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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
Major General, USA
The Adjutant General

Regraded unclassified when separated from classified inclosure.
2. (c) Section 2, Lessons Learned: Commander’s Observations, Evaluations and Recommendations.

a. Personnel.

(1) (U) Rotational DEROS Hump Month.

(a) OBSERVATION: The Squadron experienced a January DEROS hump of enlisted personnel assigned to the Squadron.

(b) EVALUATION: The DEROS hump was caused primarily through an infusion program with the 7th Squadron, 1st Air Cavalry. The DEROS of personnel from the 7/1st Cav occurred within the last week of January. The infusion program and January DEROS hump was reduced considerably through command emphasis within the entire Squadron to offer extensions and explaining the advantages available through extension. Personal interviews were conducted by all the commanders and the results were noted by a sizeable number of EM extending for six months or shorter periods of time to take advantage of the 60R and 30 day special leave policy, and the Army-wide 5-months early-out program.

(c) RECOMMENDATION: All units closely screen personnel with rotational dates within DEROS hump months to influence these personnel to extend and benefit through extension advantages.

(d) COMMAND ACTION: This program has been implemented within this Squadron.

(2) (U) Air Cavalry Squadron Officer Infusion Program.

(a) OBSERVATION: The 1st Aviation Brigade initiated a program within the command for the Air Cavalry Squadrons’ officers to be branch material and cavalry oriented.

(b) EVALUATION: The Squadron was to infuse 22 officers and warrant officers with Aviation elements within the command for like qualified Armor officers. Branch material positions were filled with Armor officers. Four officers submitted requests for branch transfers to the Armor branch to remain with the Squadron. Most of the officers were transferred to other aviation units because of DEROS hump months, but were replaced with newly assigned Armor aviators in-country. Six of these diverted replacements have not reported to the Squadron.

(c) RECOMMENDATION: All non-Armor aviators that are to be assigned, branch immaterial, to Cavalry Squadrons be requested to apply for Branch transfer before assignment. Replacements for infused officer personnel report before departure of presently assigned officer to properly allow for an overlap period and training cycle.

(d) COMMAND ACTION: The above recommendation has been discussed with all commanders to insure it continues to function as described.
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(3) (U) Shortage of H5J20 Personnel.

(a) OBSERVATION: A shortage of Armament Repairmen, MOS series H5J20, exists within this Squadron.

(b) EVALUATION: Since this Squadron became equipped with the AH-1G, several changes have been effected. Pilot transition is certainly a critical problem; however, enlisted armament transition and refresher training is clearly imperative to insure the weapons platoons remain effective. The new MOS for the Air Cavalry Troop authorizes three E-5, four L-4, and one E-3 in the H5J series MOS. One solution to the problem is to select an intelligent individual possessing an MOS not nearly so critical and have him OJT with the troop's experienced armorers. After sixty days, if the individual proves productive, the commander can award the H5J MOS. Additionally, the troop can request an allocation for enlisted armorer refresher training through the AARTS program. This one training week will completely round out the individual's OJT experiences. Thus, within less than ninety days a fully trained armament repairman is produced. In view of the promotion system afforded the troop commander by the KTOE, these soldiers can be motivated easily, i.e., begin a tour in RVN as a TC and leave as an SP5. If the troop commander selects individuals for the OJT program within 3 to 5 weeks apart, a continuous program is easily put into effect.

(c) RECOMMENDATION: Units with a shortage of H5J personnel should adopt a program such as the one described above until the CONUS replacements arrive in sufficient numbers.

(d) COMPTD ACTION: This program has been thoroughly discussed with all commanders, operations officers, maintenance officers, and weapons platoon leaders. The results have been satisfactory. Additionally, the program affords the commander flexibility; as the supply of school trained personnel increased from CONUS, the OJT program is decreased.

b. Operations.

(1) (C) Convoy escort techniques and enemy mines.

(a) OBSERVATION: The enemy repeatedly employs mines along the shoulder of the roads.

(b) EVALUATION: During November, D Troop's mission consisted of escorting the daily convoys from LZ Mary Lou to the Polci Xleng CIDG Camp. The convoy formation consisted of a lead scout jeep with M-60 MG and radios, a second scout jeep without radios, a command jeep, the main body of the convoy, a 105 mm recoiless rifle jeep, a 50 cal MG gun jeep, an ACAV and finally a rear scout jeep. The convoy generally moved at between 15 to 20 MPH with a 20 meter interval between vehicles. Initially the straight line formation was used but because of a natural tendency to move towards the shoulders of the road, particularly on curves, two trucks were destroyed during the first few
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days of operations by mines. However, it was determined that by staggering the escort jeeps, one on each side of the road, most mines could be located. The mines in the center of the road are relatively easily detected. By staggering the escort jeeps, the scouts can devote their entire attention to one specific area, namely their respective side of the road and not the entire road thus increasing the chances of mine detection. Also, the escort commanding officer has included in his convoy leader briefing that the main body of the convoy must stay in the center of the road as much as possible. Additionally, the distance between the lead jeeps has been increased to about 50 meters to provide for better dust separation and weapons employment areas. While in a turn or passing a bank, gunners concentrate weapons on the critical areas and the escorts slow their speed to increase observation. If the convoy receives fire, the speed is immediately increased and no vehicle should stop unless forced to do so.

(c) RECOMMENDATION: All other convoy escort organizations in the central highlands consider employment of the techniques described above.

(d) COMMAND ACTION: D Troop commander has incorporated the above lessons-learned into all troop in-country training for replacements.

(2) (C) Artillery Night Program.

(a) OBSERVATION: The effectiveness of night artillery firing can not be over emphasized. Recently air cavalry elements have detected several areas obviously used as enemy night rest locations. Night artillery H & I fires have been directed into these areas with impressive results.

(b) EVALUATION: Recent Air Cavalry operations, particularly in the DAK PAYOU valley area, ('VC Valley' south of An Khe) have noted several recently used enemy night locations. It was finally determined that when a comparatively small enemy unit moves through an area it will generally use the same night locations as its predecessors. The night locations are often near rivers where fish traps can net a quick breakfast for the small force. The aero-scouts discovered the pattern and the liaison officers began to develop a night program by recording on a separate map plots of these night locations as they were reported. Additionally the scouts provided a suggested time for the artillery fire based on their knowledge of observed enemy movement and terrain analysis. When the daily operations were concluded the liaison officer would coordinate with the artillery liaison officer and the S-2 to develop the time schedule for the artillery H & I fires. Generally, the enemy night locations are not near friendly locations thus 3" and 175mm guns are most often employed. These weapons; however, are best suited for this mission as their area coverage is relatively larger than the smaller guns. Initially the program was successful because the H & I fires were struck at 2300H and 0300H only, but by using the time estimates of the scouts more impressive results were obtained. During early morning sweeps following the artillery fires the scouts began to discover fish nets still in position, sleeping mats hastily abandoned, significant amounts of enemy equipment (such as helmets) remaining in the night locations.
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plus blood trails. The aero-rifle platoon has been inserted into these areas and confirmed these findings and has confiscated the equipment.

