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AGO D/A ltr, 29 Apr 1980; AGO D/A ltr, 29 Apr 1980

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DEPARTMENT OF THE ARMY
OFFICE OF THE ADJUTANT GENERAL
WASHINGTON, D.C. 20310

IN REPLY REFER TO

AGAM-P (M) (30 Jul 69) FOR OT UT 692163 6 August 1969

SUBJECT: Operational Report - Lessons Learned, Headquarters, 145th Combat Aviation Battalion, Period Ending 30 April 1969 (U)

SEE DISTRIBUTION

1. Subject report is forwarded for review and evaluation in accordance with paragraph 5b, AR 525-15. Evaluations and corrective actions should be reported to ACSFOR OT UT, Operational Reports Branch, within 90 days of receipt of covering letter.

2. Information contained in this report is provided to insure appropriate benefits in the future from lessons learned during current operations and may be adapted for use in developing training material.

BY ORDER OF THE SECRETARY OF THE ARMY:

Kenneth G. Wickham

KENNETH G. WICKHAM
Major General, USA
The Adjutant General

1 Incl
as

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  145th Combat Aviation Battalion

DEPARTMENT OF THE ARMY
HEADQUARTERS, 145TH COMBAT AVIATION BATTALION
APO San Francisco 96227

"FIRST IN VIETNAM"

AVBACA-BC 13 May 1969

SUBJECT: Operational Report of 145th Combat Aviation Battalion for Period Ending 30 April 1969 (RCS CSFOR-65) (RI) (U) (UIC: WCYNAA)

SEE DISTRIBUTION

(U) Under provisions of AR 525-15, AR 870-5, and USARV Reg 525-15, the Quarterly Operational Report - Lessons Learned is submitted.

Carl H. McNair, Jr.
CARL H. MC NAIR, JR.
LTC, INF
Commanding

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FOR OT UT
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Inclosure

OPERATIONAL REPORT - LESSONS LEARNED for period ending 30 April 1969.

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DEPARTMENT OF THE ARMY
HEADQUARTERS, 145TH COMBAT AVIATION BATTALION
APO San Francisco 96227

"FIRST IN VIETNAM"

AVBACA-SC 1 May 1969

SUBJECT: Operational Report of 145th Combat Aviation Battalion for Period ending 30 April 1969 (RCS CSFOR-65) (RI) (U) (UIC: WCYNAA)

SEE DISTRIBUTION

I. (C) SECTION 1 - Operations Significant Activities

A. Chronology of significant events

(1) The 145th Combat Aviation Battalion was organized with three Assault Helicopter Companies, one Armed Helicopter Company and the USARV AH-1G Training Team at the outset of this reporting period. On 7 March 1969, the USARV AH-1G Training Team was transferred to the 214th Combat Aviation Battalion and displaced to Vung Tau, completing the move on 9 March. By relocating to Vung Tau, the team was able to obtain larger facilities in order to double the output of the training program.

(2) During this quarter the 145th continued to support the allied forces within the III Corps Tactical Zone with primary support provided to the three ARVN Divisions located within the III Corps Tactical Zone. The 145th supported the BHTAC (Bien Hoa Tactical Area Command) in the defense of Bien Hoa/Long Binh complex during the VC/NVA forces ill fated 1969 post TET offensive which commenced on 23 February.

(3) The 68th, 118th, and 190th Assault Helicopter Companies continued their primary support for the 25th ARVN DIV, 18th ARVN DIV, 5th ARVN DIV, 1st ARVN AEN DIV, III Corps and II FFV General Support. The companies also provided general support to the 5th Special Forces Group.

(4) The 334th Attack Helicopter Company continued it's support of III Corps Firefly missions for the 25th ARVN DIV, BHTAC and CMAC (Capital Military Assistance Command). It also provided armed helicopter support for the 51st Long Range Reconnaissance Patrol Company and other allied units within the III Corps Tactical Zone.

(5) From 1 February 1969 to 30 April 1969 the companies of the 145th Combat Aviation Battalion flew 75,867 sorties, logging a total of 28,755 flying hours. Troops carried numbered 147,082 and 312 tons of cargo were transported in support of the forces in III Corps while aircraft of this Battalion killed 491 enemy, damaged or destroyed 253 structures, and destroyed 530 sampans during the quarter. During this period, the Battalion suffered 1 KIA, 1 killed not as a result of hostile action, and 14 WIA. 54 aircraft were damaged and 6 destroyed.

B. Mission & Organization

(1) Mission: The mission of the unit has not changed during this reporting period and continues to be as follows: To augment the aviation capabilities of II Field Forces Vietnam and the Republic of Vietnam Forces operating in III Corps area.

(2) Organization:

(a) During the reporting period, the USARV AH-1G Training Team was relieved from assignment to the 145th Combat Aviation Battalion and transferred to the 147th Assault Support Helicopter Company, of the 214th Combat Aviation Battalion, located at Vung Tau.

(b) The organization of the 145th Combat Aviation Battalion during this reporting period included the units depicted on the organizational chart located at Inclosure 1.

C. Command & Staff

(1) Significant personnel changes during the reporting period were as follows:

(a) Commanding Officer, 145th Combat Aviation Battalion

No Change

(b) Battalion Executive Officer

Outgoing: LTC James J. Ransbotham (20 Feb 69)
Incoming: MAJ Giffen A. Marr

(c) Battalion S-1/Adjutant

Outgoing: CPT John D. Hoskinson (12 Feb 69)
Incoming: CPT William M. Walterhoefer

Outgoing: CPT William M. Walterhoefer (10 Mar 69)
Incoming: CPT Carlos M. Inacio

(d) Battalion S-2

No Change

(e) Battalion S-3

Outgoing: MAJ Giffen A. Marr (20 Feb 69)
Incoming: MAJ Sammy L. Childs

(f) Battalion S-4

No Change

(g) Commanding Officer, HHC, 145th Cbt Avn Bn

No Change

(h) Commanding Officer, 68th Avn Co (Aslt Hel)

No Change

(i) Commanding Officer, 118th Avn Co (Aslt Hel)

No Change

(j) Commanding Officer, 190th Avn Co (Aslt Hel)

No Change

(k) Executive Officer, 190th Avn Co (Aslt Hel)

Outgoing: 1LT Herbert D. Dyer (14 Feb 69)
Incoming: CPT Robert Estes

Outgoing: CPT Robert Estes (27 Mar 69)
Incoming: CPT John C. Taylor

(l) Commanding Officer, 334th Avn Co (Atk Hel)

Outgoing: MAJ Charles A. Edwards (22 Mar 69)
Incoming: MAJ Robert W. Arnold

(m) Executive Officer, 334th Avn Co (Atk Hel)

Outgoing: MAJ Sammy L. Childs (20 Feb 69)
Incoming: VACANT

Outgoing: VACANT (23 Mar 69)
Incoming: CPT Charles R. Ritzschke

(2) The following are personnel occupying major command and staff positions as of 30 April 1969.

(a) LTC MC NAIR, Carl H. Jr. Battalion Commander

(b) MAJ MARR, Giffen A. Battalion Ex Off

(c) CPT INACIO, Carlos M. Adjutant

(d) CPT JOHN, Charles E. S-2

(e) MAJ CHILDS, Sammy L. S-3

(f) CPT MANLEY, Rufus S. S-4

(g) MAJ Willmore, George H. Maintenance Officer

(h) CPT BENNETT, Larry G. — Signal Officer

(i) CPT LOCATELLI, Stephon R. — Safety Officer

(j) MAJ. SLAUGHTER, William G. — Flight Surgeon

(k) CPT KING, Robe L. — Chaplain

(l) CPT COBURN, George C. — CO, HHC

(m) MAJ SAATHOFF, Donald I. — CO, 68th

(n) MAJ BRITTON, John A. — CO, 118th

(o) MAJ MURRAY, Horsholl B. — CO, 190th

(p) MAJ ARNOLD, Robert W. — CO, 334th

(q) MAJ GRIMES, Eugene W. — CO, 324th ASD

D. Personnel - Unit Strengths as of 30 April 1969

(1) Military:

UNIT	OFFICERS		WO		EM		TOTAL	
	AUTH.	O/H	AUTH	O/H	AUTH	O/H	AUTH	O/H
68th	19	22	51	42	218	189	288	253
118th	19	22	51	41	218	201	288	264
190th	19	24	51	46	218	191	288	261
334th	17	17	39	35	198	169	254	221
HHC	18	24	3	5	86	103	107	132
Scty Plt	0	0	0	0	28	36	28	36
430th	1	1	0	0	7	6	8	7
520th	1	1	0	0	7	8	8	9

(2) Civilians:

UNIT	DAC		VN		TCN		CONTRACTOR	
	AUTH	O/H	AUTH	O/H	AUTH	O/H	AUTH	O/H
68th	0	0	21	21	0	0	0	0
118th	0	0	1	1	0	0	0	0
190th	0	0	1	1	0	0	0	0
334th	0	0	13	13	0	0	0	0
HHC	0	0	13	13	0	0	0	0
TOTAL	0	0	49	49	0	0	0	0

