

DECLASSIFIED

HEADQUARTERS  
3d Engineer Battalion (Rein)  
3d Marine Division (Rein), FMF  
c/o FPO San Francisco, California 96601  
NJD/JGC/cm  
3000  
7 September 1965

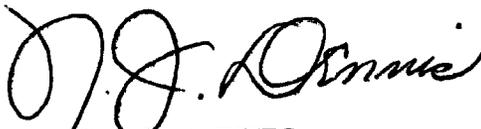
From: Commanding Officer  
To: Commanding General, 3d Marine Division, FMF (Attn: G-3)

Subj: Command Diary for period 1-31 August 1965

Ref: (a) MCO 3480.1  
(b) CG, 9th MEB Order 5750.1

Encl: (1) Command Diary for 3d Engineer Battalion

1. In accordance with the provisions of reference (a), and in compliance with reference (b), the subject report is hereby submitted as enclosure (1).

  
N. J. DENNIS

Includes Lessons 1-13

*Aug 1965*

DECLASSIFIED

7 September 1965

COMMAND DIARY

## PART I

<u>Designation</u>	3d Engineer Battalion (Rein) 3d Marine Division (Rein), FMF
<u>Period Covered</u>	1-31 August 1965
<u>Date of Submission</u>	7 September 1965
<u>Commanding Officer</u>	Lieutenant Colonel Nicholas J. DENNIS, USMC
<u>Location</u>	Located in the Da Nang Enclave, Republic of Viet Nam vicinity coordinates (AT 946755) map sheet 6659 III, Indochina 1:50,000
<u>Subordinate Units</u>	(a) Headquarters and Service Company (b) Support Company, 3d Engr Bn (c) Co "A", 3d Engr Bn (d) Co "B", 3d Engr Bn (e) Co "C", 3d Engr Bn (f) Co "C", 7th Engr Bn (g) Co "C", 1st Engr Bn
<u>Staff and Subordinate Unit Commanders</u>	(a) XO, Maj C. J. SMITH (b) S-1, CWO-2 S.L. WILLIAMS (c) S-2, 1stLt P.I. FAULKENBERRY (d) S-3, Capt J.G. CELLI (e) S-3A, 1stLt R.J. GADWILL (f) S-4, Capt J.G. DIXON (g) Sup Off, Capt R.B. McLAUGHLIN (h) Legal Off, 1stLt P.I. FAULKEN- BERRY (i) CO, Co "A", 3d Engr Bn Capt L.A. TAYLOR (j) 1st Plt, Co "A", 2ndLt B. RANTA (k) 2nd Plt, Co "A", 1stLt S.M. CLEARY (l) CO, Co "B", 3d Engr Bn Capt D.R. COMER (m) XO, Co "B", 3d Engr Bn 1stLt H.A. TOMPKINS (n) 1st Plt, Co "B", 2ndLt M. FELSKE

(CON'T)

- (o) 2nd Plt, Co "B", 1stLt J. NICHOLS
- (p) 3rd Plt, Co "B", 2ndLt J.F. BRENNAN
- (q) HE & MT Off, Co "B", 1stLt D. SHAW
- (r) CO, Co "C", 3d Engr Bn  
Capt R.F. FAUST
- (s) 1st Plt, Co "C", 2ndLt J.A. STRALEY
- (t) 3rd Plt, Co "C", 2ndLt T.J. RODRIQUEZ
- (u) CO, Co "C", 7th Engr Bn  
Capt G.H. ROOT
- (v) 1st Plt, C-7, 2ndLt W.M. BRINK
- (w) 2nd Plt, C-7, 2ndLt D.A. DEMATTEO
- (x) Bridge Plt, C-7, 2ndLt R.R. TEALL
- (y) CO, Spt Co, 3d Engr Bn  
Capt D.D. CREWS
- (z) HE Officer, Spt Co  
1stLt L. ANDERSON
- (aa) Util Officer, Spt Co  
1stLt J.M. HENNESSY
- (bb) Maint Officer, Spt Co  
CWO-2 B. GARRIS
- (cc) Assist Maint Officer, Spt Co  
CWO-2 G.L. GUTHRIE
- (dd) CO, H&S Co/Comm Off, 3d Engr  
Bn, Capt J.L. WHALEY
- (ee) XO, H&S Co, 3d Engr Bn  
1stLt J.S. PARSONS
- (ff) Spl Project Officer  
2ndLt M.J. CHUMER

PART II

## Narrative Statement

During the month of August, the 3d Engineer Battalion (Reinforced) continued to perform it's mission by providing combat and service engineer support to the 3d Marine Division and it's attachments. The support was provided to Division units within all Marine enclaves in the Republic of Viet Nam.

ENCLOSURE (1)

7 September 1965

(CON'T)

The strength and capability of the 3d Engr Bn remained rather stable during August. On 31 August 65, the strength of the Battalion consisted of 35 officers and 810 enlisted men as compared to the 1 August strength of 37 Officers and 795 enlisted personnel. Company C (-), 1st Engr Bn landed at Chu Lai, RVN on 15 August 1965 and remained under the administrative control of the 3d Engr Bn. The 6 officers and 125 enlisted of Co C, 1st Engr Bn raised the chargeable strength of the 3d Engr Bn to 41 officers and 935 enlisted. As with Co B, 3d Engr Bn which is under the operational control of the 4th Marines, the operational control of Co C, 1st Engr Bn remained with the 7th Marines located at Chu Lai, RVN.

The 3d Engineer Battalion Headquarters, located near Khanh Son, RVN, four miles west of Da Nang, maintained operational and administrative control of H&S Co, Engr Support Co, Co A, Co C, and Co C, 7th Engineer Battalion. Engineer units under the administrative control of the 3d Engr Bn are; 1st Plt, Co C, 1st Engr Bn at Qui Nhon; 3d Plt, Co A, 3d Engr Bn at Phu Bai; Co B (Rein), 3d Engr Bn and Co C (-), 1st Engr Bn at Chu Lai. This Battalion supported the engineer units located in other than the Da Nang enclave with replacements, construction materiel, engineer equipment, and engineering guidance. Materiel shipped to these enclaves included eight strongback kits, four 4-hole heads w/e enclosures, one 55 GPM pump, two power saw blades, 200 lbs of nails, 800 lbs of water supply chemicals, 74 sheets of plywood, 38 rolls of insulation, and 6 rolls of roofing felt.

ENCLOSURE (1)

7 September 1965

(CON'T)

The staff and organizational assignment of officers within the Battalion are set forth in Part I of this diary. No officers joined the Battalion during the month other than those officers reporting with Company "C", 1st Engr Bn except Major B.A. KAASMANN. Major KAASMANN returned to the Battalion from 13-20 August 1965, and again rejoined the 3d Engr Bn on 30 August 1965. Two officers, Major J.P. HRAYNAK and Captain E.R. MARKELL rotated from RVN during August. Captain P.E. WESTPHAL, 1stLt C.W. WALKER, and 1stLt J.M. SIMPSON were reassigned within the 3d Marine Division. 2ndLt J.C. SHUMAKER was evacuated from the Republic of Viet Nam as a result of injuries received while participating in combat operations south of Da Nang, RVN. Lt SHUMAKER received extensive shrapnel wounds in his legs when a VC booby trap exploded near him on 11 August 1965.

During the first week of August the 3d Engr Bn moved from its location on the Southwest side of Da Nang Airfield to a location 4 miles west of Da Nang near Khanh Son, vicinity coordinates (AT 947-755), Viet Nam, Sheet 6659 III, series L701. The Battalion echeloned forward to its new location over a period of about four days. However, complete movement of all the Battalion equipment and supplies extended over a period of about eleven days requiring 258 lifts using six M54s, three M52s, and five bridge trailers. Expeditious movement of the Battalion was curtailed due to engineer support commitments and narrow roads to the area which have since been improved.

ENCLOSURE (1)

7 September 1965

(CON'T)

The month of August showed increased requirements for combat engineer support. These operations accounted for 405 men being committed on thirty-seven separate combat operations totaling 1,063 man days of effort. These operations do not include the daily requirements for mine detection teams committed to sweeping MSR's and bridges in the Da-Nang enclave. On six occasions a platoon or larger was committed, including two Engr Company size support operations. In all cases the engineer support was provided in the form of sweep and clear mine detection and demolition teams. On one of the operations extensive information was obtained concerning VC tunnels, caves, booby traps and panji pits/stakes. The operation was supported by Company "A", 3d Engr Bn, Commanded by Captain L.A. TAYLOR on 2-4 August 1965. This operation required 156 man days of engineer support. Included with the after action report submitted by Captain TAYLOR were sketches and diagrams of VC obstacles and fortifications that were encountered and destroyed during the operation. The diagrams were reproduced and distributed to units of 3d Marine Division, a copy of which is attached to this diary. The company destroyed one concrete bunker, eight caves, eleven bunkers, fifteen tunnels, one man trap, three VC mines and one napalm bomb. A total of 467 pounds of C-4 explosive and 2,145 feet of detonating cord were expended on the operation. The obstacles and fortifications destroyed on this operation are typical of those encountered on previous and subsequent operations.

ENCLOSURE (1)

7 September 1965

(CON'T)

Also during August, engineer crews were furnished for two LVTE-1 tractors on three separate occasions.