(c) RECOMMENDATION: That other air and ground organizations consider this artillery night program which appears to add depth to the H & I firing program. Additionally, suggest that aircraft discoveries of night locations be passed into the local artillery channels for action. The critical elements of the program are: the time estimates, pin-point location of targets, and the sudden and violent artillery attack with ‘fire-cracker’ ammunition or VT.

(d) COMMAND ACTION: This lesson-learned has been thoroughly discussed within this command and troops now operating in other geographical areas are now beginning to suggest an artillery night program to the supported Infantry Brigades.

(3) (C) Air Cavalry Employment with LRPs.

(a) OBSERVATION: The employment of an air cavalry force to react and to capitalize on information obtained by a LRP team can prove to be a successful operation.

(b) EVALUATION: While operating in support of Task Force Winner, air cavalry elements were assigned the mission of reconnoitering a small area and of inserting its organic infantry to extract an extensive rice cache discovered by a LRP team from Company E, 20th Infantry (LRP). Since the 20th Infantry controlled the area of operations (AO) and because their commander flew in the cavalry C&C aircraft, clearance to fire could be obtained immediately. Generally, a LRP team will operate in an area for five days but only move about nine kilometers during this entire time. A team had discovered the rice caches located in several small extremely well-camouflaged huts in a rather insecure area. In view of extensive enemy contact other LRPs had experienced in the surrounding highlands, the air cavalry scouts provided an extensive reconnaissance to include reconnaissance by fire beginning at first light, then after forty-five minutes, the aero-rifle platoon was inserted with the LRP team who served as guides. A general ground sweep of the area by the force discovered that the enemy has cached several times more rice than indicated in original estimates. The Squadron reacted to the new findings by inserting an additional platoon of D Troop. The aero-rifle platoon from another air cavalry troop was also inserted and the cavalry liaison officer in the supported infantry brigade arranged for one platoon of RFPFs to be inserted. Terrain proved to be the largest impediment; however, the aero-scouts would direct each platoon to the rice collection zones from the LZ. Additionally, maximum effort was devoted to the rice collection with a minimum of security force since the air scouts provided most of the security. The scouts also re-distributed supplies such as water, shovels, and rice bags to the labor forces after they were unloaded into the central LZ by the slicks. The LRPs proved to be the key figures in the entire operation. Only the LRPs knew the area, the local VIE and NVA rice storage techniques, and the local hostile booby-traps. Briefings by the LRPs to the aero-rifle and aero-scout platoons prior to insertion expedited the entire operation.
The following day an aero-rifle platoon was inserted with another LRP team into a very rugged ravine which contained an NVA classroom complex. The LRP's had located the area previously; but the LRP/Cavalry force was able to thoroughly reconnoiter and destroy the classroom complex.

(c) RECOMMENDATION: In view of the increased intelligence gathered from the area and the concrete results obtained, it is recommended future operations employing air cavalry and LRP teams be considered.

(d) COMMAND ACTION: Both the Squadron S-3 and S-2 have presented these ideas to the 1st Infantry Division G-2/G-3 sections.

(a) OBSERVATION: During the past few months the Squadron has received several mission briefings which proved, after the operation had already begun, to be lacking in many essential elements of information needed to conduct the reconnaissance. The results of these operations have always been less than satisfactory.

(b) EVALUATION: During the month of November and into December the Squadron was called upon to react to several intelligence type targets without adequate briefing. The normal mission from higher headquarters was to fly to a given location and contact a controlling agency, usually a brigade, for details. This agency often would not possess a complete briefing or would indicate the information was too highly classified to discuss. Nevertheless the cavalry would reconnoiter the area and endeavor to discover something to justify its employment. Frequently, a negative report would be submitted to the supported agency. Often the intelligence personnel receiving the report were displeased with the results. When questioned concerning enemy activity in the area, a great deal of information was obviously known prior to the mission assignment.

(c) RECOMMENDATION: All supported units endeavor to provide as much information as possible when supporting a combat force. It is difficult to search for a given intelligence object if the reconnaissance element does not know what it is looking for.

(d) COMMAND ACTION: The Squadron S-3 has discussed this situation thoroughly with Division G-3 and the Infantry Brigades. Additionally, the cavalry liaison officers have been instructed to make every effort to gain information for the troop assigned the mission.

(5) (C) Firefly Operations in the Central Highlands.

(a) OBSERVATION: The Firefly light is effective in the central highlands; but the results and techniques are slightly different than those used in other areas.
(b) EVALUATION: After conducting several FIREFLY missions in the central highlands using AH-1G aircraft as escort, the FIREFLY light has proven to be a definite asset. The results, however, from the employment of the light in mountainous areas cannot be compared to those in III or IV Corps. The following general techniques of employment should be considered:

Caution must be exercised when using the light in hilly or mountainous terrain.

The light becomes ineffective at any altitude above 700' AGL.

The haze and smoke predominant in the highlands diffused the light; consequently, the Cobra escort will have to be closer to the target to see it and engage it.

When shooting at night using the light, the pilot has the same problem as when using flares or artillery for illumination; i.e., he will shoot short until he adjusts to the available light.

When the light is to be turned off, the Cobra crews must be given adequate warning, as vertigo can be encountered easily when the light is turned off abruptly. Transition must be made to the instruments until such time that a horizon is re-established.

The light is ineffective in very heavy jungle; however, it is fairly successful along faint trails and small streams encountered in the highlands.

(c) RECOMMENDATION: That units conducting FIREFLY operations in the central highlands consider the above mentioned techniques.

(d) COMMAND ACTION: None required.

c. Training. (c) Quarterly Training.

(1) OBSERVATION: Past experience has repeatedly proven that it is very difficult to accomplish all mandatory troop level training of both the unit and the individual soldiers as required by USARV Reg 350-1 for tactical units which require long hours of maintenance at night and extended support during the day.