(3) Personnel (Enlisted) gains and losses for February, March, and April 1969

UNIT	FEBRUARY		MARCH		APRIL	
	GAINS	LOSSES	GAINS	LOSSES	GAINS	LOSSES
68th	11	11	6	31	17	14
118th	12	15	15	17	13	11
190th	11	19	8	26	15	15
334th	4	16	8	13	16	16
HHC	1	9	6	18	8	13
Scty Plt	2	2	0	0	3	2
430th	1	0	1	3	1	0
520th	1	1	3	1	0	1

E. Intelligence and Physical Security

(1) During the period of 1 February 1969 through 30 April 1969, enemy action was high-lighted by two enemy contacts at Bien Hoa Air Force Base. The first contact was on the morning of 23 February 1969 when, after an attack by fire on the base, an enemy unit attempted to penetrate the Southern perimeter of the base. This particular portion of perimeter is manned jointly by the 145th Combat Aviation Battalion and the 3rd Security Police Squadron. The second contact was on the East perimeter on 26 February 1969 when an estimated battalion of the 275th VC/NVA Regiment was detected moving towards the base. During the ensuing battle approximately 290-300 enemy troops were either captured or killed. Approximately 90% were attributed to air action. Since that time the enemy activity in the Bien Hoa area has been extremely light and restricted principally to limited harrassing attacks by fire.

(2) The physical security in the battalion was improved significantly during the reporting period. Improvements included the construction of additional sapper bunkers along the western edge of the ramp area, the relocation of the listening post bunkers so as to provide wider coverage of the area between Honour-Smith Compound and the Ammunition Supply Point, the use of Starlight Scopes in the perimeter guard towers, and the use of sentry dogs from the 3rd Security Police Squadron to guard against enemy sapper attacks from the West against the Battalion Headquarters and the ramp area. Additionally, a detailed and comprehensive defense plan encompassing all-around defense and increased defense in depth of the battalion area was adopted. All of these innovations have served to greatly enhance the security and defensive posture of the 145th Combat Aviation Battalion's area of responsibility.

(3) Included in the defense of the airfield has been the "Totem Pole Flare" which offers instant and effective perimeter illumination. This innovation was devised by the 3rd Security Police Squadron of Bien Hoa Air Base. The ground mounted flares are used to give immediate sustained high intensity illumination in the event of an enemy attack on the perimeter. (See ORLL, Intelligence section, and Inclosure 4 for details.) Also in the testing stage for perimeter illumination is a new low intensity lighting system constructed of two inch water pipe and mini-gun ammunition boxes

mounting 200 watt bulbs. This system will provide for low intensity illumination up to 100 meters out on the perimeter. This system is also being constructed and tested by the 3rd Security Police Squadron around the entire Bien Hoa Air Base perimeter. To back up and increase the effectiveness of the above mentioned illumination improvements, Fire-Fly teams now perform a sweep of the perimeter each time they depart and return to the airfield on other missions. This provides a total of six to eight perimeter sweeps by Fire-Fly each and every night, yet does not detract from the fire-fly mission itself. The sweep requires approximately five minutes and is accomplished within the Battalion Control Zone.

F. Operations and Training

(1) Combat Operations:

(a) The 145th Combat Aviation Battalion continues to be committed daily to tasks varying from direct combat support missions to combat assault operations. The battalion is normally committed daily for two combat assault helicopter companies, one general support helicopter company, and a variety of armed helicopter missions. The normal mission package for the combat assault is nine UH-1D/H lift helicopters, one command and control helicopter, one maintenance helicopter, one smoke helicopter and four armed helicopters from the unit's assets. For General Support missions, the normal commitment for support of III Corps and II Field Forces Vietnam is 13 UH-1D/H and two light fire teams (UH-1C).

(b) The 334th Aviation Company (Attack Helicopter), one of the three all AH-1G "Cobra" units now serving in Vietnam, provides three Fire-Fly teams nightly to interdict sampan traffic on the rivers and canals in III Corps Tactical Zone. They also afford defense of the Saigon, Long Binh and Bien Hoa complexes.

(c) The 334th also supports the 51st LRP company with two light fire teams on a 24 hour a day basis. In addition, they provide armed escort missions as required by II Field Forces AAE and 145th Cbt Avn Bn B.O.C. As such, they are called upon to augment the armed helicopter capability of the assault companies during contact situations. Because of the greater speed, payload and endurance, this augmentation can be extremely valuable to the Air Mission Commanders.

(2) Counter Mortar:

(a) The Bien Hoa Air Base was subjected to enemy rocket/mortar fire on five occasions during this reporting period. These attacks occurred as shown below:

DATE/TIME	NUMBER OF ROUNDS	DAMAGE TO BN AREA
230210 February	54	Minor Damage - 2 Buildings Light Damage - 1 AH-1G
230555 February	6	None
232105 February	2	None

DATE/TIME	NUMBER OF ROUNDS	DAMAGE TO BN AREA
290220 March	6	None
312347 March	14	None

(b) During this reporting period, the 145th Combat Aviation Battalion retained the responsibility of primary command and control of all armed helicopter light fire teams utilized in support of Oplan Checkmate in the Bien Hoa-Long Binh complex. A command and control helicopter is flown nightly to reconnoiter the entire complex within the battalion's area of responsibility and then remains on a 5 minute standby from 2100 hrs until 0600 hrs each night.

(3) Training:

(a) During this reporting period the assigned training task for VNAF UH-1 transition training has increased threefold. As reported in the previous ORLL, six VNAF pilots (1 staff officer and 5 pilots) underwent transition training in the UH-1D and two aviators in the UH-1C armed helicopter. Currently, there are 16 VNAF pilots undergoing transition training in the UH-1D (3 staff officers and 13 pilots). This significant increase from the previous quarter has placed a larger demand on the IP's and unit traning programs; however, due to centralization of ground school, all students are rapidly transitioned and released to operational missions with experienced aviators throughout the Battalion.

(b) Understandably, this accelerated program has caused some scheduling problems, such as shortage of aircraft and instructor pilots (these problems will be discussed more thoroughly in Lessons Learned) since training aircraft are not authorized per se. Only after all mission schedules have been met may an aircraft be utilized for training purposes. No associated reduction of missions is possible even with the large increase in training requirements, hence scheduling becomes extremely critical. Once the initial transition is completed, training progresses quite rapidly since the trainees are committed daily to operational missions. Students are generally quite enthusiastic and complete their training program with a full understanding of airmobile operations, having flown almost every position in the flight and a variety of general support missions.

G. Logistics

(1) During this period, a long awaited Crash Investigation Kit, FSN 5180-903-1049, was obtained through 34th Group AMMC in Saigon, hand carrying through the unit's supporting DSU directly to AMMC. The kit is complete in every respect and has proven to be an invaluable aid during on-the-scene accident investigation.

(2) Class V: Unit basic loads are being maintained in accordance with USARV Regulation 735-28 and 700-7. All unit basic loads for small arms and 7.62mm for ground mounted M-60 machine guns have now been placed on 1½ ton trailers to provide increased mobility in transporting ammunition

to perimeter defensive positions. These trailers are all revetted in the Battalion ASP for immediate deployment by unit as required.

(3) Construction:

(a) On 16 April, 1969, this Headquarters forwarded through 12th Group to 1st Aviation Brigade a DD Form 1391 Military Construction Line Item Data to provide adequate water supply at a pressure consistent with existing requirements. The existing facilities are highly inadequate and include boilers currently inoperative due to low pressure in the distribution system. This project would provide water for operation of future and existing facilities currently without adequate water supply.

(b) On 18 March, 1969, Engineers from the 159th Engineer Group began construction of two BOQ's adjacent to the Honour-Smith compound for the 68th Avn Co (Aslt Hel). Once the construction is completed, all of the officers and warrant officers of the 145th CAB will be located in Honour-Smith Compound. The troop billets now occupied by officers of the 68th will be vacated and become enlisted quarters.

(4) During this period all M-60 machine guns had the bullet ramp angle modified in accordance with MWO 9-1000-232-30/1. This particular MWO applied only to machine guns with a serial number of 77605 and lower and once the MWO was completed, an "R" suffix was added to the weapon serial number. The MWO was accomplished by the supporting DSU.

H. Safety

(1) Aviation Safety Program: The safety program continues as the responsibility of the commander and all members of the command administered by the Aviation Safety Officer.

(2) Publications: The Aviation Safety Officer publishes a monthly safety newsletter which includes articles and tips on aviation safety, changes in procedures, safety slogans, and a safety letter from the Battalion Commander. Each aviation company contributes an article on safety each month and wide distribution is made to the companies. The Aviation Safety Officer also maintains the Battalion Safety Bulletin Board and prepares Battalion safety posters for appropriate display.