Aside from the combat engineer support furnished 3d Marine Division units, the 3d Engr Bn was heavily committed in general, engineer support of units within the Marine enclaves in the Republic of Viet Nam. Major projects in the Da Nang enclave that extended into August included; capping the road around Hills 268 and 327 with laterite, developing the new Hq Bn CP site, construction of the Division Command Post Bunker and improvement of the Dai La Pass Road.

The project of capping the road around Hills 268 and 327 from coordinates (AT 990746) to (AT 950750) of reference (a), involved approximately 5,600 meters of road. The project involved capping the road with eight inches of laterite and spreading water and oil for compaction and dust control. The project was completed on 3 August 1965, taking fourteen days to complete. All available 3d Engineer Battalion dump trucks in conjunction with MRS-200 tractors with scrapers were used to haul laterite for capping. Approximately 14,000 cubic yards of laterite were hauled and spread on the road during the period. In conjunction with the laterite hauled, approximately 115,000 gallons of water and 16,00 gallons of oil were hauled and spread on the road for compaction and dust control.

The development of the new Hq Bn, 3d Marine Division CP location started during the latter part of June extended through August.

ENCLOSURE (1)

7 September 1965

(CON'T)

The location of the new site is on the northern slope between Hills 268 and 262, overlooked by and adjacent to the Division Command Post Bunker (to be covered later in this Diary). Second Lieutenant D. A. DeMATTEO, the assigned officer in charge of the project completed staking out the entire Battalion area and had prepared drainage plans by 1 August 1965. The location of the Battalion is situated on the side of a mountain and the immediate surrounding area. During the first days of August work was started on developing the drainage system and internal road net for the area. A number of intercept ditches were dug using a TD-18 and TD-15 for the work. Approximately 700 meters of ditch were dug, five feet deep and approximately twelve feet wide. In conjunction with digging the ditches almost five miles of internal roads were roughed out in the area. In mid August the requirement to develop a road to the summit of Hill 262 for use by MASS-2 was added to the project. During the development of the road heavy going was encountered and required six days of blasting. Seventy loads of rock were removed from the site and hauled to the Division Command Post Bunker, and were used as fill behind the backwall. In late August, materials began arriving for the cantonment construction program. As part of this program the 3d Engr Bn was required to construct 280 strongback tents, two shower facilities, ten heads, one 1500 man messhall, and one 500 man messhall in the Hq Bn area. These facilities are to be used by Service Company, Comm Company, Hq Company and the Military Police Company of Hq Bn.

ENCLOSURE (1)

7 September 1965

(CON'T)

On 25 August 1965, Company "C", 7th Engr Bn, 3d Engr Bn, commanded by Captain G.H. ROOT was assigned the project of building the aforementioned structures with augmented personnel from Spt Co, Co A, and Co C, of the 3d Engr Bn. Working twenty hours a day, with two shifts, sixteen admin and fifty-three billeting strongbacks were completed by 31 August 1965. Also completed was the site preparation for the 1500 man messhall under the supervision of 1stLt L.R. ANDERSON. This project required 300 engineer equipment hours and 360 man hours to level and grade.

Construction of ASP #2, under the supervision of 1stLt W.M. BRINK began on 5 July 1965. The project consisted of seven ammunition storage bunkers located on the Northeast slope of Hill 364, in Hoa Khanh Province west of Da Nang. By 1 August, the extensive earthwork involved in roughing out the seven bunkers had been completed. By 24 August, ASP #2 was completed for use as an ammunition storage point except for the PSP decking which is not yet available. During August, Lt BRINK and the 1st Plt of C-7 completed; 1.3 miles of road serving the area; installed sixteen culverts with headwalls using 990 feet of culvert material and 482 bags of cement; and completed final grade work and retreating of the seven bunkers. A total of 6,200 man hours and 1,300 Motor transport/Engr Equipment hours were expended on the project during August

Construction of the Division Command Post Bunker progressed considerably during the month of August. This was primarily due to increased availability of materials required for the project.

ENCLOSURE (1)

7 September 1965

(CON'T)

The bunker, located on the north-east slope of Hill 262 is being constructed under the supervision of 2ndLt M.J. CHUMER. The project consists of constructing in the side of a mountain a structure 240' x 40' with an eight foot earth cover, fronted with a sand bag blast wall. During August the concrete work on the bunker was completed. Sixty footings, 7850 square feet of concrete deck and 960 square feet of concrete backledge were poured requiring approximately 278 cubic yards of concrete. In addition, forty-six posts were set and caps placed on them; the backwall and right sidewall sheathing was completed, including the placement of seventy truck loads of rock behind them; 37,000 of the estimated 300,000 sand bags were filled for the blast wall and overhead cover; and moving the tremendous of timber and sheathing to the site continued. On 31 August, the timber construction was approximately 58% completed.

Improvement of the Dai La Pass road from coordiantes (AT 942775) to (AT 920742) was completed on 31 August. The project was started during the middle of July and involved extensive widening and drainage development. By 1 August, the cutting through Dai La Pass was completed, which involved many hours of drilling and blasting thru rock ledges on either side of the road. The 2.3 miles of road required; 615 loads of fill (3906 cubic yards); repair of eight bridges using 1,636 board feet of timbers and 12 pieces of PSP; and installation of six culverts and headwalls using 268 feet of culvert material and forty-three bags of cement to improve the road to an average width of twelve feet and to a Class 60 road (except for bridge width restrictions).

ENCLOSURE (1)

7 September 1965

(CON'T)

The road required 4140 man hours and 615 motor transport/engineer equipment hours to complete.

In addition to the engineer projects that overlapped into August, many new and varied tasks were undertaken during August. The major projects included; improvement of the Da Son road and bridges; construction of the A-1/3 access road; expansion of ASP #1; constructing enclosures for the field sanitation program; standard strongbacking projects; providing engineer assistance in moving the 2/3 and 3d Marines CP locations; and improvement of the 2/9 MSR.

Improvement of the Da Son Road from coordinates (AT 968767) to (AT-942755) began on 16 August, under the supervision of 2ndLt B. RANTA. The 3400 meters of road required extensive widening and ditching development, in conjunction with repairing and widening three bridges. Improvement of the road and bridges required 2,475 cubic yards of laterite fill, 796 feet of bridge timbers and five bags of cement. The project was completed on 28 August, requiring twelve days, 1240 man hours, and 740 motor transport/engineer equipment hours. Construction of the A-1/3 access road, also supervised by 2ndLt RANTA, was started on 24 August, requiring five days to complete. The project included installing seven culverts (4-36" and 3-18") and hauling fill to raise the road over the culverts. A total of 515 feet of culvert material, 162 feet of 6x6 timbers, and 108 cubic yards of fill were expended on the project. The project was completed on 29 August, requiring 517 man hours and 60 motor transport/engineer equipment hours.

ENCLOSURE (1)

7 September 1965

(CON'T)

Expansion of ASP #1, was started on 1 August by personnel of Co C, 3d Engr Bn, commanded by Captain R. F. FAUST. The project included revetting two bunkers, and constructing 600 meters of road with appropriate drainage culverts. The project was completed on 8 August, requiring twenty-seven feet of culvert, 8 bags of cement, 500 man hours, and 461 motor transport/engineer equipment hours.

Throughout the month of August all units of the Battalion were involved in construction of standard GP strongbacks, screened head enclosures and mess tables for the various units of the Third Marine Division. Twenty-nine GP strongbacks, thirty-eight screened head enclosures, and forty mess tables were constructed during the month. In many cases the materials were pre-cut and issued to requesting units for assembly.

On 22 August, Co "A", 3d Engr Bn, began providing the necessary engineer assistance required to move the 3d Marine, Regimental Headquarters and on 22 August, the 2ndBn 3d Marines Headquarters. The tasks involved were site preparation, drainage development, disassembly, moving and reconstruction of strongbacks, and construction of new strongbacks. Nine strongbacks were moved and two new strongbacks constructed for the Regimental Headquarters and six strongbacks moved for 2ndBn 3d Marines CP. The two projects were completed by 31 August, requiring 1,420 man hours and 86 motor transport/engineer equipment hours.

Construction of the 2ndBn, 9th Marine MSR from coordinates (AT-998705) to (AT 996687) of reference (a), was started on 26 August 1965.

ENCLOSURE (1)

7 September 1965

(CON'T)

Co "C", 3d Engr Bn, moved a Platoon of 31 men and established a base camp near Duong Son (1) (AT 996687) to work on the road. Improvement of the road required extensive fill and culvert installation in conjunction with widening and improving bridges. By 31 August, 67 loads of fill and rock were hauled, four culverts installed, and 500 yards of the road completed. During August, approximately 2360 man hours and 480 motor transport/engineer equipment hours were expended on the road.

The projects previously discussed were major projects extending longer than a few days. Numerous requests for engineer assistance requiring minor work, yet when combined, required perhaps more coordination and effort than any one of the major projects. In conjunction with the engineer support activities to 3d Marine Division units, organization and improvement of the Engineer Battalion CP location was continuously undergoing changes. The new Battalion location required complete electrical and communications wiring systems to service the camp. Approximately 7000 feet of wire, 50 power poles and two generators were used to distribute electricity throughout the camp. Approximately eight miles of comm wire was used to provide internal communications within the camp, and six miles of external lines. A total of 34 trunk lines were operated by the Engineer Battalion Communications Section, commanded by Captain J.L. WHALEY. In addition, the messhall was completely strongbacked, the EM Club built, and five standard GP strongbacks completed as part of the Battalion cantonment program.

