

UNCLASSIFIED

AD NUMBER

AD837679

LIMITATION CHANGES

TO:

Approved for public release; distribution is unlimited. Document partially illegible.

FROM:

Distribution authorized to U.S. Gov't. agencies and their contractors; Critical Technology; 30 APR 1968. Other requests shall be referred to Army Office of the Assistant Chief of Staff for Force Development, Attn: FOR-OT-RD, Washington, DC 20310. Document partially illegible. This document contains export-controlled technical data.

AUTHORITY

AGO, d/a ltr, 29 Apr 1980

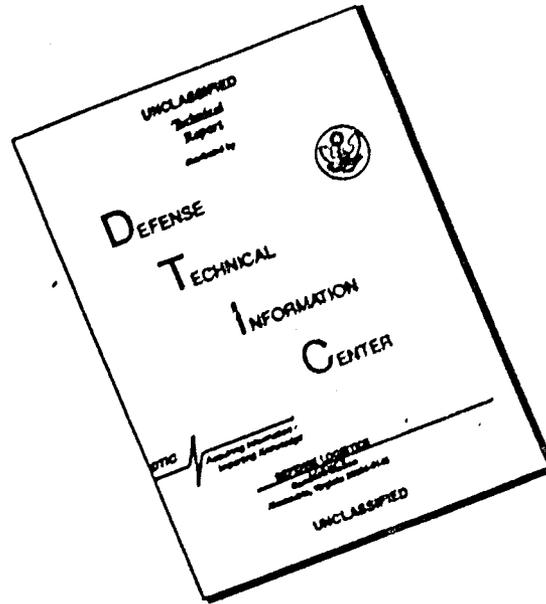
THIS PAGE IS UNCLASSIFIED

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

DISTRIBUTION STATEMENT A

APPROVED FOR PUBLIC RELEASE;  
DISTRIBUTION UNLIMITED.

# DISCLAIMER NOTICE



THIS DOCUMENT IS BEST QUALITY AVAILABLE. THE COPY FURNISHED TO DTIC CONTAINED A SIGNIFICANT NUMBER OF PAGES WHICH DO NOT REPRODUCE LEGIBLY.

FOR OFFICIAL USE ONLY



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

IN REPLY REFER TO

AGAM-P (M) (5 Aug 68) FOR OT RD 682197

7 August 1968

SUBJECT: Operational Report - Lessons Learned, Headquarters, 70th  
Engineer Battalion (Cbt)(Army), Period Ending 30 April 1968

STATEMENT OF UNCLASSIFIED

AD 837679

SEE DISTRIBUTION

This document is subject to special handling and each transmittal to foreign countries must be made only with prior approval of the office of Asst. Chief of Staff for Force Dev. attn: FOR OT RD, Wash D.C.

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 RD, Operational Reports Branch, within 90 days of receipt of covering letter.

20310

2. Information contained in this report is provided to insure that the Army realizes current benefits from lessons learned during recent operations.

3. To insure that the information provided through the Lessons Learned Program is readily available on a continuous basis, a cumulative Lessons Learned Index containing alphabetical listings of items appearing in the reports is compiled and distributed periodically. Recipients of the attached report are encouraged to recommend items from it for inclusion in the Index by completing and returning the self-addressed form provided at the end of this report.

BY ORDER OF THE SECRETARY OF THE ARMY:

*Kenneth G. Wickham*

KENNETH G. WICKHAM  
Major General, USA  
The Adjutant General

AUG 19 1968

1 Incl  
as

DISTRIBUTION:

Commanding Generals

- US Continental Army Command
- US Army Combat Developments Command

Commandants

- US Army Command and General Staff College
- US Army Engineer School
- US Army Ordnance School
- US Army Quartermaster School
- US Army Transportation School

Protective marking cancelled when separated from inclosure.