(2) EVALUATION: The USARV AIO team during November noted the deficiency mentioned above and recommended the problem be presented to the 4th Infantry Division G-3 for action. The 4th Division had encountered a similar problem concerning their line battalions and had developed a 'stand down' program in which one battalion at a time was rotated to base camp and relieved of all tactical commitments for a one week period. The Squadron was able to propose a similar program for the cavalry troops and G-3 approved the plan. The results were impressive. D Troop inaugurated the program in early December. Highlights of the training program included airmobile operations, 105mm, smokeless rifle,
81 mm mortor firing and crew drill, plus refresher maintenance training. This troop had been unable to maintain proficiency in these areas because of tactical fire base and convoy security missions near Kontum. A troop, Air Cavalry, was then relieved of all tactical commitments for one week during the Christmas period. Highlights of the troop's training included CBR exercises, range firing and squad live firing exercises, repelling, mine and booby traps detection extensive maintenance refresher training, and additional aerial gunnery drills for the scout and cobra crews. At the conclusions of this training week the troop had 24 aircraft mission ready with only one LOH and one slick down. These two, however, required major component changes and extensive battle damage repair. C Troop, Air Cavalry, conducted training from 18 to 24 Dec with similar results.

(3) RECOMMENDATION: In view of the results accomplished by the week of training in several cases, it is recommended that the program continue and other units investigate this method to conduct the required training.

(4) COMMAND ACTION: Commanders at all levels were pleased with the results of this training program. They recognized the need, however, to plan the entire seven day period. They are required to publish training schedules, establish priorities and courses of action.

d. Intelligence.

(1) (C) NVA/VC Company unit tactics

(a) OBSERVATION: After conducting cordon and search operations over a four month period it was determined that enemy units are often located 1000 to 2000 meters from the village and in wooded areas in close proximity to trails and stream intersections.

(b) EVALUATION: From the period August through December 1968, A/7/17 conducted over twenty cordon and search operations of villages located in the Ban Me Thout/Hewal Plantation and Oasis areas. 25% of these operations resulted in enemy contact in the immediate area of the cordon. No contact was made in the village; however, valuable documents, information, and some detainees were obtained. Three of these contacts were with possible company sized units or larger and the enemy was well dug in. On two occasions it was noticed that approximately 200 to 500 meters from the main force a group of 3 to 5 men were located and once detected would move away from the main force. Five additional smaller enemy engagements during this period occurred also in close proximity to the villages; however, these were purely a result of the area reconnaissance by the aero-scouts accompanying the cordon force. One characteristic of all these contacts is that they all occurred within 1000 to 2000 meters of the village in wooded areas and in close proximity to trails and stream intersections. It was further concluded that the NVA and VC units were dependent on these local villages to varying degrees and for varying lengths of time but positioned their base areas some distance away from the village to prevent detection by the cordons which had become a common allied tactic in these areas.
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(c) RECOMMENDATION: That units conduct cordon and search operations in these areas consider the above lessons learned when planning their operations. Reactions forces should be used to engage any contacts established outside the villages.

(d) COMMAND ACTION: The above lessons-learned have been thoroughly disseminated within this command and to as many adjacent units as possible.

(2) (C) Intelligence briefings.

(a) EVALUATION: The S-2 section recently initiated a system of squadron wide intelligence briefings on a by-monthly basis. The first briefing was given mainly to the pilots and observers of the Aero-Scout Platoon. The briefing consisted of an updating of the war effort in Vietnam and included the latest in enemy and friendly activity plus political actions. To instill group interest, training aids were used i.e., Captured Chicom 51 Caliber AA Gun, photographs of enemy rockets and firing techniques, tanks, aircraft, captured enemy propaganda films, and charts showing enemy capabilities, habits, strengths, locations, and camouflage techniques. A question and answer period followed the presentation in which areas of general interest were discussed based on the S-2's information from 4th Division G-2. Additionally, the scout crews discussed various techniques of observation, gunnery, and observed enemy techniques. The session was extremely profitable. The briefing was given to maintenance and support personnel of the squadron the following day to increase their knowledge and understanding of their importance to the squadron's mission.

(c) RECOMMENDATION: That other intelligence agencies investigate the value of giving intelligence briefings to their units to enlighten personnel who otherwise would be denied the complete picture of their role in the unit's mission.

(d) COMMAND ACTION: Troop commanders have repeatedly expressed their satisfaction with this program. Maximum attendance is easily obtained; as everyone enjoys the briefings and the discussion period that follows.

e. Logistics.

(1) (U) AH-1G Time Component Changes

(a) OBSERVATION: The Army has a relatively new aircraft in its inventory, the AH-1G. Several instances have occurred in which components have become defective long before their normal time change.

(b) EVALUATION: Maintenance personnel have found during a 300 hour inspection of one AH-1G that the main rotor hub grip extension had a crack 1/8" wide and 3" long. On another Cobra a maintenance team found one of the M1 nozzles cracked though the nozze's normal time change is 1200 hours.
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During a gun run in turbulent weather south of An Nhe, for a unit in contact, one Cobra sustained a broken transmission lift link and the wingman's Cobra had one of its main rotor blades twisted. The blade was measured and found to have 5 degrees negative pitch. Neither of these Cobras were over torqued during the flight.

(c) RECOMMENDATION: That all pilots and maintenance personnel exercise extreme care during 100 hour inspections and check each component for wear and not overlook it because, under normal conditions, the part is designed to last longer. Maintenance Officers should submit EIRs whenever possible and be mindful of trends in local component failures.

(d) COMMAND ACTION: The Squadron Maintenance Officer has insured that these failures were brought to the attention of all maintenance personnel and desires all such future failures to be reported to him to guarantee maximum dissemination.

(2) (U) New UH-1H maintenance problems

(a) OBSERVATION: During the past few months, several days of aircraft availability were lost due to bearings working loose on models recently received from the factory.

(b) EVALUATION: During the past few months it has been noted by one Technical Inspector that the bearing (FSN 3110-142-4472 Figure 1-14 Index 22 TM 55-1520-210-35) on the new scissors and sleeve assembly is working loose on all UH-1H aircraft. Initially this deficiency was not detected and caused considerable damage to adjacent parts in the scissors and sleeve assembly. On new aircraft, naturally, this bearing is pre-assembled at the factory. The replacement part must be locally assembled by staking the bearing. The first loose bearing was detected after 200 hours on the airframe and after considerable damage had resulted. The second defective bearing was detected after only 75 hours of operation. In addition to the procedures outlined in the TM for installation of this bearing, the mechanics recommend metal-setting the bearings for additional guarantee they will not work loose.

(c) RECOMMENDATION: That all units receiving new UH-1H aircraft be advised that the bearing may work loose. Additionally, that the factory assembly of this component be checked to guarantee the bearing does not work loose.