ENCLOSURE (1)

7 September 1965

(CON'T)

The Battalion Utilities Section, under the direction of 1stLt J.M. HENNESSY, operated the 3d Marine Division water points in the Da Nang Enclave. An average of 125,000 gallons of potable water was distributed daily, using a total of 7,700 pounds of purification chemicals.

During the latter part of August, the Bridge Platoon, commanded by 2ndLt R. R. TEALL, erected a five float, Class 60 raft at the railroad bridge across the Song Cau Do River on Highway 1A. The raft was erected to provide a crossing for tanks to be used south of the river on operations. The raft was erected in 8 hours and 15 minutes, a considerable improvement from the previous erection time of 12 hours. 2ndLt TEALL, also conducted many reconns during the month for future/possible bridge or raft sites in the DaNang and Chu Lai areas. A raft site was selected to cross the Song An Tan River at Chu Lai near the Route 1 bridge. The site will require some earthwork preparation, but is a suitable crossing site. Also during the month of August, the Battalion conducted a concentrated Land Mine Warfare School to 3d Marine Division Organizations. This school was presented to the small unit leaders primarily from infantry organizations. Emphasis in the school was placed on Viet Cong mines and booby traps. The school is designed to equip the small unit leaders to return to their parent organizations and present the instruction to Marines within their respective units. A complete set of lesson plans (see part III) with space allotted for pertinent notes is presented to each man attending the Battalion school. At the conclusion of the class, student

ENCLOSURE (1)

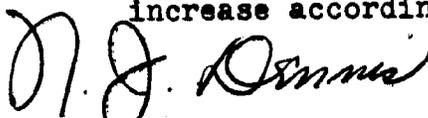
7 September 1965

(CON'T)

comment sheets are forwarded to the G-3, 3d Marine Division for information. These comments have indicated strong student enthusiasm, attentiveness, and motivation. In August, 114 small unit leaders attended the Battalion school.

The foremost projects confronting the 3d Engr Bn at the end of August are opening and maintaining the routes of communication, the Division Command Post Bunker, and the Hq Bn Cantonment Construction Project. The Battalion is exerting maximum effort to complete the Bunker and Cantonment projects at the earliest possible date.

Reconstruction and maintenance of routes of communications is a continuing major project unto itself. Based on proposed tactical moves in the immediate future, this Battalion will be very heavily committed in the Southern sector of the Da Nang TAOR. Route reconnaissance is currently underway utilizing every practicable means of transportation including vehicle, helicopter, and boat. Detailed and thorough measurements and computations are being made where feasible. Estimates of requirements are being computed from map and aerial photo studies. As a direct result of one of these reconnaissance missions, an M-6 fixed span bridge will be installed at (BT 071-701) to facilitate the advance of the 1st Bn, 9th Marines. Because of the terrain in the area, a major expenditure of effort will be required in the repair and rebuilding of bridges and culverts. It is obvious that as the TAOR expands, the extensive engineer requirements in maintaining routes of communications will increase accordingly.

  
N. J. DENNIS

1. =

LESSON

Introduction

TIME ALLOTTED

15 minutes

TYPE OF LESSON

Lecture

OBJECTIVE

To instill in the student the increased use of mine warfare, throughout History & the present day use by the U.S. and Viet Cong, Also why you need to know & purpose of mines & minefields

1. Introduction

2. History

a. Earliest known

b. Civil War

c. World War I

d. World War II

e. Korean War

f. Vietnam

3. Why you need to know

4. Purpose of mines & minefields

(1)

(2)

(3)

(4)

2.

LESSON: Fundamentals of Mines  
 TIME ALLOTTED: 30 Minutes  
 TYPE OF LESSON: Lecture  
 OBJECTIVE: To teach the student the terminology used in Mine Warfare and to give him the basic principles of Mines and Fuzes.

1. Terminology

- a. Fuzes
- b. Firing Devices
- c. Fuzing
- d. Arminging
- e. Disarming
- f. Neutralizing
- g. Safeties
- h. Activating

2. ~~Components~~ Components of a Mine

- (1)
- (2)
- (3)
- (4)

6 (50)

3. Types of Initiating Action

- a. The Firing Chain
- b. Types of initiating action

- (1) (6)
- (2) (7)
- (3) (8)
- (4) (9)
- (5) (10)

4. Types of Fuzes

- a. Percussion (Mechanical)
- b. Chemical
- c. Friction
- d. Electrical

5. Classification of Mines

- a. Anti-tank mines
  - (1)
  - (2)
- b. Anti-personnel mines
  - (1)
  - (2)

6. Types of mines

- a.
- b.
- c.
- d.

3.

LESSON: U.S. Firing Devices  
TIME ALLOTTED: 1 Hour  
TYPE OF LESSON: Lecture and Demonstration  
OBJECTIVE: To teach the Students the U.S. Firing Devices to include the Description, Functioning, testing, installation and neutralizing

## 1. U.S. Firing Devices

## a. The M1A1 Pressure Type

- (1) Description:
- (2) Functioning:
- (3) Testing:
- (4) Installation:
- (5) Neutralizing:

## b. The M1 Pull Type

- (1) Description:
- (2) Functioning:
- (3) Testing:
- (4) Installation:
- (5) Neutralizing:

## c. The M2 Pull Friction

- (1) Description:
- (2) Functioning:
- (3) Testing: Cannot Be Tested
- (4) Installation
- (5) Neutralizing:

d. M3 Pull-Tension Release type

- (1) Description:
- (2) Functioning:
- (3) Testing: Cannot be tested
- (4) Installation:
- (5) Removal

e. M5 Pressure-Release type

- (1) Description:
- (2) Functioning:
- (3) Testing:
- (4) Installation:
- (5) Neutralizing:

f. The Mark 1 Mod. 1 Firing Device

- (1) General
  
- (2) Functioning
  - (a) Pressure
    - 1. Functioning
    - 2. Testing

(b) Pull

1. Functioning

2. Testing

(c) Pressure Release

1. Functioning

2. Testing

(d) Tension Release

1. Functioning

2. Testing

(3) Installation

(4) Removal.

4

LESSON: Anti-personnel Mines and Trip Flares.

TIME ALLOTTED: 1½ Hour

TYPE OF LESSON: Lecture

OBJECTIVE: To teach the students the characteristics, capabilities and correct use of A.P. mines and Flares

1. M2A4 A.P. mine
  - a. Type of A.P. mine
  - b. Type of fuze:
  - c. Functioning:
  - d. Casualty Radius:
  - e. Danger Radius:
  - g. Laying:
  - h. Arming:
  - i. Neutralizing:
2. M16A1
  - a. Type of mine :
  - b. Type of fuze:
  - c. Functioning:
  - d. Casualty Radius:
  - e. Danger Radius:
  - f. Laying:
  - h. Arming
  - i. Neutralizing:
  - j. Sympathetic detonation:

3. M 18 A.P.

- a. Type of mine:
- b. Functioning:
- c. Casualty Radius:
- e. Backblast Radius:
- f. Arming:
- h. Arming:
- i. Neutralizing:

4. M13A1

- a. Type of mine:
- b. Functioning:
- c. Casualty Radius:
- d. Danger Radius:
- e. Backblast Radius:
- f. Aiming:
- g. Arming:
- h. Neutralizing:

i. Use As:

(a) Mine

- 1. Trip wired

(b) Controlled weapon

- 1. Electrip
- 2. Pull wire to M-1 Firing Device

5. M14 A.F.

- a. Type of mine
- b. Purpose of the mine
- c. Arming
- d. Neutralizing

6. M48 Trip Flare

- a. Type
- b. Functioning
- c. Burning Time
- d. Radius Covered
- e. Candle Light
- f. Arming
- g. Neutralizing

7. M49 Trip Flare

- a. Type
- b. Functioning
- c. Burning Time
- d. Radius Covered
- e. Candle Light
- f. Arming
- g. Neutralizing

8 M49A1

- a. Type
- b. Functioning
- c. Burning Time
- d. Radius Covered
- e. Candle Light
- f. Arming
- g. Neutralizing

5

LESSON: Anti-Tank Mines  
TIME ALLOTTED: 1 Hour  
TYPE OF LESSON: Lecture and Demonstration  
OBJECTIVE: To teach the student the characteristics, capabilities, and the use of Anti-Tank Mine.

