Division's Demolition and Landmine Warfare School conducted a series of tests using a Code "X" vehicle and a door obtained from a salvaged $2\frac{1}{2}$ ton M-35 truck. Neither the door nor the truck had any physical damage relative to body or structure prior to the tests. A total of five mines were detonated, the placement and results are stated below, and substantiated by the photographs in enclosure (1).

a. Against a door. The door was secured to two (2) steel pickets and elevated approximately eight (8) inches off the ground by a sand bag. A steel plate, $12" \times 18" \times \frac{1}{2}"$ thick was used to back the mine, and was centered on the door. After detonation, the larger fragment, approximately $6" \times 12" \times \frac{1}{2}"$ thick was found forty-nine (49) paces directly to the rear of the point of detonation. The condition of the door is shown in photographs (1) and (2) of enclosure (1).

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TAB C

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b. On the front bumper. The mine was mounted on the extreme left corner of the bumper and detonated. The bumper was severed and fragments pierced the hood and fender of the truck. Fragments penetrated under the vehicle and came out through the battery box and battery door on the opposite side of the vehicle. The left front spring shackle was broken off; the left front shock absorber was ruptured and bent; the transfer case was shattered and locked so that the rear dual wheels were locked and would not turn. The windshield was cracked but was not blown out. In all likelihood, no one in the vehicle would have been seriously injured, however sufficient damage was sustained by the vehicle not only to completely immobilize it, but extensive repairs by either field or depot maintenance would be required to place the vehicle back in satisfactory operating condition. Photographs (3) and (4) of enclosure (1) show original placement and result.

c. Forward on the left side of the bed. This mine was backed by $\frac{1}{2}$ " steel plate, 12"x18". The mine was centered on the steel plate and fired. See photographs (5) and (6) of enclosure (1) for placement and results. Any person riding in the bed of the truck directly in line with the back-blast would have sustained serious injury, and would have been killed or at best would have lost both legs. The concussion and shock would have undoubtedly caused minor casualties to others riding in the vehicle. The blast would have also caused some minor injuries to the driver. A large steel fragment was visible being hurtled approximately 200 meters directly to the rear of the detonation.

d. Left rear of the bed of the truck. This mine was backed by two 2"x12"boards approximately 18" long. The mine was centered on the front of the boards and detonated. The placement results are shown in photographs (7) and (8) of enclosure (1). The same damage to passengers as stated in 3.c. above would have resulted, however the driver would probably not have been harmed.

e. Centered on the left side of the truck bed. This final mine was backed by two sandbags which were separated by a $\frac{1}{2}$ " steel plate 8"x12". The sandbags, steel plate and mine were mounted on an angle steel frame on the side of the vehicle and stuck out approximately 18". The sandbags were completely ruptured and not recognizable. The steel plate was slightly bent. The angle frame was completely destroyed. The truck sustained damage as shown in photograph (9) in enclosure (1). A helmet worn by a dummy sitting directly over the mine was blown approximately 200' straight up in the air and landed about 250' to the rear of the detonation.

4. Action. These test prove conclusively that the Claymore can not be fired from a vehicle without sustaining more than an acceptable amount of damage, both to the vehicle and occupants. It is recommended this information be given the widest possible dissemination and that all schools be directed to cease teaching the use of Claymores mounted on vehicles as suitable immediate action in case of an ambush.

F. P. KUNKLE
Acting

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TRAINING UNIT
1st ENGINEER BN

<u>SUBJECT</u>	<u>DAYS TAUGHT</u>
Land Mine Warfare School	2 Day Course
Demolitions	2.5
Mine Warfare	3.0
Construction	5.0
RIGGING	1.0
FIELD FORTIFICATIONS	1.5
Camouflage	1.5
Bridging	1.0
Route Reconnaissance	2.5
Reviews & Testing	2.0
	<u>22.0 days</u>

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TAB B

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SYLLABUS OF DEMOLITION TRAINING

Subj: Landmine Warfare, Demolitions and Boobytrap Training

1. Syllabus of available training.

Two Day CourseFIRST DAY

0730-0745 Introduction
0750-0840 Firing Devices
0850-0940 U. S. Anti-personnel Mines/Flares
0950-1050 M18A1 Claymore
1100-1125 Protective Minefields
1130-1155 Soviet Mines and Fuzes
1300-1315 Boobytraps
1315-1350 VC Boobytraps
1400-1415 Hand Grenade Boobytraps
1415-1450 VC Mines and Fuzes
1500-1525 Trail Markers
1530-1630 Route and Trail Clearance
1630-1700 Walk Through Jungle Trail
1830-2000 Clearance of Boobytrap Lane
2000-2015 Critique

SECOND DAY

0730-0800 Move to Demolition Range
0800-0830 Demolition and Range Safety
0830-0915 Priming Non-Electric Charges
0915-1630 Improvise Charges
TNT and C-4 Charging and Firing; Trunk Lines; Ring Mains, etc.
Placement and Calculation of charges
Prepared Charges

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TAB A

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SUPPORTING DOCUMENTS

- TAB A. Syllabus Demo & Land Mine Warfare Course
- TAB B. Syllabus for 1371 training
- TAB C. Claymore Mine Report w/photos

Appendix B

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REFERENCE LISTEVENT DATE

1 Jul 65
23 Aug 65

Sep 65
11 Oct 65

12 Oct 65
29 Nov 65
Dec 65

14-16 Dec 65

REFERENCE

DSO 264-65, 25 Jun 65
Letter Orders 7/OFF/lds over
1320 of 2 Aug 65 Ser: 00228-65
DivO 1500.28
Camp Hansen Commander's letter
5/WMB/rr over 1700 dated 8 Oct 65
to CO 1stEngrBn
1stMarDiv Publication "1st Word"
DSO 432-65
CO 1stEngrBn letter 3/CRG/mpc
over 8000 of 23 Dec 65 to CG
1stMarDiv
CG 1stMarDiv Report to CG FMFPac
3/OP/sml over 3590 Ser: 00289-65
of 28 Dec 65.

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DETAILED DESCRIPTION OF SIGNIFICANT EVENTS:

1 Jul 65 - LtCol L. R. HETRICK assumed command of 1st Engineer Battalion. Outgoing CO was LtCol HEINEMANN, who retired 31 June. Change of Command Ceremony took place on 28 June.

16 Jul 65 - Division levied the requirement on this organization to construct an Asian Village in the Las Pulgas area, CamPen, for the purpose of training troops in the art of town fighting. Work had commenced on 27 Jun 65 and was completed approximately 16 July.

23 Aug 65 - Battalion (-) departed San Diego with 1stMarDiv (Forward) for deployment to Okinawa.

Sep 65 - Two (2) day Mine Warfare School was established on a continuous basis as opposed to previous four (4) week school at CamPen. Division Order 1500.28 was published 1 Dec to announce availability of assistance from 1stEngrs in conducting subject training. A total of 5000 personnel have been processed thru this school to date. See syllabus attached in Appendix B.

11 Oct 65 - Engineer Equipment ground work commenced for the Ishikawa Junior High School to ready a playground for the city's forthcoming sports day. Project was first requested by the principal of Ishikawa Jr. High School, whose letter was supported by a second letter submitted by the Ishikawa Mayor. Both letters were submitted to the Camp Hansen Camp Commander, who in turn requested this organization to undertake the project. Project was completed 11 Oct 65. Work consisted of leveling, and limited packing, of new dirt.

12 Oct 65 - GySgt F. FILKINS broke Camp Hansen Pistol Range Record by firing 397 out of possible 400. Story was carried in Div Newspaper and Navy Times (w/photo).

4 Nov 65 - At request of Camp Hansen Camp Commander a building was moved by Engineers to Kin Village School. Building was to be used to house sports equipment.

29 Nov 65 - LtCol J. R. AICHELE assumed Command of the battalion relieving LtCol HETRICK.

14-16 Dec 65 - Received Naval Technical Proficiency Inspection (NTPI). A Ground Nuclear Operational Readiness Manuever (GNORM) was conducted concurrently with the NTPI. Result of inspection was satisfactory with minor discrepancies. Full inspection report was submitted by CG 1stMarDiv to CG FMFPac.

23 Dec 65 - Upon learning that some schools were advocating the use of the M18A1 Claymore Mine as a counter ambush weapon by attaching the mine to a vehicle, a test was conducted to actually determine feasibility of same. Tests proved that this concept to be completely false. Report with photos was submitted to Division Hqs. dated 23 Dec 65.

Dec 65 - Assisted in design of temporary contonement for use in Vietnam by providing key personnel to Division Engineer's Office. Constructed sample of hut which acquired the nickname "Ely" hut. Also commenced 24 hour operation in construction area to pre-fab Division CP and Imhoff Tank to enable speedy construction of same in Vietnam. Work in this area continues into 1966.