(3) Safety Council: A Battalion Safety Council composed of the Battalion Commander, Battalion Executive Officer, S-3, Flight Surgeon, Battalion Aviation Safety Officer, Battalion Maintenance Officer, and all Company Commanders, Aviation Safety Officers, and Maintenance Officers meets monthly to discuss problem areas with respect to aviation safety along with reviewing all recent accidents and incidents occurring in the Battalion. Information discussed therein is later discussed at each company safety meeting.

(4) Accident Investigations Kit: An accident investigation kit was obtained through supply channels during the past quarter. This kit, which includes a Polaroid camera and portable tape recorder, contains all

equipment necessary to conduct the on-site portion of the accident investigation. (See the Logistics portion of this ORLL for procedures for obtaining this kit.)

(5) Accidents: There has been an overall increase in the accident rate during the past ninety days although the fiscal year rate continues to be below the USARV and 12th Cbt Avn Gp averages. Over 60 percent of the accidents were caused by pilot error while the remainder were caused by materiel failure and maintenance error. There have been 11 major accidents, no minor accidents, 3 incidents, 2 forced landings, and 24 precautionary landings. The following is a list of the accidents and incidents reported during the period:

ACCIDENTS

Lost Control	3
Lost RPM	1
Low side governor failure	2
Engine failure	1
Tail rotor failure	1
Pilot not at controls	1
Collective sleeve bearing failure	1
Flew into flag pole	1

INCIDENTS

Struck revetment	1
Landed hard	1
Damage to blades while hovering	1

(6) The total flight time for the reporting period is 29,087 hours for an accident rate of 37.8 per 100,000 hours. The fiscal year rate is 18.7 per 100,000 hours.

I. Signal

(1) Voice Secure: Radio sets AN/PRC-77 were issued to the entire Battalion during this reporting period. The capabilities of this radio will greatly improve the secure means of communications. This equipment, when used with speech scrambler KY-38, will provide a portable, battery operated system which can be utilized in areas that are impractical or inaccessible to a similar vehicular mounted set, i.e., guard posts, bunkers, etc.

(2) Land Line Teletype: Due to a marked increase in teletype messages, it was necessary to acquire an additional teletype set. With this additional teletype, one set can be utilized to prepare outgoing traffic in a pre-punched form while the other set is receiving incoming traffic. This eliminates the amount of time expended by an operator who previously had to wait for the line to be free of incoming messages before he could prepare the outgoing message.

(3) Avionics: With the implementation of MTOE's, the 190th AHC was assigned an avionics detachment. This alleviated the work load of the direct support detachment that had been maintaining the avionics equipment for both the 190th AHC and the 118th AHC. This new avionics team has increased the number of avionics trained personnel within the battalion.. The addition of the 243rd Sig Det which has been assigned and transferred to the 190th AHC has greatly alleviated the work load of the avionics maintenance personnel. This diminished work load has provided faster and more reliable service to the avionics equipment.

J. Awards and Decorations: The following awards and decorations were processed during the reporting period:

SUBMITTED	AWARD	RECEIVED
1	Legion of Merit	1
2	Silver Star	3
22	Distinguished Flying Cross	14
14	Bronze Star	11
24	Air Medal with "V" Device	22
5	Army Commendation Medal with "V" Device	4
34	Army Commendation Medal	30
3	Purple Heart	13
2632	Air Medal	2749

K. Rest and Recuperation: In an effort to better facilitate the desires of each man in reaching his chosen R & R site, new procedures were established. Each company forwards, on the first of the preceding month for which R & R's are allocated, the number of seats to each location they desire based upon the request of personnel within their company. This enables battalion, when allocating seats, to satisfy the greatest number of personnel and precludes needless turnbacks of seats. The number of battalion personnel going on R & R the past quarter increased to 280.

L. Public Information

(1) The Public Information Office has broadly expanded its program

during the period 1 Feb 69 - 30 Apr 69. It worked with representatives from the New York Times, CBS, NBC, and the Federal Republic of Germany TV network.

(2) Use of the Battalion photographer was expanded to include coverage of aircraft accidents, vehicular accidents, orphanage visits, celebrity visits, promotions, award ceremonies, and any other official functions that are of interest to members of the command.

(3) In addition to taking the photographs, the Battalion has an in-house capability of developing the pictures since the construction of a photo lab containing the basic facilities necessary for complete processing.

(4) Command emphasis has been placed on the Hometown News Release Program. During this reporting period, 115 individual releases were submitted to the U. S. Army News Release Center.

M. Chaplain

ITEM	OCCASIONS	ATTENDANCE	AVERAGE SUNDAY ATTENDANCE
Protestant	20	433	22
Catholic (Handled by BHAB Catholic Chaplain and Facilities)			
Memorial Services	2	118	—
Religious Education	6	58	6
Counseling	553	—	—
Troop Visits	267	—	—
Hospital Visits	26	—	—
Character Guidance Lectures	21	1321	—
Character Guidance Orientations	3	1065	—
Incountry Orientations	3	63	—

N. Civic Action

(1) The 145th Combat Aviation Battalion procured and distributed 569 pounds of pediatric foods and formula to the Tan Mai Orphanage, Bien Hoa. The water supply of the Tan Mai Orphange was tested, found to be contaminated and corrective measures are being taken. Supplementary potable water was provided which involved securing tankage for transportation and storage. A program was instituted to avoid future contamination, and the spread of communicable diseases among the infants and children.

(2) At the Tan Mai Orphanage, a program of medical and dental visitation was established. The medical program included diagnosis, treatment, and preventative measures. The dental program included fluoridation treatment, dental examination, and providing personal individual dental hygiene items. Approximately 150 infants and children received aid through the over-all program.

(3) The children of the Dan Minh Orphanage were entertained at an Easter egg hunt and Easter dinner on 6 April. This project was organized and funded by the 68th Avn Co (Aslt Hel).

(4) The 68th Avn Co (Aslt Hel) undertook sponsorship of the Dan Minh Orphanage with plans to provide personal hygiene items and to give aid to their present construction program.

(5) The 190th Avn Co (Aslt Hel) assumed sponsorship of a baseball team with the Vietnamese Boy Scouts of Bien Hoa Air Base. This program encompasses the provision of training, equipment, uniforms and social functions for the boys, of whom approximately 35 Scouts are currently involved.

O. Reenlistment Program

During this reporting period, with added command emphasis, the re-enlistment rate within this battalion has shown substantial increases in the first term Regular Army Re-enlistment and career personnel reenlistment. A program of closer coordination between the battalion career counselor and the company re-enlistment NCO's and an expanded re-enlistment publicity program has resulted in the re-enlistments statistically depicted below:

	1ST TERM RA		AUS		CAREER		PERCENT TOTAL
	Elig	Re-enl	Elig	Re-enl	Elig	Re-enl	
Jan	13	2	6	0	2	2	19%
Feb	9	3	13	1	2	2	25%
Mar	10	2	8	0	3	3	23.8%

II. (C) Section 2, Lessons Learned: Commanders Observation, Evaluation and Recommendations

A. Personnel: NONE

B. Operations:

1. Lack of adequate personal weapons for crewmembers of the AH-1G

a. OBSERVATION: During the past year, this battalion has had several AH-1G (Cobras) shot or forced down in enemy territory. There have been several cases when the crewmembers were forced to remain on the ground for periods of time extending up to 45 minutes, armed only with the standard issue .45 caliber pistol.

b. EVALUATION: The standard issue .45 caliber pistol will offer very little protection should a crew be required to defend itself while awaiting rescue or during escape and evasion. Due to limited space inside the cockpit of an AH-1G, most shoulder fired weapons are too large to be carried.

c. RECOMMENDATION: That the U.S. Air Force CAR 15 submachine gun be a standard issue weapon for all crewmembers of the AH-1G. This weapon, being compact in size, would allow both crewmembers to stow it in the space available. The CAR 15 would offer sufficient firepower for the crew to defend themselves should they be forced down in hostile territory.

d. COMMAND ACTION:

(1) A command letter has been forwarded to the Commanding Officer, 12th Combat Aviation Group for consideration and referral to higher headquarters.

(2) The 334th Aviation Company (Attack Helicopter) is preparing a change to the MTOE to include the CAR 15 as the individual crew weapon for the crewmembers of the AH-1G.

2. Lack of equipment for marking aircraft forced down at night

a. OBSERVATION: During the month of December, 1968, an aircraft from this battalion was shot down in hostile territory during the hours of darkness. Due to fuel requirements, the rescue aircraft had to depart the area soon after the crash occurred. An aircraft subsequently scrambled to secure the aircraft could not locate it upon arrival. Due to darkness, a period of approximately four (4) hours elapsed before the downed aircraft could be relocated.

b. EVALUATION: No provisions have been made for marking of downed aircraft at night. Normal aircraft lighting will not suffice due to the necessity of the battery switch being left off, otherwise causing a fire hazard. Even when it is possible to use the aircraft lights, they would be visible to the enemy ground forces thereby giving away the aircraft's position should the enemy also be searching for it.

c. RECOMMENDATION: That all crewmembers be instructed to carry some type of flashlight or strobe light that can be fastened to the aircraft. It is recommended that the light be secured in a manner that will allow it to be visible from the air only.

d. COMMAND ACTION:

(1) All pilots of this command have been instructed to carry and utilize a means of marking their aircraft, either strobe lights or a flashlight.