1. General

a. Methods of Emplacement

- (1) Hot Cross Bun
- (2) H-Cut
- (3) U-Cut
- (4) Scoop Method

2. M6A2

- a. Type of A.T. Mine
- b. Description
- c. Fuze Required
- d. Booster Required

3. M-15 A.T. Mine

- a. Type of Mine
- b. Description:
  - (1) Fuze Required
    - (a) Functioning:
  - (2) Booster Required:
  - (3) Activator Required:
- c. Functioning:
- d. Laying
- e. Arming

- f. Boobytrapping (Activating)
- g. Neutralizing
- h. Effectiveness
- i. Sympathetic Detonation

4. M-19 A.T. Mine

- a. Type of A.T. Mine:
- b. Description
  - (1) Fuze Required
    - (a) Fuze Functioning
  - (2) Booster Required
  - (3) Activator Required
- c. Functioning
- d. Laying
- e. Arming
- f. Boobytrapping (Activating)
- g. Neutralizing
- h. Effectiveness
- i. Sympathetic Detonation

5. M-21 A.T. Mine

- a. Type of A.T. Mine
- b. Description
  - (1) Fuze Required
    - (a) Functioning
      - (1a) By pressure
      - (1b) By Tilt Rod
  - (2) Booster Required

- c. Functioning
- d. Laying
- e. Arming
- f. Boobytrapping (Activating)
- g. Neutralizing
- h. Effectiveness
- i. Sympathetic Detonation
- j. Miscellaneous Information

M612 Fuze

6

LESSON: Booby Traps  
TIME ALLOTTED: 1 Hour  
TYPE OF LESSON: Lecture  
OBJECTIVE: To teach the student the general information pertaining to Boobytraps and Dirty Trick Devices.

1. Characteristics

- a. Definition
- b. Types of Boobytraps:
  - (1)
  - (2)
- c. Component parts:
  - (1)
  - (2)
  - (3)
- d. Purpose of Boobytraps:
  - (1) Main purpose
  - (2) Other purposes

2. Installation:

- a. Authority:
  - (1)
  - (2)
- b. Selection of a site:
  - (1)
  - (2)
  - (3)
  - (4)

c. Why Boobytraps work:

- (1) Habit
- (2) Curiosity
- (3) Acquisitiveness
- (4) Desire for comfort

d. To increase Effectiveness

- (1)
- (2)
- (3)
- (4)

e. Installing Party

- (1) Plt. Ldr:
- (2) Plt. Sgt:
- (3) Team(s)

3. Detection of Boobytraps

a. Outdoors

- (1)
- (2)
- (3)
- (4)

b. Indoors

- (1)
- (2)
- (3)
- (4)

4. Neutralizing:

a. Tactical Units:

b. Combat Engineers

c. Marking and Reporting

5. Boobytrap Removal

a. Removal Teams:

(1)

(2)

(3)

b. Methods of Removal:

(1)

(2)

(3)

LESSON: Enemy Mines and Boobytraps  
TIME ALLOTTED: 2½ Hours  
TYPE OF LESSON: Lecture  
OBJECTIVE: To acquaint the student with enemy mines and boobytraps that may be encountered in Vietnam.

SOVIET

1. General Information
  - a. Soviet Doctrine
    - (1) Employment
    - (2) Patterns
    - (3) Booby Trapping
  - b. Mining
    - (1) Mine Spacing Cord
    - (2) Marking Cord
    - (3) A.P. and A.T. Panels
    - (4) Typical Soviet Minefield
2. Fuzes
  - a. MUV Pull Fuze
    - (1)
    - (2)
    - (3)
  - b. V.P.F. Pull Fuze
    - (1)
    - (2)
    - (3)

d. VZ-1 Vibration

(1)

(2)

(3)

e. CHVZ Vibration

(1)

(2)

(3)

3. Anti-Personnel Mines

a. PMD-6

(1)

(2)

(3)

b. PMK-40

(1)

(2)

(3)

c. POMZ-2

(1)

(2)

(3)

4. Anti-Tank Mines

a. TMD-B and TMD-44

(1)

(2)

(3)

b. YAM Series

(1)

(2)

(3)

c. TH 46

(1)

(2)

(3)

5. Special and Improvised Mines

a. See-Saw Tread Mine

(1)

(2)

(3)

b. Clothespin Electric

(1)

(2)

(3)

c. Dog Mine

(1)

(2)

(3)

d. Special Employment

(1)

(2)

(3)

VIET CONG

1. Doctrine
2. Fuzes
  - a.
  - b.
  - c.
3. Mines
  - a. Concrete
    - (1)
    - (2)
    - (3)
    - (4)
  - b. Cast Iron
    - (1)
    - (2)
    - (3)
    - (4)
  - c. Sheet Metal
    - (1) Water Mines
      - (a)
      - (b)
    - (2) Land Mines
      - (a)
      - (b)
      - (c)
      - (d)

(e)

(f)

(3) Special Purpose and Booby traps

(a)

(b)

(c)

(d)

(e) Bullet Mines

(1)

(2)

(3)

(4)

(5)

(6)

(7)

4. Non-Explosive Devices

a. Punji Pits

(1)

(2)

(3)

(4)

(5)

b. Bamboo Spring Devices

(1)

(2)

c. Dead Falls

(1)

(2)

d. Miscellaneous

- (1)
- (2)
- (3)
- (4)
- (5)
- (6)
- (7)

NOTES

§

LESSON: V. C. Markings

TIME ALLOTTED: 30 Minutes

TYPE OF LESSON: Lecture

OBJECTIVE: To acquaint the student with methods used by V.C. of Marking mines etc.

1. General

a.

b.

2. Specific

a. Stick or bamboo broken at right angles in road or trail indicates mines or booby traps 200/400 meters ahead.

b. Three sticks or stones placed across trail indicates trail is unsafe.

c. Cactus in trail indicates trail is unsafe.

d. Sign saying "CHU MIN"; indicates mines 200/400 meters ahead, sign is on side of road/trail.

e. Sign "CAM", indicates mines or booby traps in immediate area or on trail.

f. One to three strings above entrance to house or cave indicates booby traps. Strings may be any length, any color.

g. Tripod of wood about 2' High indicates Panji pit. Tripod directly over pit.

h. Triangle of sticks on trail indicates mines or booby traps in area.

i. Stick or length of bamboo along side and parallel to trail indicates safe for V.C., should be safe for you.

3. Discussion. (Not positive means of detection)

4. Summary.

LESSON:

Possible location of V.C. weapons caches and tunnels.

TIME ALLOTTED:

15 Minutes

TYPE OF LESSON:

Lecture

OBJECTIVE:

To acquaint students with possible hiding places used by the V.C.

1. Weapons Caches

a.

b.

c.

d.

e.

f.

g.

2. Tunnels

a.

b.

c.

d.

e.

10

LESSON:

Methods of Detection and  
Removal

TIME ALLOTTED:

30 Minutes

TYPE OF LESSON:

Lecture

OBJECTIVE:

To acquaint the student with  
methods of Detection and Re-  
moval

1. Detection

a.

b.

c.

d.

2. Removal

a.

b.

c.

d.

13

LESSON: Non-Electric Priming for Breaching Operations

TIME ALLOTTED: 1 Hour

TYPE OF LESSON: Lecture, Demonstration

OBJECTIVE: To familiarize the student with the knowledge he will need in order to breach a minefield with explosives and demolitions.

1. Non-Electric Priming

a. Equipment

- (1) M2 Cap Crimpers
- (2) Cap Box
- (3) Priming Adapters
- (4) Tape

b. Materials

- (1) Time Fuze
  - (a)
  - (b)
  - (c)
- (2) M2 Weather-proof Fuze Lighter
  - (a)
  - (b)
  - (c)
  - (d)
- (3) Non-Electric Blasting Cap
  - (a)
  - (b)
  - (c)
  - (d)

(4) Detonating Cord

(a)

(b)

(c)

(5) Detonating Cord Clip

(a)

(b)

(c)

(6) TNT

(a) Characteristics

(1)

(2)

(3)

(4)

(5)

(7) C-4

(a) Characteristics

(1)

(2)

(3)

(4)

(5)

c. Testing Time Fuze

(1)

(2)

(3)

(4)

(5)

d. Capping the Fuze

- (1)
- (2)
- (3)
- (4)
- (5)

e. Dual-Detonating Assembly

- (1)
- (2)
- (3)
- (4)

f. Non-Electric Priming with Capped Fuze.

- (1) TNT
  - (a)
  - (b)
  - (c)
  - (d)
- (2) C-4
  - (a)
  - (b)
  - (c)
  - (d)

2. Detonating Cord Firing Systems

a. General

- (1) Knots used with Det-Cord.
  - (a) Square Knot
  - (b) Girth Hitch

- (c) Clove Hitch
- (d) Rolling Hitch
- (e) Det-Cord Clip

b. Det-Cord Priming of Explosives

(1) TNT

- (a) Capped Det-Cord
- (b) Rolling Hitch
- (c) Mountain Whirl
- (d) 3 Round Turns and a Half Hitch

(2) C-4

- (a) Capped Det-Cord
- (b) Overhead Knot on a Bight

c. Det-Cord Firing Systems

(1) Trunk Lines

- (a)
- (b)
- (c)

(2) Ring Mains

- (a)
- (b)
- (c)

(3) Connection of Branch Lines

- (a)
- (b)
- (c)

(4) Connecting Dual-Detonating Assembly

3. SUMMARY.

12

LESSON:

Field Expedient Mines

TIME ALLOTTED:

30 Minutes

TYPE OF LESSON:

Lecture

OBJECTIVE:

To provide the student with the basic knowledge of improvising mines and booby traps.

1. Anti-Personnel Mines

- a.
- b.
- c.
- d.
- e.
- f.

2. Anti Tank

- a.
- b.
- c.
- d.
- e.

3. Fougasses

a. Flame Fougasses

- (1)
- (2)
- (3)
- (4)

b. Rock Fougasses

- (1)
- (2)

4. 3.5 Rocket Round

a.

c.