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Commencing approximately 20 September 65, the Division Demolition and Land Mine Warfare School, which is conducted by this organization, underwent a drastic change. The school was reduced from four (4) weeks to two (2) days. The new curriculum consisted primarily of an indoctrination type course in lieu of extensive training in demolition and mine warfare. Approximately 5000 students have been processed through the course since commencement of the new concept.

At the request of the mayor of Ishikawa, Okinawa, and approved by Division Headquarters, engineer equipment operators commenced work on the Ishikawa Junior High School playground. The project consisted of leveling and compacting fill, and was completed in time for the city's annual sportsday event. Concurrent with the aforementioned project, Gunnery Sergeant Frederick FILKENS, Heavy Equipment Chief, fired a near perfect 397 to shatter the Camp Hansen Pistol Range record on 12 October.

Also significant during the month of October was the commencement of a training program for basic 1300's toward a 1371 MOS. A copy of the training syllabus is appended hereto.

On 4 November, the 1st Marines requested assistance from the battalion in the form of providing the necessary equipment to move a building from Camp Hansen to the Kin Village Elementary School. Subject project was completed, and the building is now being utilized to store the school's athletic gear. Following this project, LtCol J. R. AICHELE assumed command of the battalion on 29 November, thus relieving LtCol HETRICK who assumed the role as Assistant Division Engineer. A training and logistical rehabilitation program then went into effect simultaneously with the acquisition of an Engineer Platoon on 30 November that returned to Okinawa with BLT 2/3.

Of extremely important significance during the month of December was the organization's testing of the M18A1 Claymore Mine for its possible use as an offensive weapon, primarily as a counter - ambush measure. Mines were strategically positioned on a surveyed 6X6 M35 truck, cargo, and were detonated. The mines literally tore sections of the truck to pieces, which proved conclusively to say the least that the Claymore Mine was unsuitable for this purpose. During the period 14-16 December, a ground Nuclear Operational Readiness Maneuver (GNORM) was conducted in conjunction with the Navy Technical Proficiency Inspection (NTPI). The results were satisfactory with minor discrepancies. Concurrently, with the assistance of key personnel from this organization, plans were in the making at the Division Engineer's Office for a temporary contonement structure for use in Viet-Nam. Subject structures will be utilized as living quarters, offices, etc. In December a sample hut was constructed by the battalion. Subsequently, a 24 hour operation went into effect to pre-fab certain portions of the hut for shipment to Viet-Nam. The around-the-clock operation, still in effect, includes pre-fab construction for the Division CP and an Imhoff Tank, both for use in Viet-Nam. Upon receipt of an engineer platoon from Viet-Nam (with BLT 3/4) which dropped OPCON and ADCON to this battalion on 30 December, a second training and logistical support program immediately went into effect to rehabilitate the unit for its future return to Viet-Nam. This event concluded the year 1965.

~~CONFIDENTIAL~~PERIOD COVERED: 1 July - 31 December 1965

Commanding Officer	LtCol	L. R. HETRICK J. R. AICHELE
Executive Officer	Maj	J. P. SCHIED F. P. KUNKLE
Sergeant Major	SgtMaj	H. L. HOPE
Adjutant	CWO 2ndLt	J. S. DAVIS F. H. STRIKER
S-2/Legal Officer	1stLt Capt	H. D. SHORTLE T. P. KILDAY
S-3	Maj	C. R. GIBSON
S-4	Maj	F. P. KUNKLE
H&S Company	Capt	D. P. HIBBS T. P. KILDAY R. W. BOLSTER
	1stLt	
"A" Company	Capt	D. R. HINES
"B" Company	1stLt Capt	D. V. COURTNEY J. J. KIRKPATRICK
"C" Company	Capt	W. A. RENNER
Supt Company	Capt	J. MURPHY G. R. MEIBAUM

NARRATIVE SUMMARY

On 1 July 65 LtCol L. R. HETRICK assumed command of the battalion from LtCol Hermann HEINEMANN, who retired subsequent to relinquishing command. Simultaneously, LtCol HETRICK assumed the task of continuing work on the Asian Village project in the Las Pulgas area, Camp Pendleton. This project, built for the purpose of training Marines in the art of town fighting, was completed on 16 July 65.

During the month of August, the battalion was engaged in preparing for its forthcoming move to Okinawa. The organization (-) boarded ship in San Diego, California, and departed for Okinawa on 23 August 65, arriving Okinawa 12 September 65.

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Enclosure (1)

~~CONFIDENTIAL~~COMMAND CHRONOLOGY

1st Engineer Battalion (-)
 1st Marine Division (Rein) FMF
 c/o FPO San Francisco, California 96601

Headquarters & Service Company (-)

Support Company (-)

"A" Company (-)

Camp Hansen, Okinawa

DETACHED:

1st Plt (Rein) "A" Company to 1/3 on 6Nov65

2nd Plt (Rein) "A" Company to 2/1 on 23Dec65

3rd Plt (Rein) "A" Company to 3/1 on 8 Dec65

"B" Company (-) (See Note 1)

1st Plt (See Note 1)

2nd Plt to 2/5 (Date Unavailable)

3rd Plt (See Note 1)

"C" Company (Rein) to RLT 7 on 19May65 (See Note 2)

Note 1: With the exception of the 2nd Platoon, Company "B" remained with 1stMarDiv(Rear) upon deployment of the 1st Engineer Battalion (-) to Okinawa, and was subsequently attached to RLT 5.

Note 2: "C" Company (Rein) was attached in its entirety to RLT 7.

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ORGANIZATIONAL DATA

UNIT DESIGNATION:

"B" COMPANY RUC 11404

1ST ENGINEER BATTALION

REGIMENTAL LANDING TEAM 5

1ST MARINE DIVISION (REIN) (REAR)

FLEET MARINE FORCE

CAMP PENDLETON, CALIFORNIA 92055

LOCATION: Camp Pendleton, California

COMPANY OFFICERS AND STAFF:

Commanding Officers;

1 July 1965-25 July 1965

D. R. HINES, Captain, USMC

26 July 1965-2 Aug. 1965

Peter J. McDERMOTT, 1stLt., USMCR

3 Aug. 1965-29 Oct. 1965

D. V. COURTNEY, 1stLt., USMCR

30 Oct. 1965-PRESENT

J. J. KIRKPATRICK, Captain, USMC

Executive Officers;

1 July 1965-29 Nov. 1965

D. A. LONG, 1stLt., USMCR

30 Nov. 1965-PRESENT

R. B. KENYON, 1stLt., USMC

1stSgt.;

1 July 1965-PRESENT

R. J. ROSSI, 1stSgt., USMC

Platoon Commanders;

8 Aug. 1965-30 Nov. 1965

R. B. KENYON, 1stLt., USMC

1st Platoon

19 Sept. 1965-PRESENT

A. J. LECRONE, 2ndLt., USMCR

2nd Platoon

24 Sept. 1965-PRESENT

D. M. TOTH, 2ndLt., USMCR

3rd Platoon

C-17-1

-ENCLOSURE I
page 1

NARRATIVE SUMMARY OF SIGNIFICANT EVENTS:

As of 1 July 1965, B Company, 1st Engineer Battalion was located at Camp Talega, Camp Pendleton, California, and was under the command of Captain D. R. HINES. While at this location the company conducted training in anticipation of future deployment of the Company. At this time the strength of the unit was about 100 men, most of whom were in a non-deployable status.

On 25 July, Captain HINES was relieved as Company Commander by 1stLt. P. J. McDERMOTT. A further change of command took place when 1stLt, P. J. McDERMOTT was relieved by 1stLt. D. V. COURTNEY on 3 August 1965.

On 26 August, the Company moved to the Camp Margarita, Camp Pendleton, in order to be more integrated with the operations of its supported unit, BLT-5. At this time the unit began receiving many non-deployable personnel. Most of these marines were well trained and experienced in their MOS.

Around mid-September young marines began arriving in the unit and training was initiated to qualify and further train them in the Combat Engineer MOS. This was done primarily with formal instruction. Although a number of OJT projects were undertaken by the company.

At mid-October a ready platoon was formed with all deployable personnel. Training was accelerated for this unit in order to accomplish the assigned task, and make it capable of supporting BLT-2/5.

On 1 October a project was begun under the guidance of GySgt PENMAN, and consisted of the construction of a booby-trap course to familiarize our personnel with the type of ordnance they might find in South-Eastern Asia. General GREENE, CMC toured this course on 27 October to see the scope of the training facility.

1stLt. D. V. COURTNEY was relieved as commanding officer on 29 October by Captain J. J. KIRKPATRICK.

B Company delivered instruction to B Reconnaissance Company on demolitions and mines, in order to familiarize them with the concept of employment of them for the accomplishment of their mission.

The unit also gave the 1st Anti-Tank Battalion schooling in mines and booby-traps on the dates 6 thru 10 December inclusive. This school was given in a specific request for such by the S-3 officer of that Battalion. A letter of appreciation was sent to our unit by the Anti-Tank Battalion for the high caliber of instruction given.