FOR OFFICIAL USE ONLY



FOR OFFICIAL USE ONLY

DEPARTMENT OF THE ARMY  
HEADQUARTERS, 70TH ENGINEER BATTALION (COMBAT)(ARMY)  
APO 96318

30 April 1968

SUBJECT: Operational Report of 70th Engineer Battalion (C)(A) for  
Period Ending 30 April 1968, RCS CSFOR-65 (R1)

Commanding Officer  
937th Engineer Group (C)  
APO 96318

Commanding General  
18th Engineer Brigade  
APO 96377

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

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

Assistant Chief of Staff for Force Development  
Department of the Army (ACSFOR DA)  
Washington, D. C. 20310

PROTECTIVE MARKINGS MAY  
BE REMOVED 8 JULY 1969

FOROT RD  
682197

FOR OFFICIAL USE ONLY

## FOR OFFICIAL USE ONLY

### 1. Section 1, Operations: Significant Activities.

#### a. Administrative Operations

(1) During the period of 1 Feb 68 to 30 April 68 the 70th Engineer Battalion (Combat)(Army) performed its assigned mission which is to:

- (a) Command assigned and attached units.
- (b) Plan and coordinate operations of units assigned or attached to the battalion.
- (c) Provide all non-divisional engineer support required for tactical operations in the battalion area of responsibility.
- (d) To actively maintain the battalion sector of the Engineer Hill perimeter and to defend this sector against enemy attack.

(2) The battalion including the 630th Engr Co maintained an average strength of 84% for enlisted men and 81% for officers. (All future references to the 70th Engr Bn (C)(A) in this report include the attached 630th Engr Co (LE).

(a) The authorized and assigned strength of the battalion as of the end of the quarter was as follows:

	<u>Officers</u>		<u>Enlisted Men</u>	
	<u>Authorized</u>	<u>Assigned</u>	<u>Authorized</u>	<u>Assigned</u>
70th Engr Bn	39	33	755	717
630th Engr Co	6	6	143	170

(b) A chart showing the battalion's current organizational structure is attached as Inclosure 1.

(c) A shortage of key NCO's has existed throughout the reporting period. At present the status of key NCO's is as follows:

<u>Position</u>	<u>MOS</u>	<u>Grade</u>	<u>Authorized</u>	<u>Assigned</u>
Supply Sgt	76Y40	E-6	6	1
Combat Engr	12B40	E-6	40	15
Combat Engr				
Senior Sgt	12Z50	E-8	7	4

(d) All assigned missions of this battalion were accomplished despite the shortage of key NCO's. The assignment of experienced NCO's would assist in the development of the many fine young NCO's being developed by this organization.

## FOR OFFICIAL USE ONLY

5  
(e) During the past quarter this headquarters received personnel school trained in MOS's not authorized or in excess to our TO&E. To cite two examples: This headquarters is currently assigned nine (9) stock control specialists (76P20) and authorized zero (0); assigned five (5) surveyors (82B20) and authorized one (1).

(f) The assignment of individuals already promoted to the authorized grade by virtue of academic achievement precludes promotion of incumbent personnel for outstanding performance of duty under combat conditions.. Personnel promoted for academic excellence have the intelligence necessary to accomplish any mission required by their MOS, but they lack the experience in handling the common problems that the person currently in the position possesses.

(3) Three companies are currently operating in the field and one has recently returned. Morale is at a high level. There were 19 extensions of tours approved during the period. Article 15's administered during the quarter averaged 30 per month. Three special courts-martial were convened.

(a) The battalion chaplain conducts Protestant Services in the field and at base camp on a regular basis. Catholic Services are conducted by 937th Engr Gp (C) chaplain.

(b) Due to the TET Offensive, Civic Action declined during this reporting period. A total of 18 1/2 man days were spent on Civic Action. The cost of supplies contributed from military resources for Civic Action was 221,000 VN\$. Voluntary contribution equaled 5,360 VN\$. A total of 4 man days were spent on construction of a resettlement area for the Vietnamese in the Ben Me Thout area.

(4) The battalion maintains continuous repair and constantly improves its sector of the base camp perimeter. There is a continued requirement for the replacement of trip flares triggered by animals. A daily inspection of tactical wire and adjacent areas is conducted.

(a) Enemy activity in the battalion area of responsibility continues to increase. The repeated ambush of engineer convoys on route 14N resulted in a platoon size security element being provided by this battalion for the daily rock and sand convoys between Pleiku and Kontum. There have been no incidents involving enemy activity against this convoy since this security element has been provided.