(2) Additional strobe lights have been requested and all companies are putting them in their emergency kits.

3. Difficulty encountered by ground troops in marking enemy positions

a. OBSERVATION: Numerous occasions have been encountered by all units of the battalion when the enemy situation and terrain made it impossible for the ground elements to properly mark enemy targets.

b. EVALUATION: Accurate marking of enemy targets and positions to provide definite target identification for the helicopter gunships is essential to eliminate possibility of injury to friendly ground forces.

c. RECOMMENDATION: The use of a smoke round for the M-79 Grenade Launcher would enable ground forces to more accurately mark enemy targets. The increased range of the M-79 would greatly reduce the risk of injury to friendly personnel. The accuracy of the M-79 would allow pin-point marking of enemy positions without exposing friendly personnel to hostile fire.

d. COMMAND ACTION:

(1) The battalion S-3 will brief the American advisors to ARVN units, during his monthly briefing, on the advantages of using smoke rounds in the M-79 Grenade launcher. The marking of enemy positions in this manner will enable fire teams to place accurate fire immediately on the target.

4. Protection of avionics equipment

a. OBSERVATION: With the advent of the rainy season, avionics equipment will again be exposed to water and damp conditions due to rain showers. These conditions in the past have resulted in an increased failure rate of avionics equipment.

b. EVALUATION: Units of this battalion have operated with the pilots' doors removed with extremely satisfying results and greatly improved visibility. However, a serious drawback has arisen during the monsoon season. If the aircraft remains on the ground during a rain shower, no protection is afforded the electronics console. If water is allowed to collect on the console, an increase in the failure rate of avionics equipment will result.

c. RECOMMENDATION: Each aircraft should carry a poncho or a plastic covering in the storage compartment. If the aircraft is exposed to rain while on the ground, the plastic cover can be placed over the entire console for protection.

d. COMMAND ACTION:

(1) A command letter has been sent to all units of this battalion concerning the covering of consoles to protect them from moisture.

(2) Unit SOP's will be ammended to reflect the requirement to cover the consoles to protect them from moisture.

5. Ground commanders giving mortar firing azimuths in mils

a. OBSERVATION: This battalion has noted numerous instances where ground unit commanders have given mortar firing information to the supporting armed helicopters in mils.

b. EVALUATION: Aircraft commanders are in the habit of determining all directions in terms of degrees; however, ground unit commanders give and adjust mortar firing information in mils. Misinterpretations have occurred on many occasions where aircraft commanders have been dealing directly with ground unit commanders and have failed to convert mil readings to degrees. Errors of this magnitude could prove disastrous.

c. RECOMMENDATION: All aircraft commanders should be made aware of the fact that ground unit commanders use the mil system in adjusting fire and giving firing directions. Point to Remember: A request to the ground unit commander for a readout in degrees usually will result in the desired answer.

d. COMMAND ACTION: All companies of this battalion are briefing their pilots on the fact that ground units use the mil system. Pilots are being instructed on how to use the mil system and how to convert mils to degrees.

6. Rocket Safety

a. OBSERVATION: Many ammunition and rearming points are found to contain rockets with no grounding caps or shorting wires installed. It has also been noted that common practice among aircraft weapons maintenance personnel is to disconnect the cannon plug leading to the rocket launcher when performing maintenance on the aircraft or the weapons systems. This greatly increases the possibility of rocket motor ignition due to static electricity, radiation from nearby radios or radar, stray voltage and atmospheric conditions.

b. EVALUATION:

(1) Proper emphasis is not being placed on rocket handling and safety.

(2) The 2.75" rockets must have either a grounding cap or shorting wire installed by the manufacturer. These safety devices are intended to be left on the rocket at all times except when they are loaded in the launcher.

(3) The intervalometer portion of the rocket systems provides a ground for each rocket in the launcher. In effect, the grounding cap or shorting wire is still on the rocket as long as the cannon plugs are connected. When the cannon plug is not connected, the intervalometer is not connected to the rocket and the grounding feature is lost. The rocket is then susceptible to accidental firing.

c. RECOMMENDATION:

(1) That publications pertaining to rocket handling and safety be reviewed for proper explanation and use of grounding caps and shorting wires.

(2) That all units insure that grounding caps or shorting wires be left on rockets until loaded in launchers and are reinstalled should the rocket launchers be unloaded.

(3) That rocket launcher cannon plugs remain connected whenever possible.

(4) If it becomes necessary to disconnect the rocket launcher cannon plugs, all rockets should be unloaded and grounding caps or shorting wires reinstalled.

(5) That all maintenance and armament personnel be instructed in the proper handling of rockets and rocket safety.

d. COMMAND ACTION:

(1) All aviators, maintenance personnel, and armament personnel are being briefed on the proper handling of rockets and rocket safety.

(2) All units are inspecting to insure that grounding caps or shorting wires are being left on rockets until placed in launchers, and are replaced when rockets are removed from launchers.

(7) <u>Flight Following of Aircraft</u>

(a) OBSERVATION: Several calls a day are received by the Battalion Operations Center from units using General Support Aircraft inquiring as to the location of the aircraft or attempting to relay a message. There have also been occasions when Capitol Center has requested information concerning location of aircraft.

(b) EVALUATION: As a result of improper or inadequate flight following a great amount of time can be lost by the aircraft and also by the using unit. Not only time can be lost, but also a great amount of effort is expended by Capitol Center, the Battalion Operations Center, the Company Operations and the using unit in trying to locate an aircraft or to relay a message.

(c) RECOMMENDATION: That companies require a backup system to the flight following carried on with Capitol Center which provides the company with information concerning their location, intentions and shut down times.

This can be accomplished by flight following with the company, on the company frequency, in a fashion similar to that employed with Capitol Center. The same results can be obtained by requiring pilots to make position reports to company operations every 30 minutes, providing the necessary information as listed above. For aircraft operating out of the range of UHF, a relay using the aircraft within the company allows for the passing on of the essential data. This system would enable the unit, and subsequently battalion operations center, to have communications with each aircraft, and be aware of their location at all times. It would also enhance the operation oth from the standpoint of efficiency and safety, due to the overlap in responsibility. Any delay in ETA could be immediately checked on.

(d) COMMAND ACTION: All companies of this battalion are instituting measures to establish a system of flight following with their own aircraft.

C. TRAINING

(1) Transition Training of VNAF Pilots

(a) OBSERVATION: A requirement exists to train an increasing number of VNAF aviators in the UH-1 series helicopters. The training program set up to satisfy this requirement has met with a number of difficulties. Of primary concern is the problem of aircraft availability. This problem combined with communication lapses have resulted in time lost and aircraft availability wasted.

(b) EVALUATION: The first twenty (20) hours of transition training for the VNAF pilots is single ship type training devoted to basics, such as landings, take offs, hovering, steep approaches, autorotations, etc.. It has been found that the most expedient time to conduct this training, for all concerned, is in the late afternoon. This is a consequence of the normal assigned mission times, which generally run into the late afternoon. These missions normally utilize 100% of the aircraft available for the day, including a spare aircraft, if one is available. It is imperative that the VNAF pilots are thoroughly briefed as to the next days missions and reporting times in order to be present for training as soon as aircraft become available. Time has been lost as a result of misunderstanding and lack of communication between the VNAF pilots and the personnel involved with the training and scheduling. Every attempt must be made to take full advantage of aircraft availability in order to fulfill the obligation (to include the necessary flying hours) and thus allow the VNAF aviators to graduate on schedule. It is necessary to emphasize the fact that a briefing should take place each night between the A/C and his VNAF co-pilot concerning the times and places to be the following day. This is to insure that the co-pilot is exposed to all activities which are carried out each day, not only during, but also prior to and after each day's mission has been accomplished. (To include all pre and post flight inspections and checks, plenum chamber inspection, etc.)

(c) RECOMMENDATION:

1 That close co-ordination be conducted between individuals involved in VNAF training, scheduling of ships and the VNAF themselves, including

those individual A/C's involved in the next day's training mission. The primary purpose is to reduce time lost due to shortage of aircraft, and to eliminate misunderstandings which develop as a result of the language barrier and improper briefings.

2 That after the first twenty (20) hours of flying, when the VNAF are assigned on normal daily missions (both direct combat support and general support), training must be conducted utilizing the most experienced A/C's.

(d) COMMAND ACTION: The battalion training officer has instructed all companies to co-ordinate their training programs and ship scheduling to better utilize existing but limited resources in order to achieve the desired results of the VNAF transition program.

(2) Instructor Pilot Shortage

(a) OBSERVATION: The accelerated VNAF transition pilot program as well as the high turnover rate in personnel, has left the battalion with a shortage of qualified instructor pilots. These instructor pilots are required for in-country orientation, 90 day standardization rides and the first 20 hours of VNAF training.