At the present time the company is engaged in training to prepare its marines for future deployment. The instruction consists of MOS subjects, augmented by EMSP matter.

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ENCLOSURE I
page 2

TRAINING AND SPECIAL OPERATIONS

26 August 1965 B Co., 1st Engr. Bn. moved from Camp Telaga, Camp Pendleton, California to the 33 Area, Camp Pendleton, California. See footnote #1.

1 November 1965 Classes given to B Recon Co. See APPENDIX B, page 1.

3 November 1965 Viet Cong Booby-trap Demonstration Trail started by GySgt. PENMAN. See APPENDIX B, pages 2 thru 34.

18 November 1965 Basic MOS Training policy was set-up to qualify Marines having the 1300 MOS. See footnote #2.

6 December 1965 Classes given to 1st A. T. Bn.. See APPENDIX B, page 35.

FOOTNOTES:

1.0)
2.0) Company Order 1230.1

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ENCLOSURE I
page 3

APPENDIX ALIST OF REFERENCE

The following are the reference used in making-up this report of the activities of B Co., 1st Engr. Bn. from 1 July 1965 thru 31 December 1965.

- 1.) Unit Diary-B Co., 1st Engr. Bn.
dates: 1 July 1965 thru 16 December 1965
- 2.) Company Orders & Bulletins
dates: 1 July 1965 thru 16 December 1965
- 3.) Personal recollection of the Officers and Staff
who where with the Company during the dates
1 July 1965 thru 16 December 1965

TAB (A)

APPENDIX A

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APPENDIX B

DOCUMENTATION

The following pages illustrate, as a small testimonial, the activities of B Co., 1st Engr. Bn. during the dates covered by this report.

TAB (B)

APPENDIX B

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B Co., 1st Engr. Bn.,
1st MarDiv, FMF, Camp Pendleton,
California

UNIT INSTRUCTION OUTLINE

1 thru 4 Nov. 1965

SUBJECT: Instruction offered B Co., 1st Recon Bn.

DAY	SUBJECT	TIME	TYPE INSTRUCTION
#1	Intro. to U.S.		
	Explosives	1 hr.	L
	Fusing Methods	1 hr.	L & D
	Explosive		
	Calculations	1-1/2 hr.	L & D
	Firing Systems	1-1/2 hr.	L, D, & PA
#2	Range Safety	1 hr.	L
	Demo. Handling,		
	Firing, &		
	Placement	6 hrs.	PA
#3	Intro. to U.S.		
	Mines	1 hr.	L
	Fund. of Mines &		
	Fuses	1 hr.	L & D
	V.C. Mines &		
	Booby-traps	1 hr.	L & D
	Minefield Recog. &		
	Clearing	4 hr.	D & PA
#4	Minefield Reporting		
	& Recording	1 hr.	L & D
	V.C. Minefield		
	Tactics	2 hr.	L & D
	Tour of V.C. Booby		
	-trap Display		
	Area	4 hr.	D & PA

Primary Instructor: Sgt. Heron, B Co., 1st Engrs.

Purpose of Instruction:

The purpose of this block of instruction was to train B Recon Co. in the use of U.S. Explosives in accordance with its specific support function, and to orient them to the extensive use of booby-traps in Viet Nam.

B Co, 1st Engr. Bn.,
1st MarDiv, FMF, Camp Pendleton,
California

SUBJECT: V.C. Booby-trap Demonstration Course

BACKGROUND:

This trail and course was originally concieved by GySgt. PENMAN, B Co., 1st Engr. Bn., to train the Marines of his unit in the V.C. employment of mines and booby-traps. The underlying objective was to encourage the use of personal initiative in setting in mines and booby-traps... thus enabling us to learn from our enemy.

CMC toured this demonstration trail on 27 October in conjunction with his visit to Camp Pendleton.

RLT-5 ordered the further expansion of the V.C. trail, and set up a training program to enable every marine of RLT-5 to benefit from this instruction.

At present the V.C. Booby-trap Demonstration Course is in constant use, and is expanding from the original one (1) trail to two (2) separate trails. Lessons and new techniques are constantly being learned and applied through intelligence information and through lessons actually learned by Viet Nam veterans which were passed on to the Trail instructors. Authenticity and realism are primary factors in the V.C. Trail, and compliments and thanks are frequently expressed by Marines on the trail.

The future promises many more developments ...invaluable to the Marines of Camp Pendleton.

It's true value will be alert Marines in Viet Nam... and the denial of "easy causalties" to our most threatening adversary ... Victor Charlie.

HEADQUARTERS
 Regimental Landing Team 5
 1st Marine Division (Rein) (Rear), Fleet Marine Force
 Camp Pendleton, California, 92055

3A/HRE/www
 1500
 28 Oct 1965

SUBJECT: Mines and Bobby Traps.

TYPE OF INSTRUCTION: Lecture and demonstration.

TIME ALLOTTED: 85 minutes per class of twenty students; classes spaced 30 minutes apart; five classes between 0800 and 1130; three classes between 1330 and 1600; total capacity of 160 students per day. Spacing between classes allows time for resetting and recamouflaging devices on trail.

CLASSES PRESENTED TO: Personnel of RLT 5.

CLASS PREPARED BY: Gunnery Sergeant D. E. PENMAN, 1153204/1371/8511, USMC, Company B, 1st Engineer Battalion, RLT 5.

TOOLS, EQUIPMENT AND MATERIALS FOR STUDENT USE: None.

PERSONNEL: One NCOIC, three primary instructors, three assistant instructors.

INSTRUCTIONAL AIDS: Three sets of bleachers each capable of seating up to thirty persons; two large tables; available U. S. mines and fuzes; locally constructed replicas of Viet Cong mines, fuzes and booby traps (See Enclosure (1)); demonstration trail (See Enclosure (2)).

REFERENCES: FM5-25; FM5-31; FM20-32; TB's 0-1345-200/1, 3 and 4; TB 9-1370-200/1; TB's 9-1940-13 and 14; TB 34-9-69; DATC 5-10; DATC 7-3; TM 5-280; TM 9-1900; TM 9-1903; TM 9-1910; TM 9-1940; TM 9-1946; Tactical Trends and Training Tips Received from Units in Combat in the Republic of Vietnam; Personal Experience.

STUDY ASSIGNMENTS: None.

STUDENT UNIFORM AND EQUIPMENT: Utilities with cap, cartridge belt, canteen and individual first aid kit.

TROOP REQUIREMENTS: None.

TRANSPORTATION REQUIREMENTS: 7 personnel from Company B, 1st Engineer Battalion to coordinates 695893 and return; as required by students from parent organization/unit to coordinates 695893 and return; in accordance with schedule to be published.

TIME SCHEDULE:

<u>Time</u>	<u>Activity</u>	<u>Method</u>	<u>Location</u>
0000-0003	Introduction	L	1st Set of Bleachers
0003-0015	Description and Display of U. S. Mines and Fuzes	L, D	-do-
0015-0020	Movement to 2d Set of Bleachers		
0020-0035	Description and Display of Viet Cong Mines, Fuzes and Booby Traps	L, D	2d Set of Bleachers

ENCLOSURE (1)

TO TAB (B)

0035-0040	Break		
0040-0115	Installation and Neutralization Procedures - Viet Cong Mines, Fuze and Booby Traps	L, D	2d Set of Bleach-ers
0115-0125	Review		3d Set of Bleach-ers

1. INTRODUCTION

a. Gain Attention and Motivate

- (1) Welcome.
- (2) Brief synopsis of Viet Cong activities.
- (3) Brief synopsis of Viet Cong capabilities.

a. Ability to improvise.

- b. Ability to utilize our natural habits and instincts to his advantage.
- (4) Stay alert, expect the unexpected and survive.

b. Objective. Objective of today's instruction is twofold:

- (1) To refresh your knowledge of United States mines and fuze.
- (2) To acquaint you with typical mines, fuze and booby traps employed by Viet Cong in the Republic of Vietnam.

c. Scope. Instruction consists of four main areas of interest:

- (1) Description and display of various United States mines and fuze.
- (2) Description and display of typical mines, fuze and booby traps employed by Viet Cong forces.
- (3) Demonstration trail designed to acquaint personnel with methods utilized by Viet Cong forces to install mines, fuze and booby traps, as well as methods to neutralize each device.

(4) Review.

TRANSITION: You probably are wondering why we begin this class by describing and displaying for you the various types of United States mines and fuze. You must remember that the Viet Cong uses any and all types of weapons obtainable, including captured U. S. Material. Mines and booby traps do not recognize uniforms. Hence this review as the small detail you overlooked, forgot, or considered unimportant until today may mean your life tomorrow.