(d) COMMAND ACTION: The Squadron Maintenance Officer has insured all troop maintenance officers have received this information concerning new UH-1Hs.

(3) (U) Car-15 for Cobra crews

(a) OBSERVATION: Two recent incidents involving AH-1G crews have brought to light a serious lack of weapons for use during emergencies.

(b) EVALUATION: In January an AH-1G made a forced landing due to fuel contamination in an unsecure area northeast of Pleiku, RVN. Within an
hour the organic infantry platoon was inserted to secure the aircraft and assist during extraction by CH-47. The crew stated upon recovery that they felt extremely uneasy defending the site with two .38 caliber pistols. Additionally, on 15 Jan 69 an AH-1G was shot down, crashed, and burned. The crew was killed and the auto-rifle platoon recovered their bodies. The platoon leader made repeated statements to the effect that even if the crew had survived the crash, rescue would have taken over two hours at the least. He added that the ship had crashed in close proximity to an enemy bunker complex and armed with two .38 caliber pistols, the crew, unable to defend themselves, would most likely have been killed by the hostile force.

(c) RECOMMENDATION: That each AH-1G be authorized a CAR-15 for crew survival. The weapon would be placed behind the rear pilot's seat.

(d) COMMAND ACTION: During November and December the three Air Cavalry Squadrons under 1st Aviation Brigade conferred to recommend a standardized MTOE. One change on this MTOE included CAR-15 for the Cobra platoons. Additionally, a letter is being prepared to forward through supply channels to request issue of these weapons based on the need and the MTOE change pending.

(4) (U) Turn-in procedures.

(a) OBSERVATION: The following requirements are required by the 62nd Maintenance Battalion for turning in of equipment by this organization:

- Must have the item and/or equipment listed on a DA Form 2407 (Work Order Request) and classified unserviceable.
- Must have four (4) copies of DA Form 2404 (Equipment Inspection and Maintenance Worksheet) completed by technical inspector.
- Must have four (4) copies of "Certificate" stating that the equipment is unserviceable due to fair wear and tear signed by the Property Book Officer.
- Must have four (4) copies of Certificate stating that no parts have been removed from the equipment being turned-in and signed by the Property Book Officer.

(b) EVALUATION. The great amount of paper work required to turn-in any given piece of equipment exceeds any requirement that is published in the AR's and creates difficulties in turning in equipment due to the location of the unit and the Maintenance Support Unit declaring the equipment unserviceable. In addition this creates a problem with the operation of the S-4 in that a great deal of time is required preparing the paper work and transporting the equipment to the turn-in point without a guarantee of being returned for additional paperwork.

(c) RECOMMENDATION. That a policy be established on turn-in procedures and the correct paper work required by the Property Disposal Officer in accepting unserviceable equipment.

(d) COMMAND ACTION. The situation has been discussed with higher
headquarters in an attempt to find a solution.

(5) (U) Availability of Cleaning Solvent SD II.

(a) OBSERVATION. The Squadron has been experiencing difficulties in obtaining Cleaning Solvent SD II.

(b) EVALUATION. A shortage of Cleaning Solvent SD II has existed in this area since mid-December, 1968. A requisition for SD II, FSN 6850-281-1986, was submitted to the 88th S & S Battalion. This product was not available and another product, Dry Cleaning Solvent FSN 6850-249-8029 was issued in lieu of the requested item. This product came with the warning, "Caution, Strong Solution Use Rubber Gloves", and it is not suitable for the required use of flushing aircraft engines. A representative of the Squadron S-4 hand carried a requisition of SD II, FSN 6850-218-1986, to Qui Khon Depot and found depot was at zero balance. A subsequent check of Cam Ranh Depot produced the following results. Contact was made with the Directorate of Petroleums, Cam Ranh Bay Support Command and the following information obtained: SD II in an 18 gage drum, FSN 6850-285-8011 replaces SD II in a 16 gage drum, FSN 6850-281-1986, and that in mid-January 1969 there were some 11,000 drums in the Cam Ranh Bay Depot with some 6,000 additional drums due in that week and that adequate quantities would be transferred to other depots. To date, there has been no change in availability of this product in this area.

(c) RECOMMENDATION. That information on FSN changes be sent out to using units and measure be taken to assure quantities of SD II, FSN 6850-285-8011, be made available.

(d) COMMAND ACTION. Requisitions pending the new FSN are now being processed.

f. Organization. None.

g. Others.

(1) (U) Civic action vaccination programs.

(a) OBSERVATION: Villagers are reluctant to get vaccinated when special teams of doctors and nurses come to their villages.

(b) EVALUATION: This quarter two vaccinations were conducted in the villages of Plei Do and Plei La Lang. Though the people realized the importance and the chiefs consented to the idea, the program was not as successful as anticipated. The second time both villages were vaccinated there was a noticeable drop in the number of people to be vaccinated. The possible reason for this drop is that it had only been three weeks since the first vaccination and the experiences were too vivid in their minds.

(c) RECOMMENDATION: Never give more than two drugs in one day and vaccinate villagers at an interval of at least a month and a half.
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(d) COMMAND ACTION: Steps have been taken to schedule the vaccinations approximately every six weeks. The medical personnel are also advising the DA teams as to the best times of the year to vaccinate each drug to guarantee maximum protection.

(2) (U) Secure voice in UH-1H

(a) OBSERVATION: Dissemination of information concerning installation of secure voice device KY-28 TSEC has been received in a sporadic manner.

(b) EVALUATION: This command was in the final process of the ZIR and ZIS modifications when information was disseminated concerning the volume control wiring modification which was necessary to enable audio volume condition of the AH/ARG-54 after a KY-28 is installed. This modification was closely followed by a reliability modification which prevents the final stage of the AH/ARG-54 from discharging into an open. These modifications have resulted in aircraft being worked on two to three times to ready them for KY-28 installation. Neither of the aforementioned modifications were received in the form of a DA WO but were received as a command letter and command message. It is reasonable to assume that defects of this nature would have been discovered during the test and evaluation phase. And that a standard DA WO published or that the modifications could have been a part of the overall ZIR or ZIS program.

(c) RECOMMENDATION: It is recommended that when defects are located during test and evaluation, the corrections be included as a part of overall installation program. If the modification to correct the defect is not apparent at time of acceptance of equipment it is recommended that information concerning the defects be disseminated to the lower command echelons and that DA WO's be published as soon as a modification is devised.

(d) COMMAND: The modifications were performed concurrently and while the aircraft was down for some other reason whenever possible, however, they could have been more easily performed as a part of the overall ZIR and ZIS program.