(b) EVALUATION: To contend with the shortage of instructor pilots, it was found necessary to initiate a new instructor pilots course at the battalion level. This course consists of Safety, Maintenance, Aircraft Systems and MDI training in addition to a full flight program. Flight time is on a proficiency basis with a minimum of ten (10) hours required on each model and series. The battalion has also received two school trained instructor pilots from Fort Rucker. These two aviators are recent graduates of the initial entry aviator course, who were selected to attend the instructor pilots course. These aviators are well trained in the fundamentals, however, due to their limited in-country experience, as well as the lack of knowledge of the potential local hazards (i.e. high density altitude, wet and dry season hazards, etc.) they are being given the supervision provided any other new in-country aviator. All indications are that it will take approximately three (3) months in country before they will fully qualify to meet USARV requirements as instructor pilots. This is nevertheless a significant reduction in the normal time required to develop an instructor pilot (normally four to six months).

(c) RECOMMENDATION: That instructor pilots courses be established at the local level wherever possible to better equip those affected by increasing training requirements established within the various units.

(d) COMMAND ACTION: Initiation of a training course has taken place at battalion under supervision and control of the battalion training officer.

D. INTELLIGENCE

(1) Perimeter Illumination

(a) OBSERVATION: From past experience on this base and other camps and bases throughout the Republic of Vietnam, it was noted that there was

a need for a better method of instant illumination for the perimeter. Because of the time element involved in calling for mortar or artillery illumination or for a flare aircraft, valuable time was lost in locating the enemy.

(b) EVALUATION: An innovation, the "Totem Pole Flare", has been used very successfully on the Bien Hoa Air Base. Its instant availability, relatively simple construction, as outlined in inclosure 4, and the amount of illumination it provides makes it an invaluable asset to our defense.

(c) RECOMMENDATION: Due to the success achieved with the "Totem Pole Flare" during the February post-TET offensive on Bien Hoa Air Base, the flare could possibly benefit every Army complex, base and compound in achieving instant and accurate perimeter illumination.

(d) COMMAND ACTION: The 145th Security Platoon has given instructions on the firing technique and when to fire the "Totem Pole Flare" to all perimeter guards. This precludes the premature firing and unnecessary use of the flare.

E. LOGISTICS

(1) Security of M-14 or M-16 During Flight

(a) OBSERVATION: Carrying of the individual weapon, i.e. M-14 rifle, in the aircraft during flight can be hazardous and perhaps costly if the weapon is lost. The need for a device to keep the weapon fixed or stationary during flight is evident.

(b) EVALUATION: Several instances have occurred in this battalion of individual weapons losses (M-14 & M-16) from helicopters during the conduct of combat assault operations. In all cases the weapons involved have not been tied down or attached to the aircraft. Instead, they have been wedged in between the seat and transmission wall, or fit into some similar insecure location. In one instance a crew chief lost a rifle while sitting on it, and subsequently standing up to return fire with his M-60 machine gun in a hot LZ. In cases where rifles have been secured to the aircraft by the use of twine or rope, this prevents the ready accessibility of the weapon in an emergency such as the failure of an M-60 in a hot LZ, thus requiring the instant availability of a secondary weapon.

(c) RECOMMENDATION: That all assault helicopter companies place on requisition and install the M-14 rifle mounting kit FSN 2590-045-9611. The kit can be modified within the same configuration to adapt the M-16. rifle. If the kit is not available, a similar mounting arrangement can be improvised and installed using parts (bolts, materials, etc.) available in most maintenance supply hangars. (See Inclosure 5)

(d) COMMAND ACTION: All companies of this battalion have been notified of the availability of the M-14 rifle mounting kit, with instructions to install it (or a similar modification) on all aircraft.

F. MAINTENANCE

(1) Material Failure of the Collective Sleeve Bearing Set on the UH-1 and AH-1G helicopters

(a) OBSERVATION: An aviator flying an AH-1G helicopter of this battalion experienced loss of collective pitch control, due to failure of the bearing package of the scissors lever assembly. The pilot lost collective control at 1200 feet, but was able to land the aircraft by executing a power on autoratation and attempting to zero the airspeed just prior to touchdown. Major problems were a high rate of descent and high RPM.

(b) EVALUATION: The investigation revealed that the probable cause of the failure of the collective sleeve bearings was inadequate lubrication. The lubrication instructions and intervals as stated in the -20 manuals for the UH-1 aircraft with respect to the swashplate, scissors and collective sleeve assembly are inadequate for existing environmental conditions. It was also realized that forced landings with complete loss of collective control is a procedure that is not normally discussed during safety meetings and pilot briefings. Many pilots are not aware of what the aircraft will do if this situation arises, and are not familiar with the procedures to follow in its event.

(c) RECOMMENDATION:

1 That all grease points of the swashplate and support assembly and scissors and sleeve assembly with the exception of the collective sleeve splines, and collective sleeve bearings, be lubricated at each 25 hours of operation.

2 Care should be taken to purge lubricate those points which are indicated as purge points in Chapter 2 of the applicable -20 manual.

3 The collective sleeve splines be lubricated by hand packing, and the collective sleeve bearings be purge lubricated at each 50 operating hour intervals. In order to expose the upper and lower collective sleeves bearing seals, it will be necessary to remove the retaining wire and to slide the lower boot down from the support ring (C&C models) and to remove the six bolts which secure the extension and spline plate to the hub allowing the spline plate and extension to be raised.

4 That all pilots be briefed on emergency procedures to follow in the event of complete collective failure, and in the problems they will encounter when these failures occur, i.e. high rate of descent, high RPM, etc..

(d) COMMAND ACTION:

1 All maintenance supervisors and mechanics have been informed of the problems which can be expected when maintenance personnel fail to comply with lubrication instructions and procedures.

2 A maintenance bulletin was distributed to all aircraft maintenance elements assigned or attached to this battalion specifying detailed instructions and lubricating intervals for lubricating critical bearings for existing environmental conditions.

3 All pilots within the battalion have been briefed on emergency procedures associated with collective failures, and these have been incorporated into regular safety briefings and instructions.

4 An EIR (Equipment Improvement Recommendation, DA Form 2407) was submitted through channels in accordance with TM 38-750 and USARV Reg 750-20 concerning proper lubrication under local environmental conditions for the collective sleeve bearing assembly on the UH-1 and AH-1G helicopters.

(2) Materiel Failure of the Internal Splines on the Tail Rotor Gear Box Quill Couplings of UH-1 and AH-1G helicopters

(a) OBSERVATION: On two separate occasions this battalion experienced anti-torque failure on UH-1D helicopters due to materiel failure of the gear box quill coupling. The probable cause of the failure was inadequate lubrication. Inadequate lubrication can be as a result of improper lubrication procedures and/or failure of the coupling seals.

(b) RECOMMENDATION:

1 That a one time inspection be conducted to ascertain that the drive shaft hanger bearing assemblies and tail rotor drive shaft couplings are properly lubricated.

2 All flexible couplings should be inspected thoroughly during the PMD.

3 That tail rotor drive shaft couplings and hanger assemblies be inspected and lubricated at every third periodic inspection instead of every 500 hours.

(c) COMMAND ACTION:

1 All aviators and maintenance personnel were briefed on the inspection and maintenance of drive shaft couplings and hanger bearing assemblies.

2 A maintenance bulletin was distributed to all units assigned or attached to this battalion stressing proper inspection procedures and changing the lubrication intervals from the current 500 to 300 hours (Incl 7)

3 A one time inspection of all flexible couplings was conducted on each aircraft.

4. An EIR was submitted through channels in accordance with TM 38-750 and USARV Regulation 750-20 concerning proper lubrication and inspections scheduling for the tail rotor drive shaft couplings and hanger assemblies.

(3) Aircraft Technical Inspectors: A serious problem of obtaining an adequate number of qualified Technical Inspectors (MOS 67Y30, 67N30) was experienced during this last quarter within the battalion. The critical shortage is evidenced by the fact that the battalion is authorized a total of 17 Technical Inspectors by MTOE; presently, there are only 10 assigned with 9 losses projected within the next 90 days. The anticipated and projected replacement of normal rotational losses will not presently meet the

demand imposed by the tactical situation and environmental conditions. A letter was forwarded to Commanding Officer, 12th Combat Aviation Group, requesting that command action be initiated to establish a comprehensive in-country course of instruction for the training of aircraft Technical Inspectors by the 34th General Support Group at the earliest practicable time.

G. ORGANIZATION: NONE

H. SURVIVAL, ESCAPE AND EVASION: NONE

Carl H. McNair Jr.

CARL H. MC NAIR JR.
LTC, Infantry
Commanding

7 Incl
~~1. Organizational Chart~~
2. Aircraft Status Chart
3. Operational Statistics Chart
4. Perimeter Illumination ("Totem Pole" Flare)
5. Rifle Installation Kit
~~6. Maintenance Bulletin Number 1~~
~~7. Maintenance Bulletin Number 2~~
Incl 1, 6 and 7 wd, Hq, DA

AVBACA-SC (13 May 69) 1st Ind
SUBJECT: Operational Report of 145th Combat Aviation Battalion for Period Ending 30 April 1969 (RCS CSFOR-65) (RI) (U) (UIC: WCYNAA)

DA, HEADQUARTERS, 12TH COMBAT AVIATION GROUP, APO 96266 22 May 1969

TO: Commanding General, II Field Force Vietnam, APO 96266

In accordance with USARV Reg 525-15, the Operational Report - Lessons Learned of the 145th Combat Aviation Battalion, for the period ending 30 April 1969, is forwarded.