2. BODY

a. United States Mines and Fuze

NOTE: Instructor uncovers display of all available U. S. Mines and Fuze.

(1) M-2 Series Anti Personnel Mine

(a) Purpose.

(b) Functioning.

(c) Type Fuze.

(d) Arming.

(e) Disarming.

(2) M-14 Anti Personnel Mine

(a) Purpose.

(b) Functioning.

(c) Type Fuze.

(d) Arming.

(e) Disarming.

(3) M-16 Anti Personnel Mine

(a) Purpose.

(b) Functioning.

(c) Type Fuze.

(d) Arming.

(e) Disarming.

(4) M-18 Anti Personnel Mine

(a) Purpose.

(b) Functioning.

(c) Type Fuze.

(d) Arming.

(e) Disarming.

(5) M-15 Anti Tank Mine

(a) Purpose.

(b) Functioning.

(c) Type Fuze.

(d) Arming.

(e) Disarming.

(6) M-19 Anti Tank Mine

- (a) Purpose.
- (b) Functioning.
- (c) Type Fuze.
- (d) Arming.
- (e) Disarming.

SUMMARIZE: Main points concerning Anti Personnel and Anti Tank mines and necessity to know.

NOTE: Direct students to move to 2d set of bleachers.

TRANSITION: You have just heard described and seen displayed the various types of U. S. mines and fuzes. You are now about to hear described and see displayed some of the types of mines, fuzes and booby traps presently being employed by Viet Cong forces in the Republic of Vietnam.

b. Viet Cong Mines, Fuzes and Booby Traps

NOTE: Instructor uncovers display of Viet Cong mines, fuzes and booby traps.

(1) General Background: All of the items you see before you can be manufactured by a poorly educated coolie with a limited supply of material. These devices are simple, crude and cheap but very effective. The key word here is **SIMPLICITY**. They represent some of the types used to date. Most of these devices are actuated by a simple friction type fuze or a version of the Russian MUV pull/pressure fuze. In some cases they may be fired electrically by an observer hidden in the dense foliage alongside of trails. Note that most of these devices contain no safety features. All these devices may vary to some extent in size, shape, and in the methods used to fire them, depending upon the material available to the Viet Cong. However, a knowledge of these types will equip you to deal with the majority of the devices you will encounter in Vietnam.

(2) Betol-Box Mine

- (a) Constructed of concrete.
- (b) Weight, 12 to 13 pounds.
- (c) Explosive normally is TNT.
- (d) Fired electrically by pressure or by pull.
- (e) Primarily used against personnel.

(3) Turtle Shaped Mine

- (a) Constructed of concrete.
- (b) Weight, 10 to 15 pounds.
- (c) Explosive normally is TNT.
- (d) Fired electrically or by pressure.

(e) Primarily used against personnel.

(4) Cylindrical Fragmentation Mine

(a) Constructed of cast iron.

(b) Pull friction fuze.

(c) Pull type mechanical fuze.

(5) Homemade AP Mine

(a) Constructed of sheet metal.

(b) Explosive approximately 1/2 pound TNT.

(c) Pull type mechanical fuze.

(6) Cylindrical Fragmentation Mine

(a) Constructed of concrete and iron pipe.

(b) Weight approximately 13 pounds.

(c) Explosive is approximately 3 to 5 pounds TNT.

(d) Fired electrically by pull or by pressure.

(7) Modified Artillery Round 105MM

(a) Fuze removed, electric cap or pull fuze inserted in explosive.

(b) Used against personnel or vehicles.

(c) Heavy fragmentation effect.

(8) Modified Mortar Round

(a) Fuze removed, electric or pull fuze inserted in explosive.

(b) Used against personnel.

(c) Heavy fragmentation effect.

(9) Steel Punji Stakes

(a) Constructed of steel slivers or nails.

(b) Coated with septic material, dung or nightsoil.

(c) Used against personnel.

(d) Located in rice paddys, pits or along trails.

(10) Bamboo Punji Stakes

(a) Constructed of bamboo 12 to 18 inches in length.

(b) Coated with septic material.

(c) Located in rice paddys, pits or along trails; a longer version may be employed in probable helicopter or paratrooper landing sites.

SUMMARIZE: Main points concerning simplicity, lethality and ingenuity.

BREAK

TRANSITION: You have heard described and seen displayed many of the devices employed by the Viet Cong. You will now see some of the methods used by the Viet Cong to install mines, fuzes, and booby traps along a jungle trail. Before we commence along the trail, I want to emphasize that at no time will you step over the white engineers tape marking the trails edge.

c. Demonstration Trail

NOTE: Students follow instructor on to trail.

(1) Punji Pit

(a) Show in camouflaged state.

(b) Remove camouflage

(c) Function:

1 Placed in trail.

2 Placed along side trail and used in conjunction with ambush or booby trap.

3 Stakes usually covered with septic material.

(2) Bangalore Torpedo

(a) Show camouflaged.

(b) Remove camouflage.

(c) Function:

1 AP Weapon

2 Constructed of any size pipe.

3 Trip wire operated; may be fired electrically.

(d) Show and explain punji stakes placed along side trail to cause casualties to personnel taking cover from blasts.

(3) Concrete Mine

(a) Placed to blend in with rocks along side trail.

(b) Trip wire operated.

(c) Anti-Personnel

(4) MK 11 Grenade Boobytrap

(a) Placement:

1 In can in tree so as to achieve air burst.

2 Vine used as trap wire.

(b) Explain purpose of placing in can and securing grenade with short length of string or wire.

(5) Concrete Turtle Mine in Trail

(a) Show placement of mine.

(b) Remove camouflage.

(c) Functioning:

1 Pressure operated.

2 Fragmentation effect.

(6) Punji Pit

(a) Located at trail intersection.

(b) Size and depth will vary.

(c) Explain cover material.

(7) 105 MM Round Placed in trail

(a) Show location.

(b) Remove camouflage.

(c) Pressure operated:

1 Explain function of shear board.

2 May be equiped with heavy shear board for anti-vehicular operation.

(8) Homemade AP Mine

(a) Attached to tree to achieve air burst.

(b) Trip wire operated.

(c) No safety devices.

(d) Point out punji sticks used in conjunction with mine.

(9) Malayan Man Whip

(a) Emphasize that students are to stay in safety area.

(b) Constructed of bamboo, normally 3 inches in diameter.

(c) Explain trigger machanizm.

(d) Example operated by spring due to lack of bamboo.

(10) Punji Pit: Review briefly.

(11) Rice Paddy

(a) Normally would be filled with water covering trip wire and stakes.

(b) Explain location and use of trip wires.

(12) Steel Picket Boobytrap

(a) Two steel pickets driven into ground forming hollow pipe.

(b) Filled with explosives.

(c) Trip wire operated or electrically control fired.

(13) Dead Fall

(a) Emphasize students are to stay in safty area.

(b) Normally camouflaged with vegetation.

(c) Explain trigger mechanism.

(d) Trip device and explain why restraining spring is used on display.

(14) 81 MM Mortar Round

(a) Show location.

(b) Remove camouflage and explain fuse assemble.

(c) Trip wire operated, may be pressure or control fired.

(d) Show punji stakes used in conjunction with charge.

(15) 105 MM Artillary Round

(a) Placed in tree for air burst.

(b) Show location.

(c) Remove camouflage.

(d) Electrically fired by hidden observer.

(e) Heavy Fragmentation effect.

NOTE: Lead students to 3d set of bleachers for review.

3. REVIEW

a. Questions: Clear up questions which students may have.

b. Summarize

(1) Main points concerning U. S. mines and fuzes.

(2) Main points concerning Viet Cong mines, fuzes and booby traps as employed along demonstration trail.

c. Closing Statement. Remember that this has been designed as an orientation class to refresh your knowledge of U. S. mines and fuzes, and to acquaint you with the various mines, fuzes and booby traps which have been encountered in the Republic of Vietnam. New models will probably continue to appear as the war continues. Certainly the use of mines and booby traps by the Viet Cong is limited only by his lack of materials and the limits of his ingenuity. The Viet Cong has always been well supplied with ingenuity.

ENCLOSURE: (1) Locally Constructed Viet Cong Mines, Fuzes and Booby Traps.
(2) Demonstration Trail.
(3) Sketch Depicting Bleacher and Demonstration Trail areas.
(4) Bleacher Areas

LOCALLY CONSTRUCTED VIET CONG MINES, FUZES AND BOOBY TRAPS

1. General. All Viet Cong mines, fuzes and booby traps utilized as instructional aids were fabricated locally. Materials were used which matched as nearly as possible the original product.
2. Cast Mines. See Tab A for photograph of molds.
 - a. Large Size. Molds were constructed of wood and sheet metal. Concrete was used as the casting material. Limited sheet metal capability prevented incorporation of serrations into the molds. Serrations were therefore cut into the casting by hand after concrete had set.
 - b. Small Size. A model of the mine was first hand made using either wood or plaster of paris. A rubber mold was then made and plaster of paris used to cast the mines. These mines were painted black.
3. Sheet Metal Mines. The small sheet metal anti personnel mines were made from either sheet metal, beer cans, or soft drink cans.
4. Explosive Filler. Yellow dental stone or plaster of paris with yellow food coloring added was used for the explosive filler in all mines and booby traps.
5. Fuzes. Fuze assemblies were constructed of wood. Strikers were obtained from U. S. fuzes or fuze lighters.
6. Booby Traps. Devices other than mines and fuzes were constructed of locally available wood, bamboo, nails and sheet metal. These devices consisted of such things as punji pits, a dead fall, bamboo and steel punji sticks, and a Malayan Man Whip.
7. Photographs. Photographs are appended as Tabs A through K.