LESSON: Breaching and Clearing  
 TIME ALLOTTED: 1 Hour  
 TYPE OF LESSON: Lecture  
 OBJECTIVE: To teach the students the methods of Breaching, Area Clearance and Route Clearance.

1. Breaching.

a. Deliberate Breaching

(1) Reconnaissance

- (a)
- (b)
- (c)
- (d)
- (e)

(2) Plans and Preparations

- |     |     |
|-----|-----|
| (a) | (e) |
| (b) | (f) |
| (c) | (g) |
| (d) | (h) |

(3) Breaching and Attack

(a) Breaching Party:

(1) Functioning

- (1a)
- (1b)
- (1c)
- (1d)
- (1e)
- (1f)
- (1g)
- (1h)

(2) Footpaths

(3) Traffic Lanes

(1a)

(1b)

(4) Miscellaneous Information

(4) Passage of Forces

(a)

(b)

(c)

(d)

(e)

(f)

b. Hasty Breaching

(1)

(2)

(3)

(4)

(5)

(6)

2. Area Clearance

a. Principals of Area Clearance

b. Methods

(1)

(2)

(3)

(4)

c. Preparations

- (1)
- (2)
- (3)
- (4)
- (5)

d. Safety Precautions

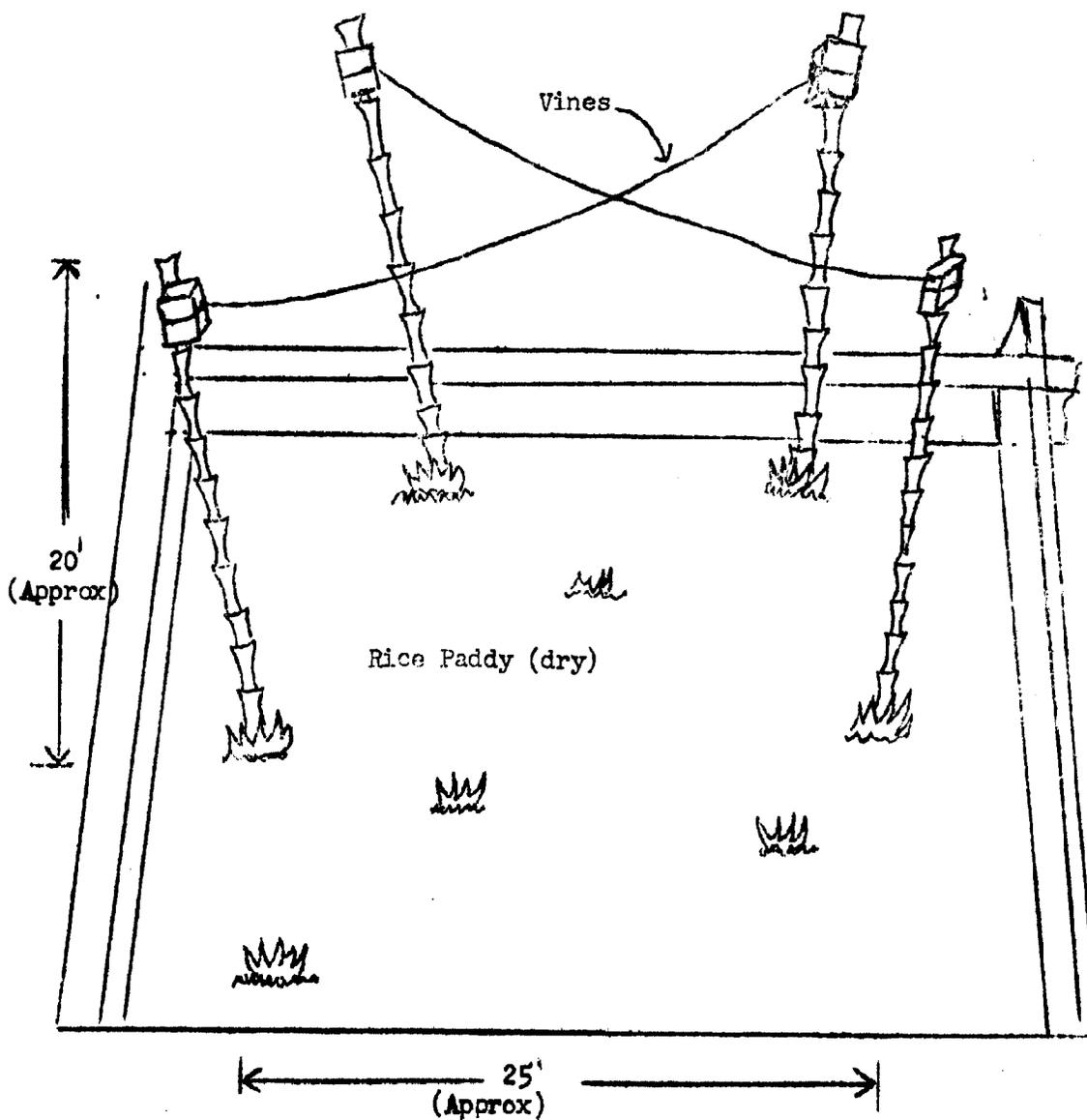
- (1) Behavior
- (2) Others
  - (a)
  - (a)
  - (c)
  - (d)

3. Route Clearance

- a. General Information
- b. Stage # 1
- c. Stage # 2

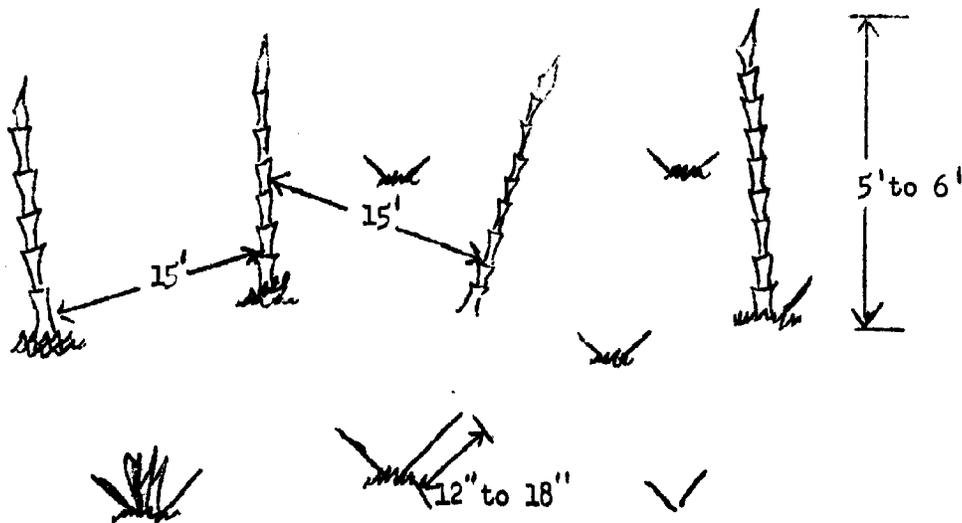
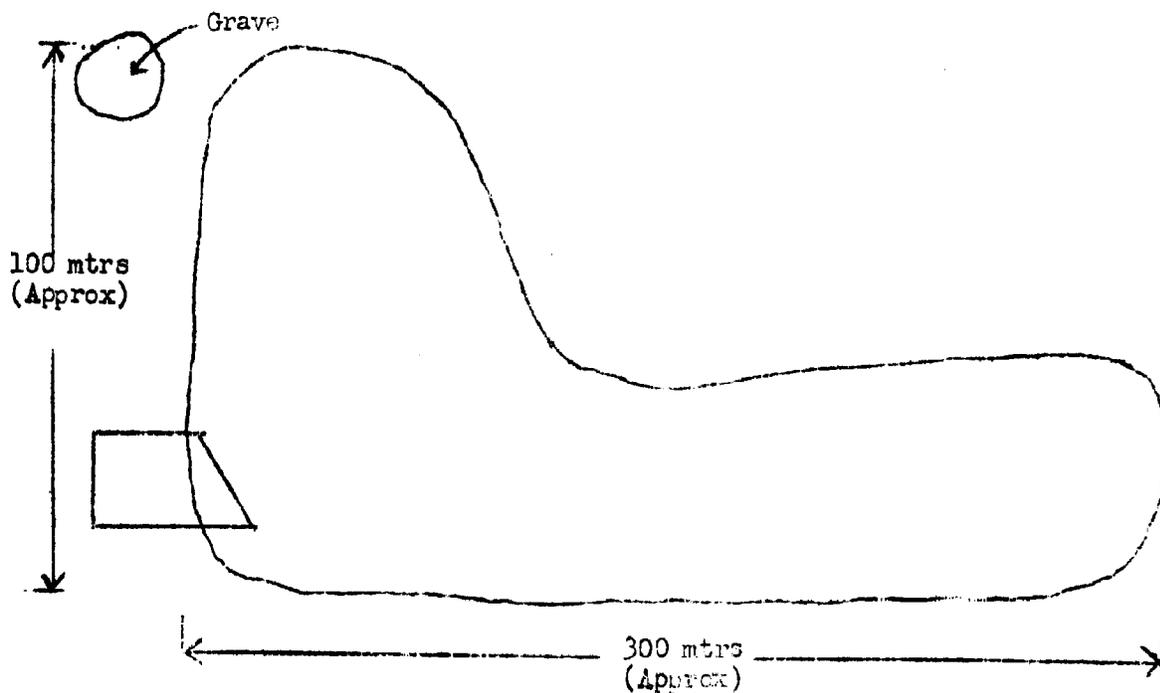
4. Summary.