(3) (U) Use of CP3 Br Fire Extinguisher in AH-1G Aircraft.

(a) OBSERVATION: A recent electrical inflight fire in the AH-1G aircraft could have become a major accident had the fire extinguisher in the front seat been used.

(b) EVALUATION: Use of the CP3 Br extinguisher in closed cockpit aircraft such as the AH-1G will result in inhalation of concentrated gas which may cause loss of consciousness and permanent lung damage. In addition CP3 Br is caustic and may cause eye damage. The result of its use in an enclosed cockpit would most probably be loss of aircraft control.
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10 February 1969


(c) RECOMMENDATION: That CF3 Br fire extinguishers be removed from the cockpit area of the AH-1G and be placed in the forward battery compartment. Also that a non-caustic, non-poisonous fire extinguisher be adopted for use in closed cockpit aircraft.

(d) COMMAND ACTION: The Squadron standardization board has required that all CF3 Br fire extinguishers be removed from the cockpit and stored in the battery compartment.


(a) OBSERVATION: In past months it was observed that much information intended for pilots was not filtering down below platoon level.

(b) EVALUATION: A Council composed of the Squadron Commander and Safety Officer, the Troop Commander, Maintenance Officer, and Safety Officer; and the platoon leaders and safety officers; was formed to improve the flow of information both up and down the chain of command. Common problems can be discussed and solutions developed with representatives of all interested parties present.

(c) RECOMMENDATION: That a Council as described above be formed within all units experiencing a similar problem.

(d) COMMAND ACTION: The Council was established in this command and will remain in effect.

ROBERT H. REUTER

LTC, AR

Commanding

5 Incl

Incl 2, 3, 4, wd, HQ DA

DISTRIBUTION:
2 CINCUSARCOM, ATM: AGS CSFAC-65, APO 96558
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CO, 2nd Scd, 17th Cav, Hue, APO 96383
CO, 3rd Scd, 17th Cav, Di An, APO 96340
1. (U) This headquarters has reviewed the attached report, considers it to be adequate, and concurs with the contents as stated except as indicated below.

2. (C) The following comments and recommendations are submitted:

a. Section 1, Operations: Significant activities. This section is historical in nature and should be in narrative form. Lengthy, detailed statistical data would be more properly placed as inclosures to the basic report.

b. Section 2, Lessons Learned: Commander's Observations, Evaluations and Recommendations.

(1) Paragraph 2a (1), Rotational DEROS Hump Month, page 21. Concur: Command emphasis at all levels is exercised to minimize future DEROS humps.

(2) Paragraph 2a (2), Air Cavalry Squadron Infusion Program, page 21. Concur: Sufficient branch oriented officers are available to fill positions in the Air Cavalry Squadron. Every effort is made at this headquarters to assign only branch qualified officers to the Cavalry Squadron. Occasionally in-country armor qualified arrivals are inadequate to cover losses and non-armor personnel are assigned to meet critical shortages. These persons should be subsequently infused out of the Squadron in order to give preference to armor qualified officers. Complete overlap is impossible for all organizations involved, however the program is monitored and impact on key positions minimized when replacement flow permits.

(3) Paragraph 2a (3), Shortage of 4520 Personnel, page 22. Concur: There exist a group wide shortage of 4520 personnel. OJT of selected individuals is standard practice throughout the group.

(4) Paragraph 2b (1), Convoy Escort Techniques and Enemy Mines, page 22. Concur: Recommend this procedure be brought to the attention of other units responsible for convoy escort.

(5) Paragraph 2b (2), Artillery Night Program, page 23. Concur: Recommend this lesson learned be disseminated to other aviation groups for considerations.
CONFIDENTIAL

AVBACB-SC (12 Feb 69) 1st Ind 24 Feb 69
SUBJECT: Operational Report of Headquarters, 7th Armored Squadron, 17th Air Cavalry for Period Ending 31 January 1969, RCS CSFOR-65 (R1) (U)

(6) Paragraph 2b (3), Air Cavalry Employment with LRFB, page 24. Concur: Recommend this lesson learn be disseminated to other aviation groups for consideration.

(7) Paragraph 2b (4), Pre - Mission Briefings, page 25. Concur: Complete and detailed pre - mission briefings are SOP at all levels. Occasionally, the urgency of a mission precludes face to face briefings in which case as much detail as can be discreetly obtained is received by radio.

(8) Paragraph 2b (5), Firefly Operations in the Central Highlands, page 25. Concur: Operational techniques peculiar to the highlands are included in Sops and initial incountry training. Subordinate units are given the flexibility of developing special techniques unique to their area of operations. Lessons learned by one unit are disseminated to others for consideration.

(9) Paragraph 2c, Quarterly Training, page 26. Concur: USARV Regulation 350-1 requires, operational commitments permitting, major subordinate commanders to schedule each maneuver battalion and reconnaissance unit for one week of refresher training every three months.

(10) Paragraph 2(d) (1), NVVA Company Unit Tactics, page 27. Concur: Command action considered adequate.

(11) Paragraph 2(d) (2), Intelligence Briefings, page 28. Concur: Lessons learned will be disseminated to subordinate units.

(12) Paragraph 2(e) (1), AH-1G Time Component Changes, page 28. Concur: This group has initiated a maintenance test flight course that includes training in very detailed pre-flight procedures.

(13) Paragraph 2(e) (2), New UH-1H Maintenance Problems, page 29. Concur: EIRs have been submitted, and subordinate units alerted to this problem. Recommend country wide dissemination.

(14) Paragraph 2(e) (3), CAR-15 for Cobra Crews, page 29. Concur: These weapons were previously requested by another unit utilizing AH-1G helicopters. The reply from USARV stated that the CAR-15 was an ENSURE item and has been adopted as a standard item of equipment and a ROI has been developed. However, the USARV CWO further advised that the weapons are not in production because of increased emphasis on production of the M-16 Rifle.

(15) Paragraph 2(e) (4), Turn in Procedures, page 30. Concur: Reporting unit has been ask to submit a command letter outlining details so that appropriate action may be initiated.
SUBJECT: Operational Report of Headquarters, 7th Armored Squadron, 17th Air Cavalry for Period Ending 31 January 1969, (C)

CSFOR-65 (AD) (U)

(16) Paragraph 2(g) (5), Availability of Cleaning Solvent SD II, page 31. Concur: This headquarters has initiated action to determine availability, and means of obtaining proper cleaning solvent.

(17) Paragraph 2(g) (1), Civic Action Vaccination Programs, page 31. Concur.

(18) Paragraph 2(g) (2), Secure Voice in UH-1H, page 32. Concur: Unit has been requested to submit KIR.