Tabs:	A	Casting Molds
	B	Betel - Box Mine
	C	Cylindrical Fragmentation Mine
	D	Cement Fragmentation Mine
	E	Turtle Shaped Mine
	F	Sheet Metal Anti Personnel Mine
	G	Improvised Anti Personnel Mine utilizing 105 MM Howitzer Round
	H	Improvised Anti Personnel Mine utilizing 81 MM Mortar Round
	I	Improvised Bangalore Torpedo
	J	Bamboo Punji Sticks
	K	Steel Punji Sticks

ENCLOSURE (1)

DEMONSTRATION TRAIL

1. General. The demonstration trail varies between two and four meters wide and is approximately one hundred fifty meters long. The trail is constructed in an area which approximates as closely as possible the heavy vegetation and terrain which is found in Southeast Asia.

2. Boundries. The trail area is bounded by a single strand of barbed wire fence with out of bounds signs attached. The trail itself is bounded along each side with white engineers tape. The boundries are utilized due to the safety hazard present in the form of instructional devices, and as a means to preserve the natural state of the area as much as possible.

3. Instructional Devices

a. At the present time there are seventeen types of mines and booby traps placed along the trail. These devices are all camouflaged.

b. Many devices are equiped to fire either the practice handgrenade charges, M30 and M21 (1330-G850/G851) and fuze (1330-G870), or various components of the AP practice mine, M8 (1345-K105).

c. Bamboo or steel punji sticks are frequently used in conjunction with other devices. They are also placed at intervals along the trail outside the trails immediate boundries unless utilized in a punji pit.

4. Safety

a. Students are not authorized to step over the white engineer tape bounding the trail.

b. At no time will any student precede the instructor.

5. Instructor Procedures. As the class proceeds down the trail the instructor points out the location of each camouflaged device, explains its function, and the removes the camouflage and explains neutralizing procedures.

Tabs:	A	Improvised Bangalore Torpedo
	B	Betel - Box Mine
	C	Grenade Booby Trap
	D	Cement Fragmentation Mine
	E	Punji Pit
	F	Improvised Anti Personnel Mine, 105 MM Howitzer Round, Pressure Activated
	G	Sheet Metal Anti Personnel Mine
	H	Malayan Man Whip
	I	Rice Paddy with Punji Sticks
	J	Dead Fall
	K	Steel Punji Sticks
	L	Improvised Anti Personnel Mine, 81 MM Mortar Round, Pressure Activated
	M	Improvised Anti Personnel Mine, 105 MM Howitzer Round, Electrically Fired

ENCLOSURE (2)

To 2

HEADQUARTERS
 Regimental Landing Team 5
 1st Marine Division (Rein) (Rear), Fleet Marine Force
 Camp Pendleton, California, 92055

3A/HRE/jah
 1500
 3 December 1965

SUBJECT: Mines and Booby Traps

TYPE OF INSTRUCTION: Lecture, demonstration and application

CLASSES PRESENTED TO: Corporals through Lieutenant Colonels every Friday.

CLASS PREPARED BY: Gunnery Sergeant D. E. Penman 1153204/1371/8511/USMC, Company B
 1st Engineer Battalion, RLT-5

TOOLS, EQUIPMENT AND MATERIALS FOR STUDENT USE: Mines, M-2, M-15, M-16; U.S. Schu Mine; Wooden Box Mine; TMDB; Firing Devices, M-1, M1A1, M-5; Grenades, Practice; 105 MM Artillary Round(Inert); 81 MM Mortar Round(inert); Bangalore Torpedo (Improvised); MUV Pull Fuze (Improvised).

PERSONNEL: One NCOIC, two primary instructors, four assistant instructors, one corpsman

INSTRUCTIONAL AIDS: Three sets of bleachers, two large tables, U. S. Mines and Fuze, Locally Constructed Replicas of Viet Cong mines, fuze and booby traps, GTA 5-5, Blackboard.

REFERENCES: FM5-25, FM5-31, FM20-32, TB's 0-1345-200/1, 3 and 4, TB 9-1370-200/1, TB's 9-1940-13 and 14, TB 34-9-69, DATC 5-10; DATC 7-3; TM 5-280; TM 9-1900; TM 9-1903 TM 9-1910; TM 9-1940; TM 9-1946; Tactical Trends and Training Tips received from Units in Combat in the Republic of Vietnam.

STUDY ASSIGNMENTS: None

STUDENT UNIFORM AND EQUIPMENT: Utilities, Cartridge belt, Canteen and Individual First Aid Kit, Entrenching Tool, Helmet.

TROOP REQUIREMENTS: None

TRANSPORTATION REQUIREMENTS: Nine personnel from Company B, 1st Engineer Battalion to coordinates 696893 and return; as required by students from parent organization/unit to coordinates 695893 and return in accordance with schedule to be published.

TIME SCHEDULE

<u>Time</u>	<u>Activity</u>	<u>Method</u>	<u>Location</u>
0000-0010	Introduction	L	1st Set of Bleachers
0010-0050	Installation Methods	L	1st Set of Bleachers
0050-0060	Break		
0100-0150	Individual Installation	A	1st Bleacher Area
0150-0200	Break		
0200-0230	Detection Methods	L, D	2nd Set of Bleachers
0230-0330	Detection and Removal	A	1st Bleacher Area
0330-0430	NOON MEAL		
0430-0550	Installation of Trail Area	A	Trail #2 or #3
0550-0600	Break		
0600-0720	Detection of Trail Area	A	Trail #2 or #3
0720-0730	Break		

ENCLOSURE (2)

TO TAB (B)

0730-0745 Review
0745-0800 Police Call, Replace Mines

1st Bleacher Area

1. INTRODUCTION

a. Gain Attention and Motivate

(1) Welcome.

(2) Motivate - As you are aware all Marine Corps units are trained for combat. As a Marine you can therefore expect to be in combat some time during your career. In view of the current situation in Vietnam you can expect to be in combat sometime during the near future. An alert, trained mind and body are your primary means of defense and of accomplishing your mission. Do not overlook even the smallest detail. Expect the unexpected and survive.

b. Objective: During the next seven hours you will receive information concerning the methods of installing, detecting and neutralizing various types of U. S. and Viet Cong mines, boobytraps and devices. This course is not designed to make experts of you, but to give you a working knowledge of employing and neutralizing various mines and devices. You will also become familiar with the problems encountered in both employing and detecting mines and boobytraps. The practical application phase will give you a first hand knowledge of these problems and instill in your minds some of the difficulties you may encounter in the near future.

2. BODY

a. Purpose of Nuisance or Protective Mines

(1) In Conjunction With Ambushes

- (a) Covered by fire, maximum use of enemies natural reaction to fire
- (b) As temporary protection

(2) Not Placed to Standard Pattern

(3) Along Routes of Approach

(4) Supplement Other Weapons

(5) Hasty or No Sketches Showing Location

(6) Generally Moved When Unit Moves

b. Installation of U. S. Mines

(1) M-16 AP Mine

(a) Installation and arming

- 1. Placement of trip wires
- 2. Casualty radius
- 3. Safeties

NOTE: Pass out mines to class and collect after use.

1. Safety checks

- 2. Shipping plug
- 3. Check striker

- (b) Neutralization
 - 1. Safety clip
 - 2. Arming dial

(3) M-18 Claymore

- (a) Placement
 - 1. Siting procedures
 - 2. Checkout procedures
 - 3. Backblast

- (b) Arming
 - 1. Electrically fired
 - 2. Non-Electric fired

- (c) Limitations
 - 1. Misalignment due to fire
 - 2. Hazard to friendly forces

(4) M-2 Series AP Mine

- (a) Installation and arming

NOTE: Pass out fuzes; collect after using.

- 1. Safeties
 - 2. Trip wires

- (b) Neutralizing
 - 1. Positive safety
 - 2. Trip wires

(5) M-15 AT Mine

- (a) Type of fuze

NOTE: Use GTA

- (b) Activating

NOTE: Pass out M-1 activators, collect after use.