FOR THE COMMANDER:

David L. Forte

DAVID L. FORTE
MAJ, Inf
Adjutant

AVFBC-RH-H (13 May 69) 2nd Ind
SUBJECT: Operational Report of 145th Combat Aviation Battalion for Period Ending 30 April 1969 (RCS CSFOR-65)(R1)(UIC: WCYHAA)

DA, HQ II FFORCEV, APO San Francisco 96266 3 JUN 1969

THRU: Commanding General, 1st Aviation Brigade, ATTN: AVBA-C, APO 96307

Commanding General, US Army Vietnam, ATTN: AVHGC(DST), APO 96375

Commander-In-Chief, US Army Pacific, ATTN: GPOP-DT, APO 96558

TO: Assistant Chief of Staff for Force Development, Department of the Army, Washington, D.C. 20310

This headquarters has reviewed and concurs with the Operational Report - Lessons Learned of the 145th Combat Aviation Battalion for the period ending 30 April 1969, with the following comment: Reference paragraph 6, Rocket Safety, on page 15. Units responsible for operating Army Aircraft Logistic Areas in III CTZ have been instructed to take steps to insure that rockets are stored with safety devices intact.

FOR THE COMMANDER:

B. G. MACDONALD
1LT, AGC
Asst AG

AVBAGC-O (13 May 69) 3d Ind
SUBJECT: Operational Report of 145th Combat Aviation Battalion for Period Ending 30 April 1969 (RCS CSFOR-65)(RI)(UIC: WCYLAA)

DA, HEADQUARTERS, 1ST AVIATION BRIGADE, APO 96384 : 8 JUN 196[illegible]

THRU: Commanding General, United States Army Vietnam, ATTN: AVHGC-DST, APO 96375
Commander-in-Chief, United States Army Pacific, ATTN: GPOP-OT, APO 96558

TO: Assistant Chief of Staff for Force Development, Department of the Army, Washington, D.C. 20310

1. This headquarters has reviewed this report, considers it to be adequate and concurs with the contents as indorsed.

2. The following additional comments are considered pertinent:

a. Paragraph 1G(3)(a), page 8. This request for construction was forwarded to USARV on 18 April 1969, and is presently being staffed by USARV and USAECAV for design requirements. Project is dependent upon release of funds by DOD.

b. Paragraph B6, page 15. This headquarters is in complete agreement with this comment, recommendation, and command action. Reproduction of this comment will be included in the next 1st Aviation Brigade G-4 Maintenance and Supply Newsletter.

c. Paragraph F(c)1, page 20. From all indications the recommendations and command action were in keeping with general instructions of appropriate TM-20's which states lubrication instructions are for normal operations and under adverse conditions lubrication is encouraged at more frequent intervals.

d. Paragraph F(2), page 21. Comment and action taken is deemed appropriate in adjusting the inspection and lubrication criteria to the condition of operations. This comment will be discussed in the next 1st Aviation Brigade G-4 Maintenance and Supply Newsletter.

e. Paragraph F(3), page 21. As a result of action taken by this headquarters, USARV is instituting a Technical Inspector course at

the AART School. It is anticipated that the course will commence on 1 July 1969.

FOR THE COMMANDER:

W. H. PIERCE
LTC, AGC
Adjutant General

AVHGC-DST (13 May 1969) 4th Ind
SUBJECT: Operational Report of 145th Combat Aviation Battalion for Period Ending 30 April 1969 (RCS CSFOR-65) (RI) (U) (UIC: WCYNAA)

HEADQUARTERS, UNITED STATES ARMY, VIETNAM, APO San Francisco 96375 17 JUN 1969

TO: Commander in Chief, United States Army, Pacific, ATTN: GPOP-DT, APO 96558

1. This headquarters has reviewed the Operational Report-Lessons Learned for the quarterly period ending 30 April 1969 from Headquarters, 145th Combat Aviation Battalion.

2. Reference item concerning Instructor Pilot Shortages, section II, page 18, paragraph E(2); concur. To overcome the degradation of effectiveness occasioned by current rotation policies and subsequent loss of experienced personnel in key positions, commanders are encouraged to establish training programs at the lowest possible level.

FOR THE COMMANDER:

C. D. WILSON
1LT, AGC
Assistant Adjutant General

Cy furn:
145th CAB
1st Avn Bde

GPOP-DT (13 May 69) 5th Ind (U)
SUBJECT: Operational Report of HQ, 145th Cbt Avn Bn for Period Ending 30 April 1969, RCS CSFOR-65 (R1)

HQ, US Army, Pacific, APO San Francisco 96558 11 JUL 69

TO: Assistant Chief of Staff for Force Development, Department of the Army, Washington, D. C. 20310

This headquarters has evaluated subject report and forwarding indorsements and concurs in the report as indorsed.

FOR THE COMMANDER IN CHIEF:

C. L. SHORTT
CPT, AGC
Asst AG

Inclosure 2

HEADQUARTERS, 145TH COMBAT AVIATION BATTALION

30 APRIL 1969

AIRCRAFT STATUS

SUBORDINATE UNIT	UH-1C AUTH	UH-1C O/H	UH-1D AUTH	UH-1D O/H	UH-1H AUTH	UH-1H O/H	AH-1G AUTH	AH-1G O/H	OH-6 AUTH	OH-6 O/H
HHC, 145TH CBT AVN BN	0	1	0	1	0	0	0	0	3	0
68TH AVN CO (ASLT HEL)	8	6	0	13	23	7	0	0	0	0
118TH AVN CO (ASLT HEL)	8	6	0	14	23	7	0	0	0	0
190TH AVN CO (ASLT HEL)	8	6	0	10	23	9	0	0	0	0
334TH AVN CO (ATK HEL)	0	0	0	1	3	1	21	21	0	0

CONFIDENTIAL

CONFIDENTIAL

Inclosure 3

CONFIDENTIAL

30

145TH COMBAT AVIATION BATTALION
OPERATIONAL STATISTICS
1 February 1969 – 30 April 1969

SUBORDINATE UNITS	HOURS FLOWN	SORTIES FLOWN	TROOPS TRANSPORTED	CARGO (TONS) TRANSPORTED	ENEMY KBA	STRUCTURES DAM	STRUCTURES DES	SAMPANS DAM	SAMPANS DES	AIRCRAFT LOST	AIRCRAFT DAM
68TH AVN CO (ASLT HEL)	7059	23,757	48,839	54	83	18	23	1	25	1	14
118TH AVN CO (ASLT HEL)	7548	17,842	49,260	166	67	13	56	0	11	2	14
190TH AVN CO (ASLT HEL)	7642	25,588	47,921	92	112	0	76	0	10	2	10
334TH AVN CO (ATK HEL)	6000	7,766	1,062	0	229	56	74	16	474	1	16
USARV AH-1G TNG TEAM *	506	614	0	0	0	0	0	0	0	0	0
145TH CBT AVN BN TOTALS	28,755	75,567	147,082	312	491	87	229	17	520	6	54

* Reassigned on 7 March 1969

CONFIDENTIAL

PERIMETER ILLUMINATION

1. DESCRIPTION: The 3rd Security Police Squadron of Bien Hoa Air Base has developed a night lighting device to provide instant illumination at practically any given point around the perimeter of the Air Base. The device is commonly referred to as the "Totem Pole Flare", which is a modification of either the Mark 21 or Mark 24 Aircraft Flare. Once the "Totem Pole Flare" is fired, it will provide illumination of 1,000,000 candle power for up to 15 minutes depending upon construction.

2. RESOURCES REQUIRED: Mark 21 or Mark 24 aircraft flares, gun powder (may be obtained from excess mortar or artillery charges), electric blasting caps (at least two per device), small plastic bags and tape (for weather proofing), wire and firing device from a Claymore mine, and a shipping and storage container - bomb dispenser XM 468, FSN 8140-464-6366 (for use as the shield) or 55 gallon drums with interior painted white for reflectivity.

3. CONSTRUCTION:

a. The construction of the "Totem Pole Flare" is begun by removing the plug from the flare container. This plug is located on the end opposite the timing device of the flare.

b. After the plug has been removed and the parachute removed from the flare container, use the metal cable to remove the flare candle from the container.

c. Once the candle has been removed, the timing device should be activated and the fuze ignited to preclude any accidental firing of the fuze which could cause an injury. These first three steps should be accomplished on two flares in order to construct one illumination device.

d. Next remove the plug from the candle opposite the end where the steel cable is attached. Then cut off the end of the cable which has the cable attached and expose the magnesium of the flare candle.

e. Take the second candle and again remove the plug opposite the cable end , however, do not cut the cable end off the candle, only remove the cable.

f. Once both candles have been prepared, place the candle with only the cable removed back into the aluminum flare casing. Be sure that the end where the cable was cut off is placed down. When this has been accomplished, place the other candle in the casing with the exposed magnesium down. This will cause the bottom candle to ignite once the top candle has been completely burned.

g. At this time prepare the ignition charge by placing the gun powder into one of the small plastic bags. Then place two electric blasting caps in the bag of powder. Wrap the wiring from the blasting caps around the bag a few times to secure the caps in the bag.