ANTI-COPTER MINES (?)



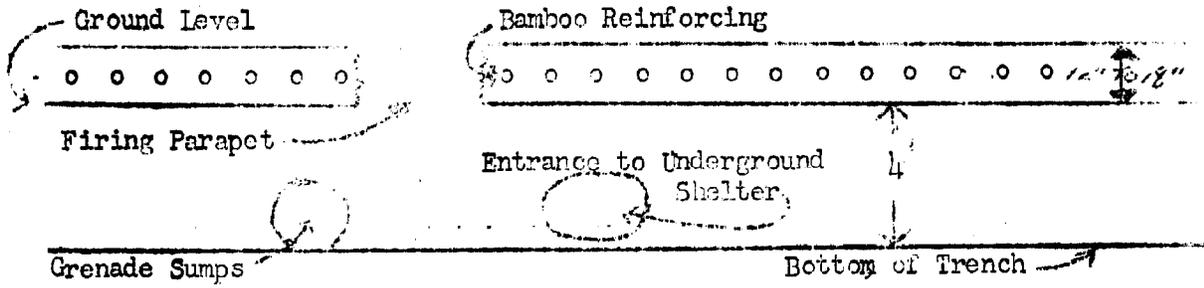
**NOTE:**  
Vines appeared to be attached to charges placed at top of poles,  
it was not checked out.

ANTI-HELICOPTER STAKES

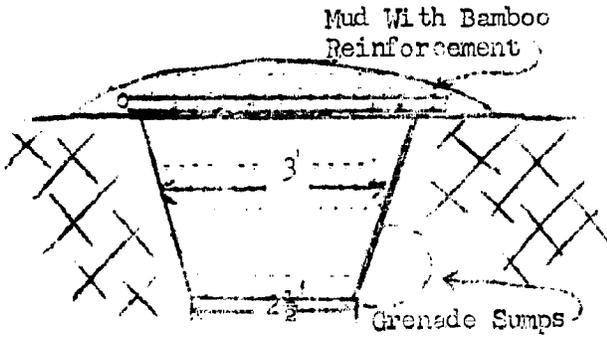


TRENCH LINE

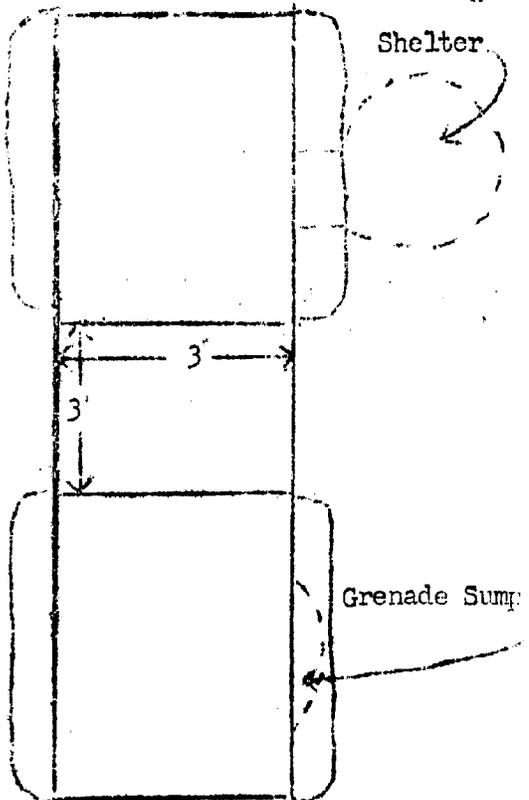
Side View



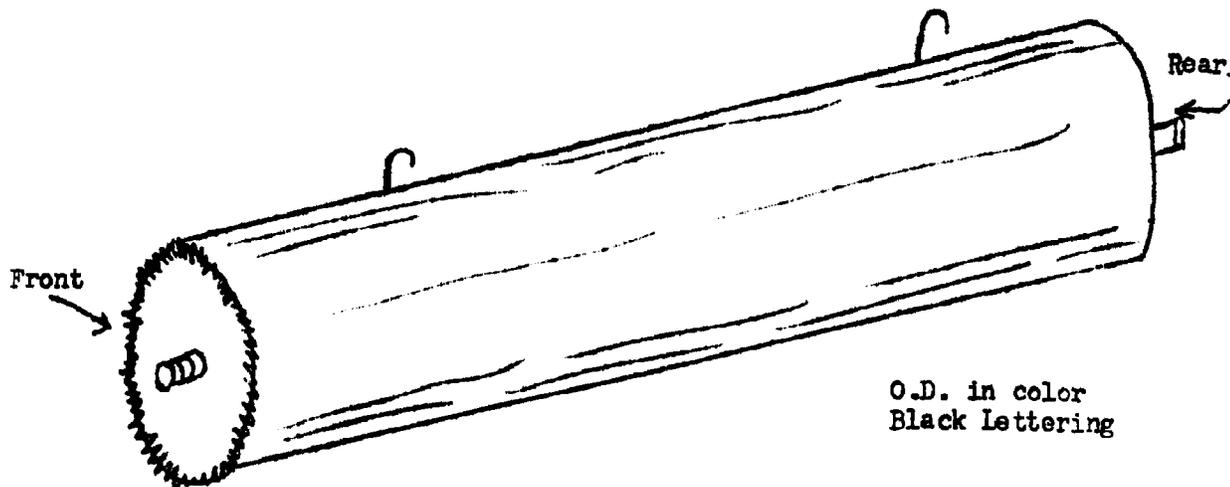
End View



Top View



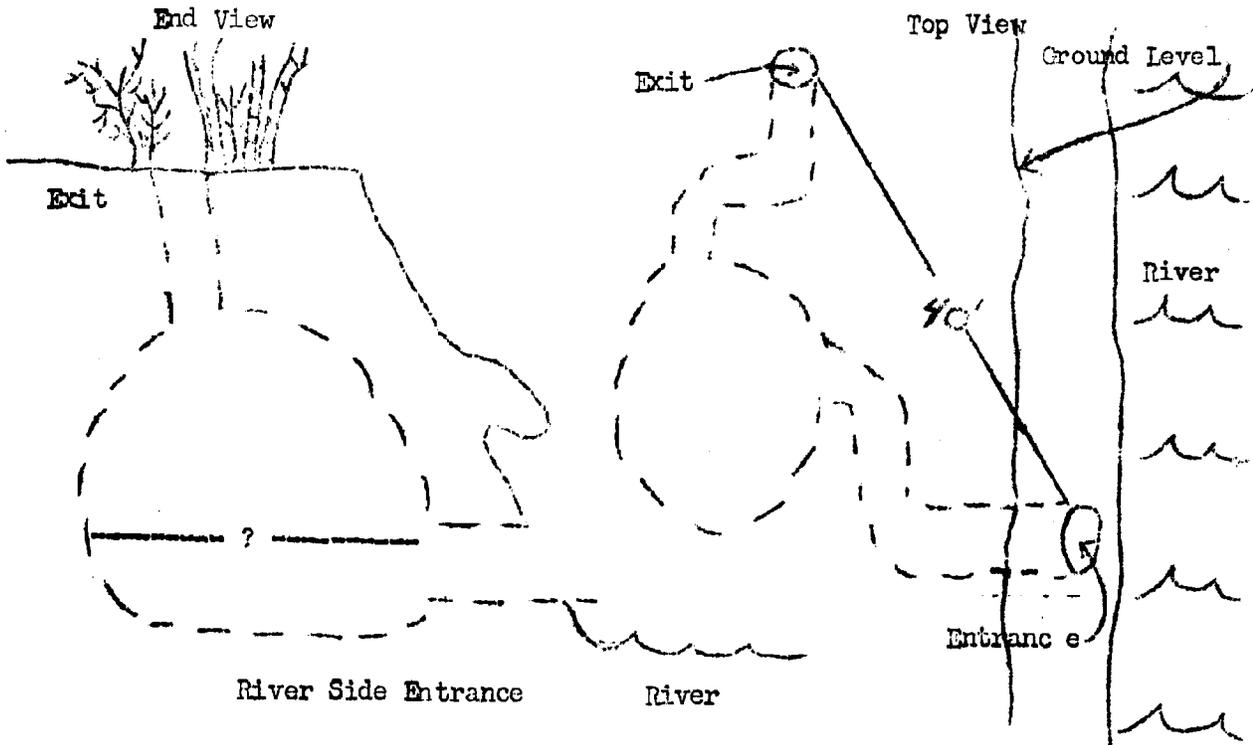
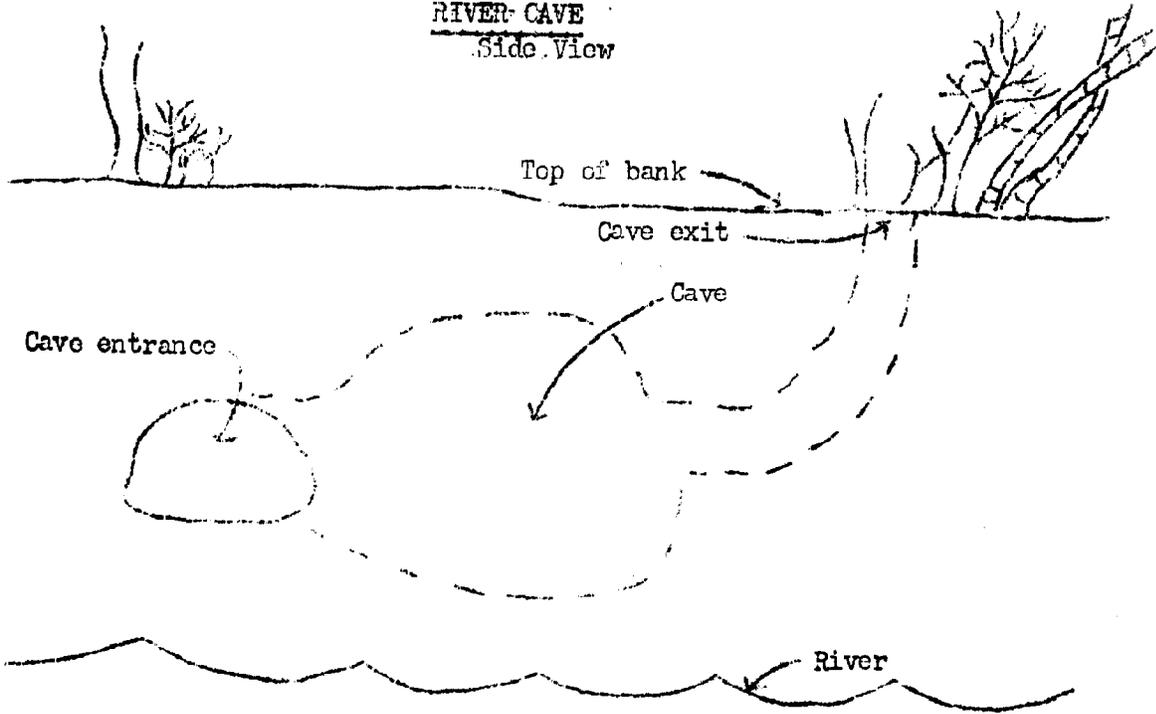
U. S. FLAME BOMB (?)