- (c) Arming

(d) Installation

(e) Activating

(7) M-21 AT Mine

(a) Type of fuze

NOTE: Use GTA; explain dual purpose

(b) Activating wells

(c) Arming

(d) Installation

BREAK

c. Individual Application Phase

(1) General

(a) You have just been briefly familiarized with the characteristics, functioning and methods of arming and installing various types of U. S. mines. However it is our desire that you acquire a working knowledge of how to arm and disarm most types of mines. Generally speaking, there are only a few basic types of fuzes and firing devices. U. S. mines may vary from foreign mines in design, but the basic principles of functioning will remain the same. Master how to arm and disarm the U. S. mines and fuzes and you will have gained a large amount of usefull knowledge on all types of mines and fuzes.

(b) There is no substitute for practice experience. You have heard this statement many times, but nowhere is it more true than in the handling of mines. During this phase of instruction you will be given the opportunity to install, arm and activate two types of U. S. mines.

NOTE: Move students to installation area. Issue one AP and one AT mine to each student. Issue two firing devices and two activators to each student.

(2) Installation

(a) Students install, arm and activate mines in designated area.

NOTE: Instructor collects safety pins

(b) As you probably noticed it is relatively simple to install and arm mines. Remember, however, that this was under ideal conditions and the mines do not contain a live charge. Also bear in mind that there are many ways you can booby trap or activate a mine so do not become careless. A booby trapped or activated mine that is made extremely sensitive can be a hazard to the man installing it. It could easily be set off by any disturbance before you can move from the area.

d. Detection And Removal Methods

(1) General

(a) The Viet Cong forces are at this time making large use of mines and booby traps. They will probably continue to do so on an even larger scale. U. S. Forces have sustained far to many casualties from these weapons. It is important that you know both how to install and detect mines and booby traps, but at the present time most of your time will probably be spent in detecting and removing mines rather than in installing them. Therefore, it is imperative

that you gain all the knowledge and practical experience you can while there is time to correct your mistakes and improve your techniques.

(b) There are no hard fast rules in detecting mines that will apply in all situations. In general you must: Keep alert; be suspicious; and, try to resist some of your natural impulses. Developing a correct mental attitude will probably be your greatest asset.

(2) Detection Methods

(a) Suspect areas

1. Trails and routes
2. Buildings
3. Abandoned gear
4. Stream crossings and bridges
5. Likely ambush sites
6. THERE ARE NO REAR AREAS

(b) Signs

1. Disturbed soil
2. Depressions
3. Areas avoided by natives
4. Debris

(c) Detection Procedures

1. Sight - limited effectiveness.
2. Feel

NOTE: Assistant instructor demonstrates

- a. Sleeves rolled up
- b. Use of light stick for trip wires
- c. Limitations - Slow movement
3. Probing

NOTE: Assistant instructor demonstrates

- a. Most effective methods
- b. Slow, not practical at all times
4. Detectors
1. Normally will not be available

2. Limited effectiveness

(d) Marking Located Mines

1. Engineer tape
2. Strips of cloth
3. Sticks

SUMMARIZE: Too often the most common method of detecting mines is when an individual sets one off. Looking for mines or signs of mines, should become as much of your mental process as combat formations or troop leading steps. Constantly watching for mines or booby traps as well as the other things that will be on your mind during combat will be a terrific strain. You must condition your mind so that it will be done instinctively. Whenever possible the point of a column should be periodically rotated so as to assure maximum surveillance over assigned sectors of responsibility.

(3) Neutralizing Procedures

(a) There are three methods you may use to neutralize mines. They are: blow in place; remove by rope; or remove by hand. The method you use will depend upon the situation.

(b) Blow in place

1. When used
2. Safest method
3. Limitations

(c) Rope removal

1. When used
2. Limitations
3. Delay investigations

NOTE: Assistant instructor demonstrates

(d) Hand Removal

1. Least desirable
2. When used
3. One man rule

NOTE: Assistant instructor demonstrates

TRANSITION: Although the hand removal method is not used when other methods can be applied there are times when you will have to remove mines by hand. This is the most difficult method to master, therefore, we will devote most of our practical application to this method. During the next phase of instruction you will put into practice some of the methods and techniques you have learned. You will remove and disarm the mines that other members of the class have installed and activated.

NOTE: Move students to application area.

e. Neutralizing Application Phase

- (1) Assign students to mines area sections
- (2) Pass out safety pins.
- (3) Students remove mines
- (4) Insure all mines, fuzes and devices are returned to dump upon removal
- (5) Critique removal phase

NOTE: Move students to trail application area

TRANSITION: You have installed and removed individual mines of U. S. Manufacture. Next you will be given the opportunity to install, detect and neutralize both U. S. and Viet Cong types of mines and booby traps in an area that resembles as near as possible the type of conditions you may encounter in Southeast Asia.

f. Installation of Trail Area

- (1) Break students into two squads, appoint squad leader
- (2) Each squad will be responsible for mining a trail area
- (3) Squad leader will designate type, location and placement of each device for each trail area.

(4) Restrictions

- (a) Stay inside boundry markers
- (b) Mines and booby traps must be functional, No Rube Goldberg types
- (c) Do not damage mines or devices
- (d) Do not damage or destroy vegetation

NOTE: Instructor issues mines and devices

(5) Instructor accompanies each squad

- (a) Take notes for critique
- (b) Squad leader will direct installation of all mines and booby traps

NOTE: Instructor collects all safety pins at completion of installation

BREAK

g. Detection and Removal of Mines and Booby Traps. The detection and removal of mines and booby traps is probably the most important phase of your training during this course. During this phase you will be required to detect and remove the mines, booby traps and devices that have been installed by the other squad. We have not intended to teach tactics during this course, however, consider this a tactical situation in an area that the enemy has occupied. Due to terrain and school considerations we have to place certain restrictions on you in order to make this problem functional. You must stay inside the boundry markers. In many situations such as this upon detecting a mine you would merely mark the location and proceed with your mission, but to gain the maximum from practical application you are required to remove by

hand each mine your squad detects. After the area is cleared the squad leader will ascertain that all mines, fuzes and devices are turned over to the instructor in charge of your group. You will have one hour to clear your assigned area. The squad leader will be in charge of all operations.

NOTE: Instructor passes out safety pins and marking tape

NOTE: Instructor accompanies squad taking notes for critique

NOTE: Instructor checks count of mines and devices and has same returned to dump upon completion of clearing operation

NOTE: Direct students to 3rd set of bleachers

BREAK

3. REVIEW

a. Questions: Clear up all questions asked by students

b. Summarize

- (1) Main points concerning U. S. Mines and Fuzes
- (2) Main points concerning Viet Cong mines and fuzes
- (3) Detection procedures
- (4) Neutralization procedures

c. Closing Statement. During a few hours today we have tried to acquaint you with the basic principles used in installing and detecting mines and booby traps. Mines and booby traps are causing far too many casualties in Viet Nam; just read the reports or ask the man who has returned. While this course has not made experts of you, we do hope you have acquired sufficient knowledge to assist in the accomplishment of your mission and to stay alive. In the near future you will probably be called upon to put into practice some of the things you have learned here today. Do not forget them.

HEADQUARTERS
 Regimental Landing Team 5
 1st Marine Division (Rein) (Rear), Fleet Marine Force
 Camp Pendleton, California, 92055

3A/HRE/jah
 1500
 3 December 1965

SUBJECT: Mines and Booby Traps.

TYPE OF INSTRUCTION: Lecture, Demonstration and Application.

TIME ALLOTTED: Three and one-half hours per class of fourteen men. One class between 0800 and 1130, one class between 1300 and 1630. Total capacity 28 students per day. Classes to be conducted Monday through Thursday,

CLASSES PRESENTED TO: Rifle Squads

CLASSES PREPARED BY: Gunnery Sergeant D. E. PENMAN 1153204/1371/8511, USMC, Company B, 1st Engineer Battalion, RLT 5.

TOOLS, EQUIPMENT AND MATERIALS FOR STUDENT USE: None.

PERSONNEL: One NCOIC, two primary instructors, six assistant instructors

INSTRUCTIONAL AIDS: Two sets of bleachers, each capable of seating up to thirty persons, two large tables, available U. S. mines and fuzes, locally constructed Viet Cong mines, fuzes and booby traps

REFERENCES: FM5-25, FM5-31, FM20-32, TB8s 0-1345-200/1; 3 and 4; TB9-1370-200/1; TB's 9-1949-13; and 14; TB34-969; DATC 5-10; DATC 7-3; TM 5-280; TM 9-1900; TM 9-1903; TM 9-1910; TM 9-1940; TM 9-1946; Tactical Trends and Training Tips received from Units in Combat in the Republic of Vietnam; Personal Experience.

STUDENT UNIFORM AND EQUIPMENT: Utilities, cartridge belt, canteen and individual first aid kit.