(19) Paragraph 2(g) (3), Use of CF3 Br Fire Extinguishers in AH-1G Aircraft, page 32. Concur: This procedure was recommended by AH-1G NETT and is being complied with by units of this command.

(20) Paragraph 2(g) (4), Command Emphasis Council, page 33. Concur: Various techniques are used by subordinate units to disseminate information to the lowest level. This approach will be passed to all units.

FOR THE COMMANDER:

MARC L. TUNAS
CPT, ADA
Adjutant
CONFIDENTIAL

AVFA-00-07 (12 Feb 69) 2d Ind
SUBJECT: Operational Report of Headquarters, 7th Armored Squadron
17th Air Cavalry for Period Ending 31 January 1969, ROG
CRGGR-65 (R1) (U)

DA, Headquarters, I Field Force Vietnam, APO 96350  6 MAR 1969
TO: Commanding General, 1st Aviation Brigade, APO 96304

(U) This headquarters has reviewed subject report and cansure with
its content as intersed.

FOR THE COMMANDER:

[Signature]
ARTHUR B. BUSSEY, JR.
Colonel, AGC
Adjutant Generall

Cy Furr:
17th Cbt Avn Gp
This Headquarters has reviewed this report, considers it to be adequate and concurs with the contents as indorsed, except as noted below.

2. The following additional comments are considered pertinent:

   a. Paragraph 2b(1), Page 22: Information will be disseminated to all units for their consideration.

   b. Paragraph 2b(2), Page 23: Information will be disseminated to all units for their consideration.

   c. Paragraph 2b(3), Page 24: Information will be disseminated to all units for their consideration.

   d. Paragraph 2b(5), Page 25: Information will be disseminated to all units for their consideration.

   e. Paragraph 2e(1), Page 28: Concur with recommendations as stated.

   f. Paragraph 2e(2), Page 29: Concur. Also recommend a closer inspection of these bearings during daily inspection.

   g. Paragraph 2e(3), Page 29: Concur. Recommendation for authorizing 1 each CAB-15 for each AH-1G Cobra has been incorporated in a proposed MOE which is being staffed at this time.

   h. Paragraph 2e(4), Page 30: Turn-in procedures appear valid. Discussion with CPT Goulding, 1st Log Cmd, indicates that DSU's publish their own external SOP's. It is recommended that a copy of the DSU External SOP be procured by the organisation and used as a guide for establishing a more expeditious and standard policy for processing un-serviceable equipment for turn-in. The 2407 must be prepared at the requesting unit level. The equipment must be technically inspected by a qualified TI either at the unit or DSU. If the DSU requires a separate attached certificate for the serviceability and cannibalisation, suggest organisation preprint certificate form leaving blank spaces for applicable entries.
1. Paragraph 2e(5), Page 31: Statement pertaining to the availability of cleaning solvent SBII is valid. Per telephone between CW2 Smith and LT Desollar, IEOV Commodity Manager for package POL products, up-to-date standard Federal Stock Numbers will be published in the next IEOV Newsletter.

j. Paragraph 2g(2), Page 32: Concur. The procedures outlined are exactly as actually transpired with the AH-1G modification. As each new modification was approved, it was included with subsequent aircraft modification.

k. Paragraph 2g(3), Page 32: Concur. At this time there is no safe-proof fire extinguisher in the Army inventory that would preclude hazards to the pilot in a closed cockpit such as the AH-1G. Normally, electrical fires in the cockpit are self containing. The AH-1G Training Team has requested that a modification be made for the fire extinguisher to be installed outside the cockpit.

FOR THE COMMANDER:

[Signature]

DAVID E. ANDERSON
Cpt, AGC
Asst AG
AVHGC-DST (10 Feb 69) 4th Ind

SUBJECT: Operational Report of Headquarters, 7th Armored Squadron, 17th Air Cavalry for Period Ending 31 January 1969, RCS CSFOR-65 (R1) (U)

HEADQUARTERS, UNITED STATES ARMY, VIETNAM, APO San Francisco 96375 31 MAR 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 31 January 1969 from Headquarters, 7th Armored Squadron, 17th Air Cavalry.

2. Comments follow:

   a. Reference item concerning AH-1G Time Component Changes, page 28, paragraph 2e(1) and endorsements; concur with recommendations as stated.

   b. Reference item concerning New UH-1H maintenance problems, page 29, paragraph 2e(2) and endorsements; concur. Action taken by the 17th Combat Aviation Group to insure that Equipment Improvement Recommendations (EIR's) have been submitted should remedy this problem. The recommendation has been forwarded to the 34th General Support Group for inclusion in their maintenance newsletter.

FOR THE COMMANDER:

C. D. WILSON

1LT, AGC
Assistant Adjutant General

Cy furn:
7/17th ACS
1st Avn Bde
GPOP-DT (10 Feb 69) 5th Ind (U)
SUBJECT: Operational Report of HQ, 7th Armored Squadron, 17th Air Cav
for Period Ending 31 January 1969, RCS CSFOR-65 (Rl)

HQ, US Army, Pacific, APO San Francisco 96558 11 APR 1969

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

This headquarters has evaluated subject report and forwarding indorse-
ments and concurs in the report as indorsed.

FOR THE COMMANDER IN CHIEF:

C. L. SHORTT
CPT, AGC
Army AG

21
5 December 1960

S U B J E C T: Combat Operations After Action Report for Dead End-Toll Road (C)

1. (U) NAME AND TYPE OF OPERATION: 1st Infantry Division Operation DEAD END-TOLL ROAD, Search and Destroy.

2. (U) DATES OF OPERATION: 1 Nov 60 - 1 Dec 60.

3. (U) LOCATION: Map, Vietnam Series L701h, 1:50,000, Sheets 63h6 I and II, 63h7 I and II, 63h8 II, 63h9 III and IV, 65h0 III. Area west of Polei Kien in the Plei Trap Valley. See attached map for general outline of the area.

4. (C) COMMAND AND CONTROL HEADQUARTERS:

   a. Operation DEAD END - TOLL ROAD was controlled by the Det D-2h, Special Forces under LTC Marquis and the 2d Infantry Brigade under COL McCrystal.

   b. The 7/17th Cav was commanded by MAJ William T. Glover. A-Troop was commanded by MAJ Robert W. Frost. D-Troop was commanded by CPT Lewis M. Hennessy. The primary coordinator was the Squadron Operations Officer, MAJ Richard H. Marshall.