NOTE:

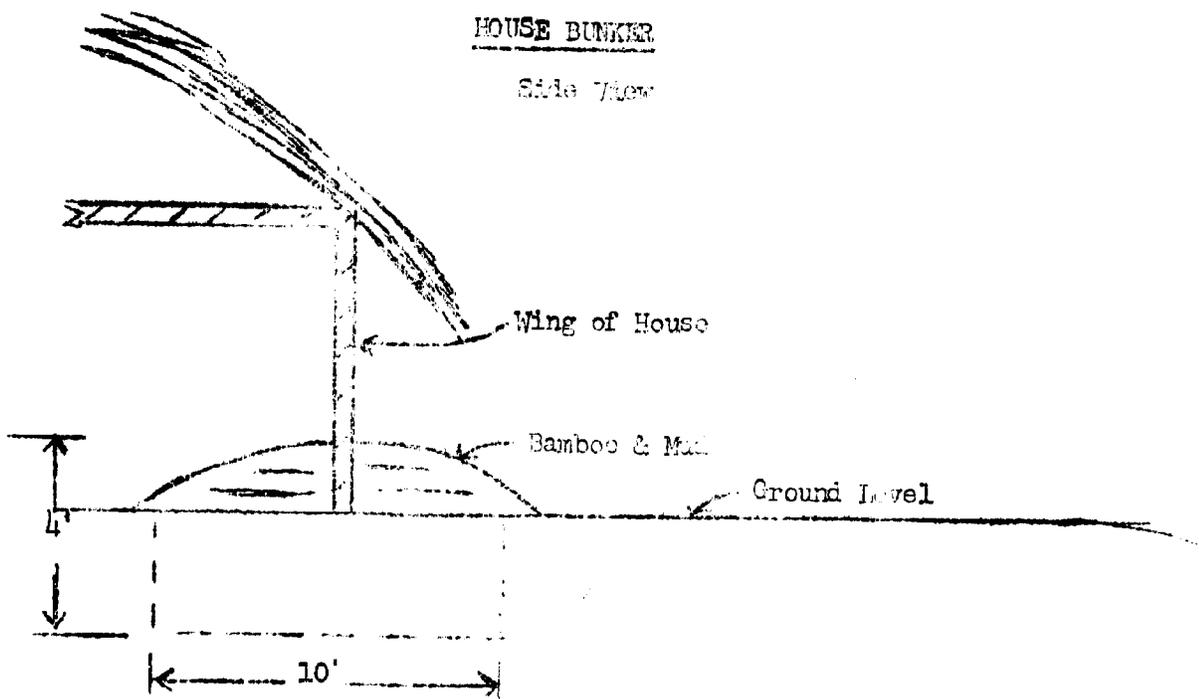
Appeared to be 100/250 lbs U. S. Incandary or napalm bomb; it was destroyed in place.