STUDY ASSIGNMENTS: None

TROOP REQUIREMENTS: None

TRANSPORTATION REQUIREMENTS: Nine personnel from Company B, 1st Engineer Battalion to coordinates 695893 and return; as required by students from parent organization/unit to coordinates 695893 and return; in accordance with schedule to be published.

TIME SCHEDULE:

<u>Time</u>	<u>Activity</u>	<u>Method</u>	<u>Location</u>
0000-0005	Introduction	L	1st Set of Bleachers
0005-0025	U. S. Mines	L,D	-do-
0025-0045	Viet Cong Mines	L,D	2nd Set of Bleachers
0045-0055	Break		
0055-0135	Demonstration Trail	L,D	Demonstration Area
0135-0155	Detection Methods	L,D	2nd Set of Bleachers

ENCLOSURE (3A)

TD TAB (B)

0155-0205	Break	
0205-0305	Application Phase	A Trails #1 and #2
0305-0315	Break	
0315-0325	Review	1st Set of Bleachers
0325-0330	Police Call	

1. INTRODUCTION

a. Gain Attention and Motivate

- (1) Welcome
- (2) Brief synopsis of Viet Cong Activities.
- (3) Brief synopsis of Viet Cong Capabilities
 - a. Ability to improvise.
 - b. Ability to utilize our natural habits and instincts to his advantage.

b. Objective. The objective of today's instruction is threefold:

- (1) To refresh your knowledge of US mines and fuzes.
- (2) To acquaint you with typical mines, fuzes and booby traps used by the Viet Cong forces.
- (3) To give you practical application in methods of detecting and removing US and Viet Cong mines, fuzes and devices.

c. Scope. Instruction consists of five main areas of interest:

- (1) Description and display of various US mines and fuzes.
- (2) Description and display of typical mines, fuzes and booby traps employed by the Viet Cong forces, as well as methods of detection and neutralizing them.
- (3) Display trail showing methods of employing various Viet Cong mines, fuzes and booby traps and methods of detecting and neutralizing each device.
- (4) Practical application phase allowing students to detect and remove various types of US and Viet Cong mines and booby traps.
- (5) Revies.

TRANSITION: You are probably wondering why we begin this class by description and displaying for you the various types of United States mines and fuzes. You must remember that the Viet Cong use any and all types of weapons obtainable, including captured U. S. material. Mines and booby traps do not recognize uniforms. Hence this review as the small detail you overlooked, forgot, or considered unimportant until today may mean your life tomorrow.

2. BODY

NOTE: Instructor uncovers each mine as needed

(1) M-2 Series AP Mine

- (a) Purpose Use GTA and mine to emphasize
- (b) Functioning
- (c) Type fuze Show safeties on GTA and fuze
- (d) Arming
- (e) Disarming Emphasize positive safety

(2) M-14 AP Mine

- (a) Purpose
- (b) Functioning Use GTA and mine to emphasize functioning
- (c) Type fuze
- Safety clip
- Arming Dial
- (d) Arming Safety checks, Shipping plug, Inspect striker
- (e) Disarming

(3) M-18 AP Mine

- (a) Purpose
- (b) Functioning Use GTA and Mine to emphasize
- (c) Type fuze
- (d) Arming
- Siting Stress back blast effect
- Electrically fired
- Non-Electric
- (e) Disarming procedures

(4) M-16 AP Mine

- (a) Purpose
- (b) Functioning Use GTA and Mine to emphasize
- (c) Type fuze Show safeties and GTA and fuze
- Positive
- Secondary

- (d) Arming
- (e) Disarming Emphasize positive safety
- (5) M-15 AT Mine
 - (a) Purpose
 - (b) Functioning Use GTA and mine to emphasize
 - (c) Arming
 - (d) Activating
 - M-5 Mousetrap Use GTA and device to show functioning of fuzes
 - M-1 Pull fuze
 - Grenade
 - (e) Disarming
- (6) M-19 AT Mine
 - (a) Purpose
 - (b) Functioning Use GTA and mine to emphasize
 - (c) Type fuze
 - (d) Arming
 - (e) Disarming
- (7) M-21 AT Mine
 - (a) Purpose
 - (b) Functioning Use GTA and mine to emphasize
 - (c) Type fuze
 - Dual purpose
 - (d) Arming
 - (e) Disarming

SUMMARIZE: Main points concerning Anti-Personnel and Anti-Tank mines, and necessity to know.

NOTE: Direct students to move to 2nd set of bleachers.

TRANSITION: You have heard described and seen displayed the various types of U. S. mines and fuzes. You are now about to hear described and see displayed some of the types of mines, fuzes and booby traps presently being employed by the Viet Cong forces in the Republic of Vietnam.

b. Viet Cong Mines, Fuzes and Booby Traps

NOTE: Instructor uncovers display of Viet Cong mines, fuzes and booby traps

(1) General Background: All of the items you see before you can be manufactured by a poorly educated coolie with a limited supply of material. These devices are simple, crude and cheap, but very effective. The key word here is SIMPLICITY. They represent some of the types used to date. Most of these devices are actuated by a simple friction type fuze or a version of the Russian MUV pull/pressure fuze. In some cases they may be fired electrically by an observer hidden in the dense foliage alongside of trails. Note that most of these devices contain no safety features. All of these mines and devices may vary to some extent in size, shape and the methods used to fire them, depending upon the material available to the Viet Cong. In many cases grenades or grenade fuzes will be used to fire mines. A knowledge of these types will equip you to deal with a majority of the devices you will encounter in Vietnam.

(2) Betol-Box Mine

- (a) Constructed of concrete
- (b) Weight 12 to 13 pounds
- (c) Explosive normally TNT
- (d) Fired electrically, by pressure or pull
- (e) Primarily used against personnel

(3) Turtle Shaped Mine

- (a) Constructed of concrete
- (b) Weight 10 to 15 pounds
- (c) Explosive normally TNT
- (d) Normally fired by pressure
- (e) Primarily used against personnel

(4) Cylindrical Fragmentation Mine

- (a) Constructed of cast iron
- (b) Explosive approximately 1/2 pound TNT
- (c) Pull type friction fuze, wooden construction

(5) Homemade AP Mine

- (a) Constructed of sheet metal
- (b) Explosive TNT
- (c) Pull type mechanical fuze

(6) Cylindrical Fragmentation Mine

- (a) Constructed of concrete and iron pipe
- (b) Weight approximately 13 to 15 pounds

- (c) Explosive approximately 3 to 5 pounds
- (d) Fired electrically by pull or pressure

(7) Modified Artillery Round 105 MM

- (a) Fuze removed, electric cap or fuze inserted in explosive
- (b) Used against personnel or explosives
- (c) Heavy fragmentation effect

(8) Modified Mortar Round

- (a) Fuze removed, electric cap or fuze inserted in explosive
- (b) Used against personnel
- (c) Heavy fragmentation effect

(9) Steel Punji Stakes

- (a) Constructed of steel slivers or nails
- (b) Coated with septic material
- (c) Used against personnel in conjunction with other weapons
- (d) Located in rice paddys, grass or pits
- (e) Will penetrate boot

(10) Bamboo Punji Stakes

- (a) Constructed of bamboo 12 to 18 inches or longer
- (b) Coated with septic material
- (c) May have removal steel barbs
- (d) Located in rice paddys, pits or along trails; longer version may be employed in probable helicopter or paratroop landing sites.

SUMMARIZE: Main points concerning simplicity, lethality and ingenuity.

TRANSITION: You have heard described and seen displayed many of the devices employed by the Viet Cong forces. You will now see some of the methods used by the Viet Cong to install mines, fuzes and booby traps along a jungle trail. Before we commence along the trail I want to emphasize that at no time will you step over the white engineer's tape marking the trail's edge.

BREAK

c. Demonstration Trail

NOTE: Students follow instructor on to trail

(1) Punji Pit

- (a) Show in camouflaged state
- (b) Remove camouflage
- (c) Function
 - 1. AP Weapon
 - 2. Constructed of any size pipe
 - 3. Stakes usually covered with septic material

(2) Bangalor Torpedo

- (a) Show camouflaged
- (b) Remove Camouflag
- (c) Function
 - 1. AP weapon
 - 2. Constructed of any size pipe
 - 3. Trip wire or pressure operated, may be fired electrically
 - 4. Explain neutralizing procedures

(d) Show and explain punji stakes placed along trail to cause casualties to personnel taking cover from blast.