5. (C) INTELLIGENCE:

   a. The Plei Trap road was first observed on 17 February 1960 by a 1st Division FAC and the road showed signs of heavy recent use until it was successfully interdicted by causing landslides across the road on 6 April 1960. During the period of use, aircraft employed against the road received intense anti-aircraft fire from positions located along the road with the heaviest concentration of positions being in the junction of the N-S Plei Trap road and the northernmost extension. The anti-aircraft fire received in this area was identified as 12.7 mm, 14.5 mm, 23 mm and 37 mm and described by Air Force pilots as being as intense as any received in North Vietnam.

   b. The southwest monsoon precluded the enemy's attempts to repair or reopen the road; however, at the end of the monsoo the road began showing signs of repair and use by foot traffic. Upon detecting this activity, reconnaissance was increased and on 27 October a Headhunter aircraft observed tracks of a 3/4 ton vehicle from Cambodian border to YA 756959, 12 kilometers south of the road's entry point into RVN.
The road showed heavy and constant vehicular use from the border to a point 10 kilometers south along the extension west of the Dak Hodrai-Nam Sathary River. On 6 November a reconnaissance aircraft sighted a convoy of twenty-one trucks and four tanks, three kilometers south of the road entry into South Vietnam. Airstrikes were employed on the 6th and 7th with seven secondary explosions. A LRP was inserted on 7 November, nineteen (19) kilometers south of the road entry point. The team observed signs of heavy use, a bridge capable of supporting heavy vehicular traffic, and bunkers spaced irregularly along both sides of the road. The LRP team also reported several trail markings, camp sights, numerous pull off points and truck parks capable of handling 25t vehicles. On 11 November another LRP patrol was inserted into the area. This team observed evidence of heavy use of vehicles and tanks. The LRP heard movement and what sounded like tanks being started and driving in the area. Both LRP teams were reinserted on 11 November to take pictures of the road. On 15 November the team was extracted. The extraction aircraft received heavy ground fire from three sides of the LZ. The 2d LRP team made contact with 2 NVA and were extracted with negative casualties. The aircraft received ground fire from all sides of the LZ.

c. WR, Red Haze, and APD sensing indicated the presence of a large force located along the road. No unit identification was achieved. It was the opinion of the LRP team that the NVA were practicing maximum security and were well supplied.

6. (C) MISSION:

a. The mission of the Det B-2, 5th Special Forces was to conduct operations in the assigned A/O, to interdict roads and infiltration routes, Search and Destroy enemy positions, and seize a possible PW Camp.

b. The mission of the 2d Infantry Brigade was to support operations of CIDG elements in the Plei Trop Valley; to prepare to reinforce or react for those forces; and to assume control of the operation when U.S. troops are committed to maneuver.

c. The mission of the 17th Cavalry was to support air insertions of 1/12th Infantry Battalion as directed, to perform WR and support missions for CIDG operations as directed, and to provide D/7/17 as security for LZ Mary Lou and for convoy cover to Polei Kleng.

7. (C) CONCEPT OF OPERATION: Detachment B-2 supported by elements of the 1st Infantry Division including the 7/17th Cav conducted operations along the New Plei Trop road to locate and destroy the enemy road network. AA positions, bunker complexes, storage areas, equipment and troop concentrations. Artillery, ZAC Air, ARC-LIGHT strikes, and gunships will be employed. Description of the road in ref c, Annex A, App 1 above.

8. (C) EXECUTION:

a. 11 November 1968 D-Troop convoyed from Base Camp to LZ Mary Lou (ZA 220 030) to provide perimeter security.

b. 16 November 1968 D-Troop started providing convoy security between LZ Mary Lou and Polei Kleng (ZA 0393).
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c. 21 November 1960 17th Cav jump CP established at LZ Swinger (YK 033 960) by CPT Boyd plus CP established at LZ Mary Lou by SGT Shields who was later joined by 1LT King.

d. 22 November 1960 C-Troop Wld areas SW of Dak To in Plei Trap Valley. C/22 hason observed one tank and two trucks. One LC: took a hit. The primary mission for C-Troop did not include operation DEAD END TOUJ ROAD only a D/2 for an ARC-LIGHT put into that area.

e. 23 November 1960 After a delay due to the high winds in the A/C, the operation was declared a GO. Final briefings were received and passed to the troops involved: A & C/7/17 and D/1/10.

f. 24 November 1960 The initial VIs for the operation began with C-Troops A/0 including the southern part of the road, A-Troops A/0 including the northern part of the road plus the junction, and D-Troops A/0 just to the east of C-Troops with the additional duty of escorting initial insertions. There were a total of 26 spot reports submitted from throughout the valley which included sighting and marking at least 10 tunnels, 10 bunkers, 4 bridges strong enough to support a 2½ ton truck, several trails around the road, many AA positions, a destroyed 2½ ton truck, numerous foxholes, numerous truck and motor cycle tracks. Several air strikes were employed. Additionally, hostile fire was received twice and returned. One individual was seen and taken under fire with unknown results. Overall it was an excellent day. The Division had up to this date only LPs on the road and this day's activities represented the first extensive aerial reconnaissance by cavalry elements. The results were listed in an unusually long 2d Bde INSUM for that evening.

g. 25 November 1968 The maneuver portion of the operation began with initial air assaults into LZ Mary (YA 784 917) and LZ Susan (YB 743 041). The Cav troops conducted VR's in the immediate areas of friendly insertions and reported only old bunker locations. A-Troop extracted a LRP and one A-Trp LOH had to be slung to base camp because of fuel problems.

h. 26 November 1960 The cavalry A/0s were again along the road and numerous spot reports were recorded which included over 20 huts, a camouflaged vehicle, a box of Soviet TNT in 1 lb blocks, numerous command bunkers, bunkers along the road every 500M. A-Troop reacted to heavy Snoopy readings with neg results. One CIDG company made gun runs were put into the area until contact was broken. One small secondary explosion was recorded from an air strike. C-Troop received fire twice. The Squadron C&C dusted of 2 CIDG, one of which later died.

i. 27 November 1960 A-Troop reported into an A/0 near the Plei Trap Valley, however at 0930 they received a mission change and reported to the 3rd Bde at the Oasis. C-Troop supported CIDG ground moves up the valley, Wld areas and reported no new findings. The troop assisted in the direction of several air strikes.

Incl 1

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28 November 1968 C-Troop was unable to enter the A/O near Plei Trap Valley until 1300 when they moved to cover an insertion. Early in the afternoon they received a mission change to strike an enemy force near Plei Krong. Neg significant results in the A/O.