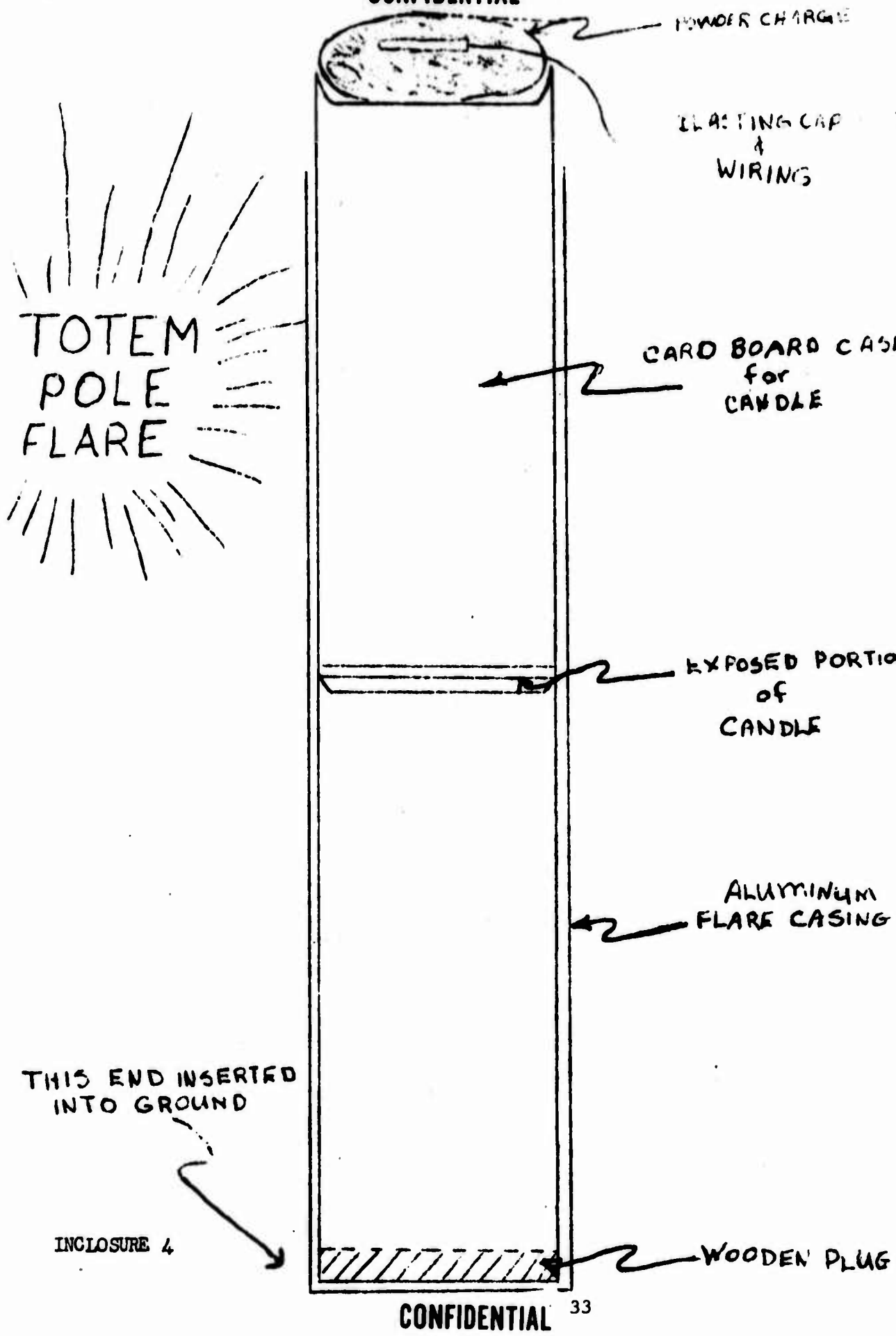
h. Now place the ignition charge on the end of the candle protruding from the casing and secure it by using tape. This will also help to weatherproof the ignition end of the device.

i. Once this has been completed, wrap the remaining wiring from the blasting caps around the container and secure it with another strip of tape. This completes the construction of the illumination device.

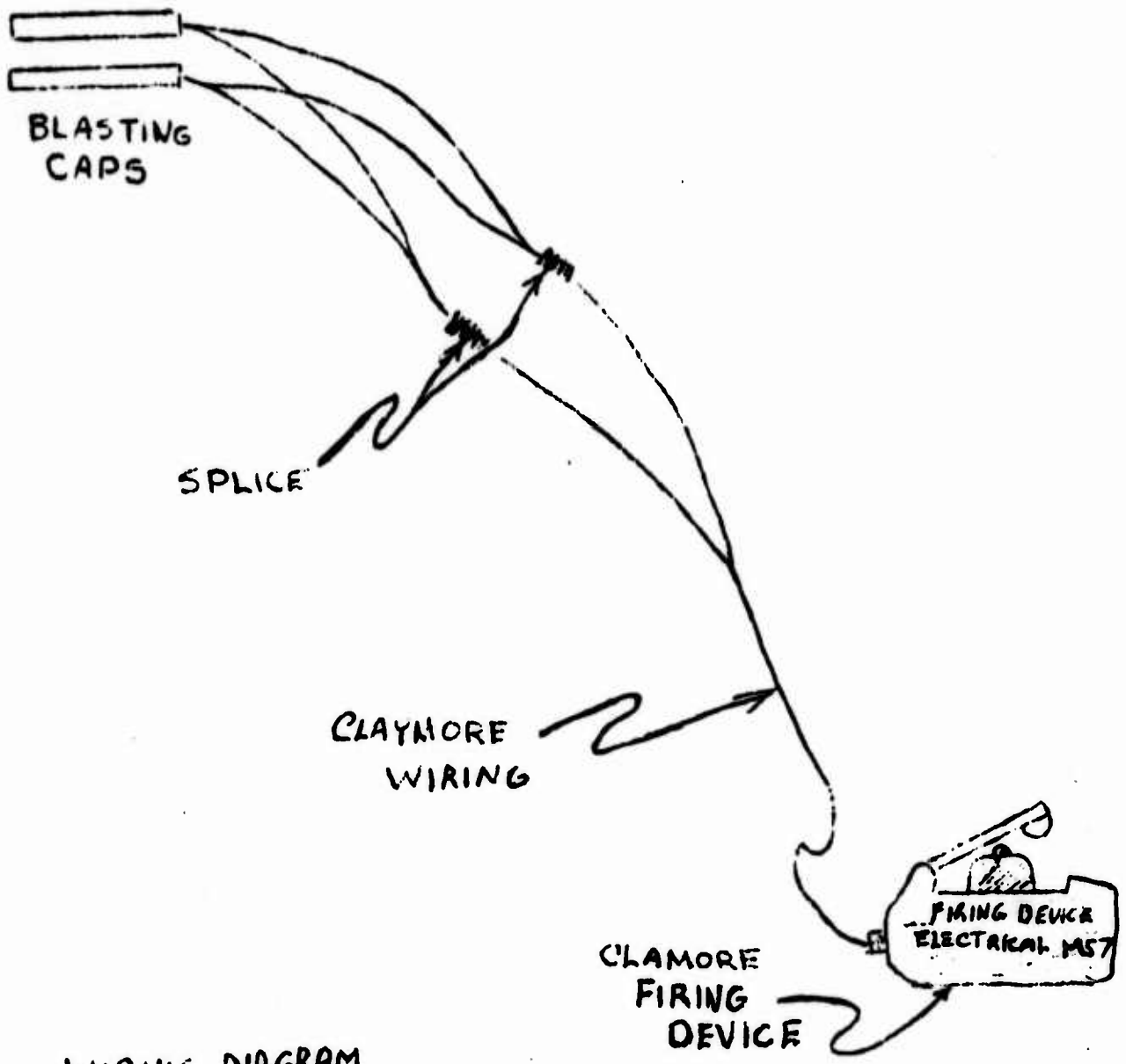
j. Once the device has been constructed, it is then placed in its position by placing approximately 4-6 inches of the container (fuze end) into the ground. This is done so that the device is positioned within the shield. At this time the wires from the blasting caps to the Claymore wiring may be attached and run to the position from where the device will be activated (i.e. a bunker).