RIVER CAVE  
Side View

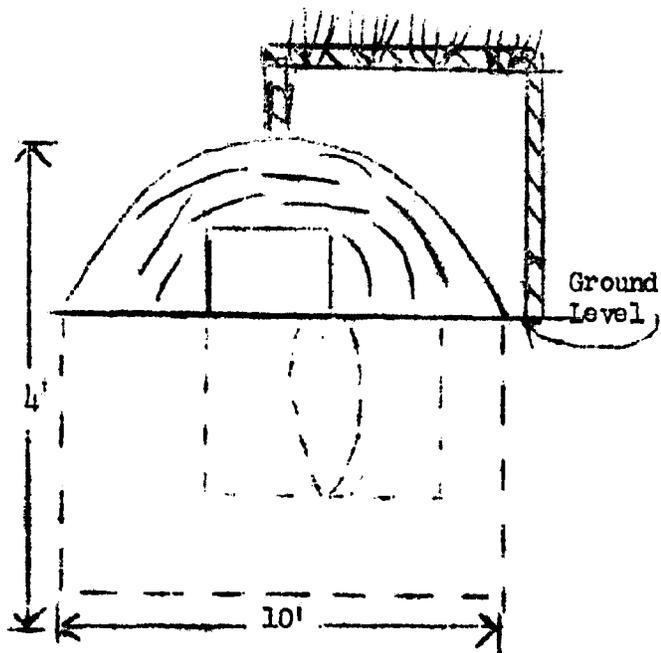


HOUSE BUNKER

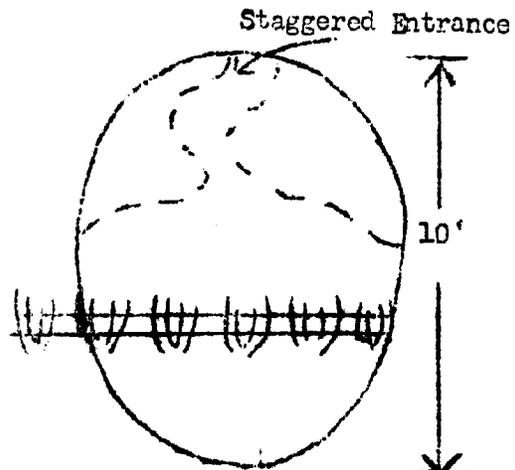
Side View



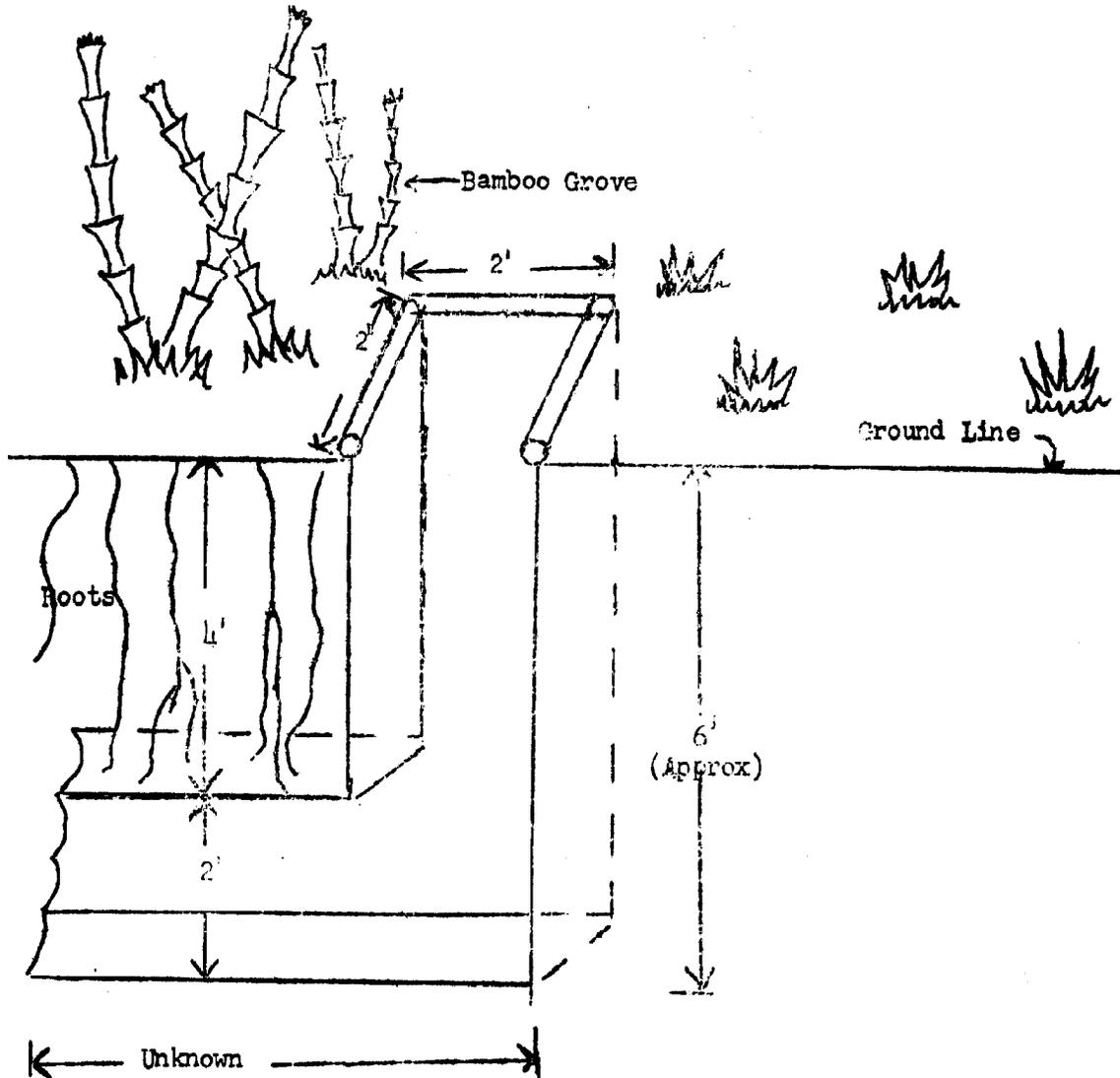
Front View



Top View



TUNNEL ENTRANCE



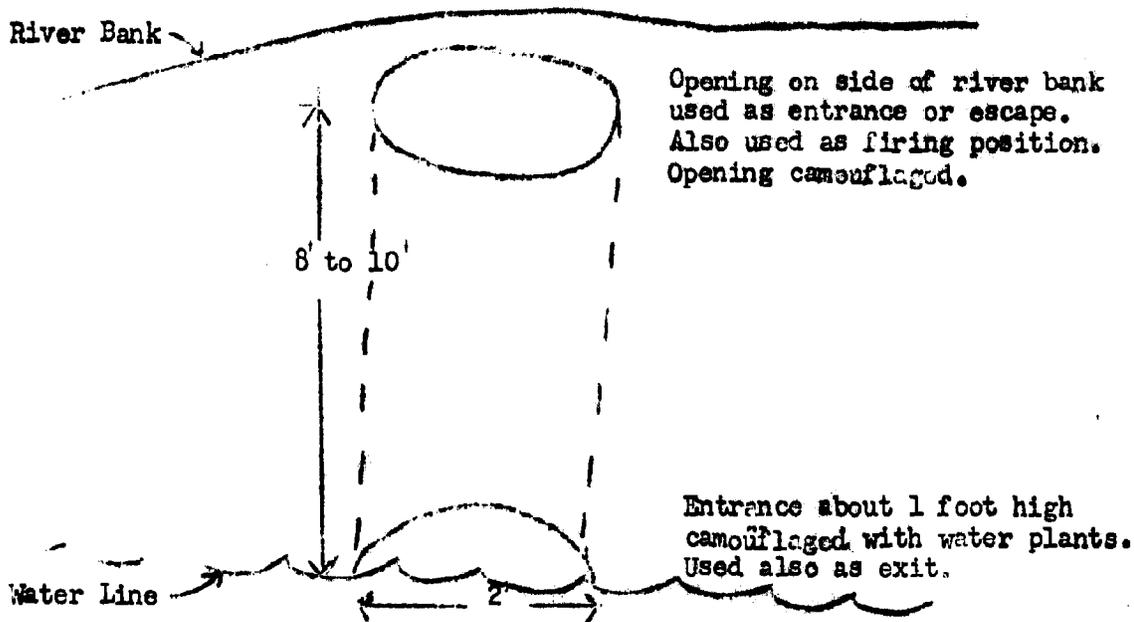
NOTE:

Tunnel was cut under Bamboo grove. Root system was excellent reinforcement for roof of cave. Horizontal tunnel appeared to go to fighting trench.

SONG BINH RIVER AREA

TYPE #2

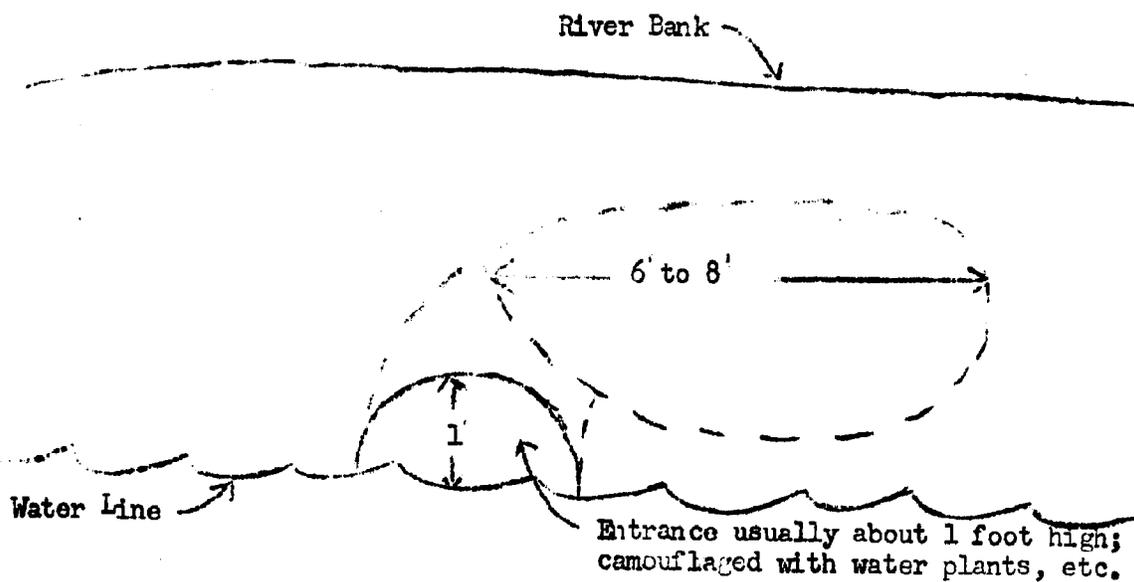
River Bank



This type of cave can be entered or exited from either end. Used as firing position or hiding place.

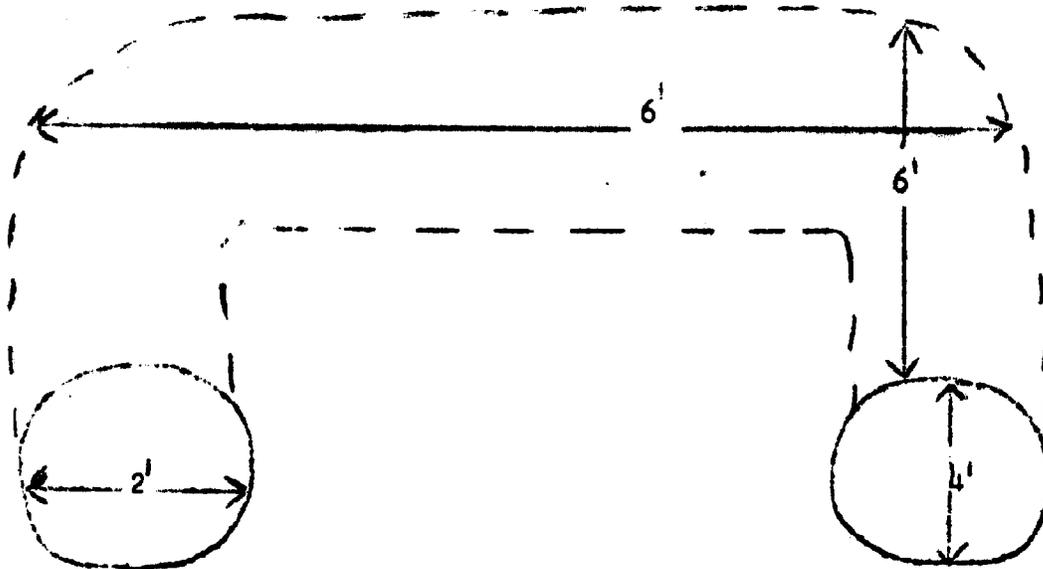
TYPES OF POSITIONS  
SONG BIHN RIVER AREA

TYPE #1



This type of cave usually has entrance from below water line to about 1 foot above. Only enterable from the water. There is about a 2 foot approach leading to the main room which is circular and about 6 to 8 feet across.

MARBLE MOUNTAIN AREA



This type of cave is usually made of Bamboo and covered with about 10 inches of dirt. Entrance and exit from either end. Difficult to clear unless approached from top and opened with demolitions.

PANJI PITS-MARBLE MOUNTAIN AREA

Located primarily in grave-yards



This type of pit is easily spotted by the slight depression caused by the earth used in camouflaging. Small pit intended for one foot only.