29 November 1968 C-Troop worked the Plei Trap Valley and WV'd with neg significant results until noon when they moved farther north along the road to check out intelligence reports that two enemy regiments were in the area. Nothing was found except several new huts with surrounding foxholes. At 1600, C-Troop covered the extraction of a captured French truck.

30 November 1968 C-Troop returned to the Plei Trap Valley and aided in an extraction from LZs Turkey and Susan and an insertion into LZ Mile High (YT 936 933). There were four spot reports submitted which included several older AA positions and 2 platoon sized unit night locations.

1 December 1968 A-Troop returned to the Plei Trap A/O and reported a tunnel entrance with complementary huts, a new road and series of trails. The Squadron was released at 1200 from the operation. At 1305 CPT Boyd terminated the jump CP at LZ Swinger. The general and tactical support provided by the Squadron terminated also at this time. 1/7/17 remained on LZ Mary Lou until 6 December 1968.

9. (C) RESULTS: Operation DEAD END-TOLL ROAD resulted in one 30cm long abatis, consisting of forty-seven trees felled across the road, some of which were two to three feet in diameter. Two side hill cuts were blown causing landslides covering the road in two places. Two large craters 20X35X20 feet were also made along the road. A total of sixteen corduroyed bridges and 159 bunkers were destroyed along with six mortar positions.

10. (C) ADMINISTRATIVE MATTERS: Supply, maintenance, and communication caused no problems, but were quite satisfactory throughout the operation. Both Air Cav Troops returned each night for maintenance and H-4. Two Forward TOCs were maintained and always were in constant communication via high frequency radio and FM radio with each other.

11. (C) SPECIAL EQUIPMENT AND TECHNIQUES: Snoopy was used several times in conjunction with our Air Cav Troops which employed CS upon finding “heavy” readings from Snoopy. This method worked very well, but results were negative.

12. (U) REFERENCES:

a. 1st Infantry Division OPORD 24-68, (DEAD END-TOLL ROAD) SECRET.
b. 2d Infantry Brigade OPORD 17-68, (DEAD END-TOLL ROAD), 10 Nov 68.
c. DET D-24, 5th SFQA OPORD: OPERATION TOLL ROAD, 18 Nov 68.

ROBERT M. REUTER
LTC, AR
Commanding

Incl: 1

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DEPARTMENT OF THE ARMY
HEADQUARTERS, 7TH ARMORED SQUADRON, 17TH AIR CAVALRY
APO San Francisco 96262

AVGD-0-3

4 February 1969

SUBJECT: Test of 2.75 Rocket as an Armor Defeating Munition.

1. GENERAL:

a. The 7th Squadron, 17th Air Cavalry has a secondary mission of employing organic armed helicopters in the role of an anti-tank force.

b. This unit exchanged the UH-1C Huey helicopters for the AH-1G Cobra helicopters, which required a change from the SS-11 weapons system to the 2.75" rocket system as an anti-tank defense system.

c. No immediate current data was available to define the 2.75 rocket as an anti-tank defense system. Therefore, an actual firing test was planned and conducted by this unit.

2. TEST:

a. Day and night firing exercises were conducted using the AH-1G Cobra firing H-U88, 17 lbs proximity fuse (VT), and H-U90, 10 lbs point detonating fuse (PD), warheads at four point targets consisting of three non-salvageable APCs and one French armored reconnaissance car. These targets were approximately 250 meters apart in both open terrain covered with trees.

b. The firing exercises were broken down into six basic exercises as follows:

<table>
<thead>
<tr>
<th>EXERCISE</th>
<th>TYPE FIRE</th>
<th>TARGET RANGE</th>
<th>ALTITUDE</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Low level</td>
<td>1200-3000m</td>
<td>25-100ft</td>
<td>Pop up</td>
</tr>
<tr>
<td>2</td>
<td>Normal angle</td>
<td>1200-3000m</td>
<td>2000ft</td>
<td>Normal fire</td>
</tr>
<tr>
<td>3</td>
<td>High angle</td>
<td>1000-2000m</td>
<td>35-60degrees</td>
<td>Fire thru trees</td>
</tr>
<tr>
<td>4</td>
<td>Low level</td>
<td>1200-3000m</td>
<td>25-100ft</td>
<td>Fire thru trees</td>
</tr>
<tr>
<td>5</td>
<td>Normal angle</td>
<td>1200-3000m</td>
<td>2000ft</td>
<td>Fire thru trees</td>
</tr>
<tr>
<td>6</td>
<td>High angle</td>
<td>100-2000m</td>
<td>above 3000ft</td>
<td>Fire thru trees</td>
</tr>
</tbody>
</table>

c. The targets were acquired from property disposal at Qui Depot, transported to Camp Enari on low boys, and then transported to the firing area by a CH-54 helicopter.

d. Approximately 300 17 lb HE, (VT) and approximately 250 10 lb Head, (PD) warhead were fired during the test.
3. **TEST RESULTS:**

   a. The 10 lb HEAT, PD fuse, proved to be an effective armor defeating munitions. This warhead penetrated armor, blew off accessories which would have wounded ground personnel, created fragmentation effect within the vehicles, and blew large pieces of armor as far as 50 meters from the target area.

   b. The 17 lb, HE, (VT) fuse, warhead produced minimal damage to the armor vehicles and indications were that personnel exposed, both ground and crew would have been killed or wounded. Direct hits did not penetrate the APCs.

   c. The best technique of fire proved to be the normal dive angle, firing a minimum of four pairs of rockets. This method produced at least one direct hit per firing aircraft and maximum area coverage. Although the low level popup method of attack furnished the least exposure time, it is a less accurate method of attack.

   d. Night firing, using the firefly aircraft to pinpoint and illuminate targets, proved to be within the capability of this unit to conduct night attacks upon armored vehicles. Haze and terrain contributed to less firing accuracy than daylight attacks.

4. **CONCLUSION:**

   a. The 2.75" HEAT warhead with PD fuse is an effective armor-defeating munitions.

   b. The best method of attack is normal angle, firing approximately four pairs of rockets each time.

   c. The 17 lb HEAT warhead with PD fuse will be more effective when available in RVN.

5. **AVAILABILITY OF TEST DATA:** This report is not a final report of firing test. Any agency desiring further information and/or a copy of the final report may write this Headquarters, ATTN: S-3.
Extract of Operational Report - Lessons Learned, Hq, 7th Armored Squadron, 17th Air Cavalry

Experiences of unit engaged in counterinsurgency operations, 1 Nov 68 to 31 Jan 69.

CO, 7th Armored Squadron, 17th Air Cavalry

10 February 1969

N/A

N/A

OACSFOR, DA, Washington, D.C. 20310