4. EXAMPLES OF SUCCESSFUL EMPLOYMENT: This device has been used successfully many times. The most recent being on the mornings of 23 and 26 February 1969. On the morning of 23 February 1969, enemy forces attempted a breach of the southern perimeter of the Bien Hoa Air Base near the 145th Cbt Avn Bn area. Once the fire fight broke out, two of the flares were ignited, one after the other had burned out. This gave the friendly personnel instant and intense illumination on that particular portion of the perimeter. This not only helped illuminate the battle area, but due to the intensity of the light, it surely acted as an added deterrent to the enemy. Again on the morning of 26 February 1969, elements of the 275th VC Regt were sighted and engaged just to the east of the air base. Again the "Totem Pole Flares" were used to provide instant illumination.

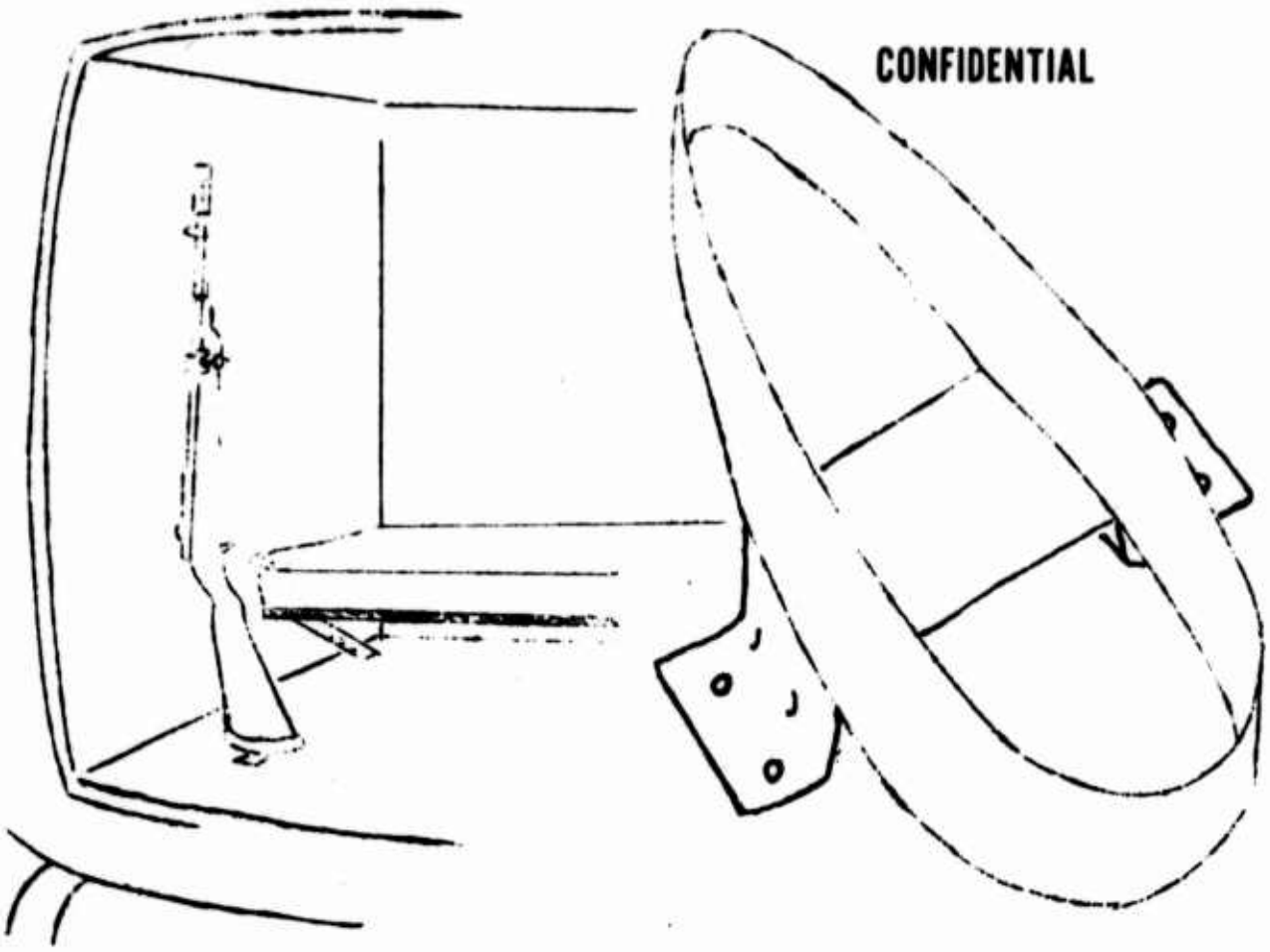
5. SUMMARY: Sufficient and timely battlefield illumination presents a problem in areas where permanent perimeter lighting is not available or where power for perimeter lighting fails. Valuable time is sometimes lost awaiting mortars, or flare ships to prc illumination. With this device, instant, intense, and generally sufficient illumination is no more than 3-4 seconds away with only a squeeze of the hand on a Claymore firing device.


POWDER CHARGE
BLASTING CAP & WIRING
TOTEM POLE FLARE
CARD BOARD CASE for CANDLE
EXPOSED PORTION of CANDLE
ALUMINUM FLARE CASING
THIS END INSERTED INTO GROUND
WOODEN PLUG

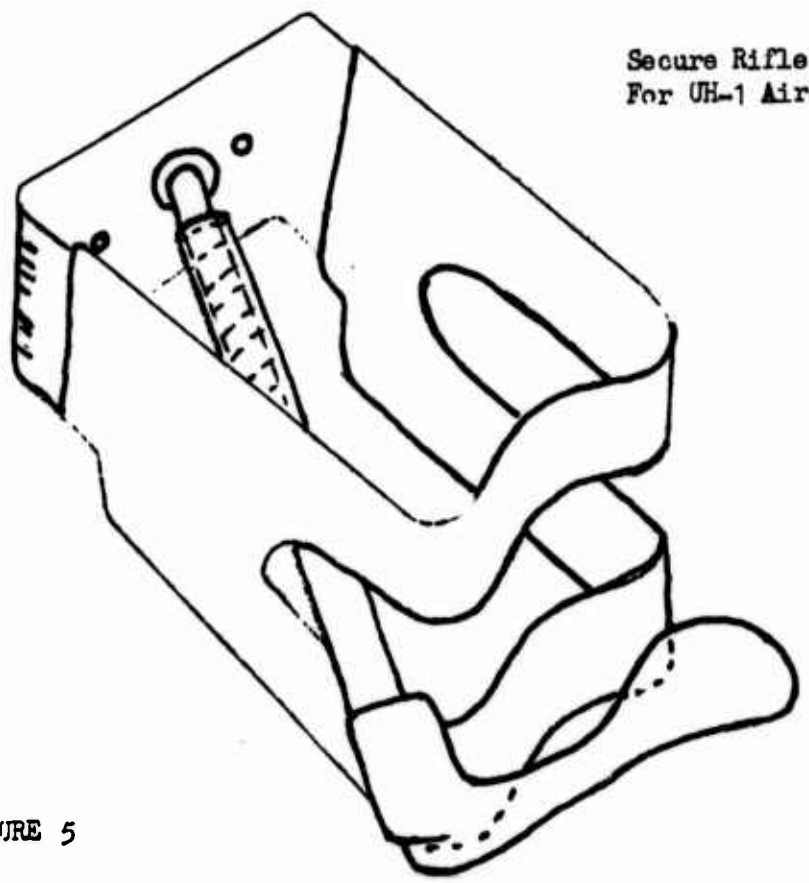
INCLOSURE 4



WIRING DIAGRAM
for
TOTEM POLE FLARE



Secure Rifle Installation
For UH-1 Aircraft



INCLOSURE 5

UNCLASSIFIED
Security Classification

CONFIDENTIAL

DOCUMENT CONTROL DATA - R & D

(Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)

1. ORIGINATING ACTIVITY (Corporate author) HQ, OACSFOR, DA, Washington, D. C. 20310	2a. REPORT SECURITY CLASSIFICATION CONFIDENTIAL 2b. GROUP 4

3. REPORT TITLE

Operational Report - Lessons Learned, Hq, 145th Combat Aviation Battalion, Period Ending 30 April 1969 (U)

4. DESCRIPTIVE NOTES (Type of report and inclusive dates)

Experiences of unit engaged in counterinsurgency operations, 1 Feb to 30 Apr 69.

5. AUTHOR(S) (First name, middle initial, last name)

CO, 145th Combat Aviation Battalion

6. REPORT DATE 13 May 1969	7a. TOTAL NO. OF PAGES 40	7b. NO. OF REFS
8a. CONTRACT OR GRANT NO. b. PROJECT NO. c. N/A d.	9a. ORIGINATOR'S REPORT NUMBER(S) 692163 9b. OTHER REPORT NO(S) (Any other numbers that may be assigned this report)	

10. DISTRIBUTION STATEMENT

11. SUPPLEMENTARY NOTES N/A	12. SPONSORING MILITARY ACTIVITY OACSFOR, DA, Washington, D.C 20310

13. ABSTRACT

CONFIDENTIAL

DD FORM 1 NOV 68 1473

UNCLASSIFIED
Security Classification