(3) Concrete Mine

- (a) Placed to blend in with rocks along side trail
- (b) Trip wire operated
- (c) Anti-Personnel
- (d) Explain neutralizing procedures

(4) Grenade Booby Trap

- (a) Placement
 - 1. In can in tree so as to achieve airburst
 - 2. Vine used as trip wire
- (b) Explain neutralizing procedures

(5) Concrete Mine in Trail

- (a) Show placement in trail
- (b) Remove camouflage
- (c) Functioning

1. Pressure operated
2. Fragmentation effect
- (d) Explain neutralizing procedures

(6) Punji Pit

- (a) Located at trail intersection
- (b) Size and shape will vary
- (c) Explain cover material

(7) 105 MM Round Placed in Trail

- (a) Show location
- (b) Remove camouflage
- (c) Pressure operated
 1. Explain function of shear stick
 2. May be equipped with heavier shear stick for anti-vehicular operation
- (d) Explain neutralizing procedures
- (e) May be booby trapped

(8) Homemade AP Mine

- (a) Attached to tree to achieve airburst
- (b) Trip wire operated
- (c) No safety devices
- (d) Explain neutralizing procedures
- (e) Point out punji stakes along side trail

(9) Schu Mine

- (a) Placed in trail
- (b) Functioning activated by pressure
- (c) Explain neutralizing procedures

(10) Malayan Man Whip

- (a) Emphasize that students are to stay in safety zone
- (b) Constructed of bamboo, normally 3 inches in diameter
- (c) Explain trigger mechanism
- (d) Example operated by spring due to lack of bamboo

- (11) Punji Pit. Brief review.
- (12) Lever Man Trap
 - (a) Show in camouflaged state
 - (b) Remove camouflage
 - (c) Functioning activated by body weight
 - (d) Normally placed in elephant grass or rice paddys.
- (13) TMDB Russian Type Wooden Box Mine
 - (a) Remove camouflage
 - (b) Explain dual purpose, shear stick
 - (c) Explain fuze functioning
 - (d) Explain neutralizing procedures
 - (e) May be booby trapped.
- (14) Rice Paddy
 - (a) Normally filled with water
 - (b) Explain purpose of trip wire
- (15) Dead Fall
 - (a) Emphasize students are to stay in safety area
 - (b) Normally camouflaged
 - (c) Explain trigger mechanism
 - (d) Trip device and show effect
- (16) Steel Picket Booby Trap
 - (a) Two steel pickets driven into ground to form pipe
 - (b) Filled with explosives
 - (c) Trip wire operated or electrically fired
 - (d) Fragmentation effect
- (17) 81 MM Mortar Round
 - (a) Show location
 - (b) Remove camouflage and show fuze assembly
 - (c) Pressure operated, may be equipped with trip wires
 - (d) Show punji stakes used in conjunction with mine

- (e) Point out bangalore torpedo with trip wire parallel to trail

(18) 105 MM Artillary Round

- (a) Placed in tree to achieve airburst
- (b) Show location
- (c) Electrically fired by observer
- (d) Heavy fragmentation effect

NOTE: Lead Students to 2nd set of bleachers

(19) Review Trail Demonstration

- (a) Answer students questions
- (b) Emphasize placement and neutralizing procedures

TRANSITION: You have seen some of the various types of Viet Cong mines and booby traps installed in their natural state. It has probably occured to you that it would be pretty difficult to detect them. Well you are right, it is difficult, but not impossible. During the next period of instruction you will learn some of the methods and techniques used in detecting and neutralizing mines. There are only a few basic types of fuzes and firing devices. Learn the general principles and you will have a working knowledge that will equip you to neutralize most of the mines and devices you will encounter.

d. Detection and Removal

(1) Detection Methods

- (a) Suspect Areas
 - 1. Trails and routes
 - 2. Buildings
 - 3. Abandoned gear
 - 4. Stream crossings and bridges
 - 5. Likely ambush sites
 - 6. THERE ARE NO REAR AREAS

(b) Signs

- 1. Disturbed soil
 - 2. Depressions
 - 3. Areas avoided by natives
 - 4. Debris

(c) Detection Procedures

- 1. Sight limited effectiveness

2. Feel

Sleeves rolled up

Use of light stick for trip wires

Slow method, impedes fast movement

NOTE: Assistant instructor demonstrates feeling and probing techniques.

(d) Marking of Mines

1. Engineer tape
2. Strips of cloth
3. Sticks

SUMMARIZE: Too often the most common method of detecting mines is when a member of the squad sets one off. Looking for mines or signs of mines should become as much a part of your mental conditioning as squad formations or troop leading steps. Constantly being alert for mines as well as the many other things that will be on your mind during combat will be a terrific mental strain. Conditioning your mind on what to expect and continuous training can and will save your life. Detecting mines and booby traps is not a one man job. It is the responsibility of everyone and during training positions in the squad should be rotated so that each member will receive as much practice as possible in detecting and neutralizing mines.

Remember there is no one shot, sure fire method of detecting mines. The method you will employ will depend on the situation and the time you have available. Generally a combination of the methods you have seen here today will be used. There is no substitute for an alert mind.

(2) Neutralizing Procedures

(a) General: There are three methods you may use to neutralize and remove mines. They are: blow in place; remove by rope; and remove by hand. The method used will depend upon the situation. Neutralizing procedures such as replacing safeties, checking for booby traps and removing trip wires will vary with each type of mine, but the general principles will remain the same. It is beyond the scope of this class to cover in detail every type of fuze and mine and its safety features, but remember as you were told earlier in the course that once you have learned the general principles they can be applied to all but the most sophisticated type fuzes. It is doubtful that you will encounter in Vietnam any but the simple type devices.

(b) Blow in place

1. When used
2. Safest method
3. Limitations

NOTE: Instructor demonstrates using blackboard and GTA

(c) Rope removal

1. When used
2. Limitations
3. Delay investigations

NOTE: Assistant instructor investigates

(d) Hand removal

1. Least desirable
2. When used
3. One man rule
4. Safe distances for remainder of squad

NOTE: Instructor explains using GTA and blackboard; Assistant Instructor demonstrates.

TRANSITION: Although the hand removal method is not used when other methods can be applied it is the most difficult to master, and there are times when no other method can be used. Therefore we will devote most of our practice application to this method. During the next phase of instruction you will put into practice some of the methods and techniques you have learned. You will detect, neutralize and remove mines and booby traps from an area resembling that which you might encounter in Vietnam.

BREAK

NOTE: Move students to application area

(e) Application Phase

(1) General: Each mine installed in this trail area is functional and of the type you might encounter in Vietnam. The mines contain a small practice charge, not enough to cause injury, but caution should be exercised. There is always the possibility of burning fingers or causing debris to be blown into the eyes. Treat each mine as if it were alive. The assigned squad leader will be in charge of all detecting and removal operations on his trail area. The only restrictions we place are that each mine be removed by hand, that mines or devices are not damaged, and that you stay inside the marked boundaries and do not damage vegetation anymore than necessary. The boundary markers will restrict your movement to some extent, but are necessary for control and coordination of this problem.

- (2) Assign students to area
- (3) Pass out safety pins and marking tape
- (4) Instructor accompanies students taking notes for critique
- (5) Instructor insures all mines and devices are returned to dump
- (6) Critique

BREAK

NOTE: Move students to 1st set of bleachers.

3. REVIEW

- a. Questions: Clear up any questions which students may have
- b. Summarize

(1) Main points concerning Mines and Fuze

(2) Main points concerning detecting and neutralizing procedures

c. Closing Statement: Remember that this course has been designed as an orientation class to refresh your knowledge of U. S. mines and fuzes and to acquaint you with some of the mines, fuzes and devices you may encounter in the Republic of Vietnam; and to give you some practical application in detecting and removing mines. New models will probably continue to appear as the war continues. Certainly the use of mines and booby traps by the Viet Cong is limited only by their lack of materials and the limits of their ingenuity. The Viet Cong have always been well supplied with ingenuity. We hope that this course has given you an insight into the methods employed by the Viet Cong and that you have learned some of the measures you can take to counter them.

4. POLICE CALL

- a. Direct squad leaders to have man police area.
- b. Have all mines and devices returned to storage area.
- c. Caution students not to remove any mines or devices.

B Co., 1st Engr. Bn.,
 1st MarDiv, FMF, Camp Pendleton,
 California

UNIT INSTRUCTION OUTLINE

6 thru 10 Dec. 1965

SUBJECT: Instruction offered B Co., 1st A.T. Bn.

DAY	SUBJECT	TIME	TYPE INSTRUCTION
#1	Intro. to U.S. Mines & Fuses	2 hrs.	L & D
#2	Intro. to V.C. Mines & Booby-Traps	2 hrs.	L & D
#3	Tour of V.C. Booby -trap Demonstration		
#4	Clearing & Dis- arming Mines & Booby-traps	4 hrs.	L, D, & PA
#5	Test	1 hr.	PA
	Critique	1 hr.	L

Primary Instructor: Sgt. Hreon, B Co., 1st Engrs.

Purpose of Instruction:

The purpose of this block of instruction was, at the request of the S-3 of 1st A.T. Bn., to familiarize the Marines of that unit with the use and effect of mines and the extensive use of, (and nature of), booby-traps as employed by the V.C. Forces in Viet Nam today.