(b) Numerous enemy actions/incidents have taken place on QL 19. Ambushes, minings and demolition of road structures has required increased engineer effort to support tactical units and maintain this LOC.

(c) Reconnaissance of roads in the battalion AO is performed as needed. Main supply routes and roads used by tactical units are under constant engineer surveillance.

(d) Intelligence information is coordinated with available intelligence sources daily. Units send in spot reports upon discovery of enemy activity.

3 FOR OFFICIAL USE ONLY

## FOR OFFICIAL USE ONLY

(e) Information is disseminated daily with reports sent out to units upon receipt of intelligence that might affect the situation of their work sites.

(5) During the reporting period, units of this battalion were spread throughout II Corps, D Company at Suoi Doi Firebase on Rt 19, C Company at Ban Me Thuot, A Company on a classified mission and, at the beginning of the quarter, B Company at Polei Kleng.

(a) Lack of road security or general inaccessibility has made resupply by convoy extremely difficult or impossible. As a result the battalion has made maximum use of Air Force and Army aircraft.

(b) The amount of supplies that were airlifted during the quarter were as follows:

<u>Month</u>	<u>Tonnage (Short Tons)</u>
Feb	151
Mar	24
Apr	732

(c) Several types of aircraft were used to supply the units in the field. Tonnage, type of aircraft and number of sorties are listed below:

<u>Aircraft</u>	<u>Sorties</u>	<u>Tonnage</u>
OH - 47 (Chinook)	83	194
C7A (Caribou)	8	18
C - 123 (Provider)	4	20
C - 124 (Globemaster)	2	40
C - 130 (Hercules)	45	635

(d) The waterpoint operated by the S-4 produced approximately 500,000 gallons of potable water during the quarter. Water was supplied to D Company 70th Engr Bn (C) and to tactical units operating in the immediate area.

(e) Shortages of necessary ordnance and engineer equipment still exist in the battalion. The most acute shortages are:

<u>Equipment</u>	<u>Authorized</u>	<u>Assigned</u>	<u>Short</u>
Semi-trailor, Low Bed 25 ton 4 wheel	10	1	9

4 FOR OFFICIAL USE ONLY

## FOR OFFICIAL USE ONLY

<u>Equipment</u>	<u>Authorized</u>	<u>Assigned</u>	<u>Short</u>
Truck, 5 ton dump	56	54	2
Grader, road motorized	4	2	2
Tractor, 10 ton (1-5 ton tractor on hand)	10	0	10
Compressor, 250 CFM. (Pneumatic Tool sets)	5	1	4
Portable Electric Tool sets	12	9	3

(f) The battalion received almost all its front loaders during the quarter. Thirteen are authorized and twelve are now on hand.

### b. Operational Support

#### A Company

(1) From the beginning of the quarter to 7 April, A Company made daily mine sweeps on QL 14N in conjunction with 3rd ARVN Cavalry Squadron and ARVN engineers. Supervisors exercised care to insure proper procedures were used as the ARVN engineers closely observed the daily sweeps and were quick to adopt our techniques.

(2) On 15 March, the company was assigned the mission of providing convoy security for the 937th Engr Gp (C) rock and sand convoys between Fleiku and Kontum. Dump truck cabs and dump bodies were covered with MBAL matting, steel plates and sand bags thus providing protection to the drivers, assistant drivers and the mounted security fire teams. The ratio of security vehicles to work vehicles was set at 1 to 5.

(a) Each security truck carried one machine gun and four to seven men with their assigned weapons. Each security vehicle had a PRC-25 and a VRC 46 was used on the command vehicle.

(b) The convoy commander and his NCO's were thoroughly familiar with the frequencies of the support elements (gunships, artillery and aerial observers) in addition to the MP's and road security elements. Personnel were thoroughly briefed in counter-ambush techniques and action to be taken in the event of mechanical failure. All personnel in the security force received additional first-aid training from medical personnel assigned to the base camp dispensary. The mission was reassigned to B Company on 7 April.

(3) In response to enemy ambushes on QL 14N Company A was assigned to clear an additional 100 meters on each side of the road in the area most frequently used by the Viet Cong. Two Rome Flows and two Bull dozers were used. The mission required that no windrows be left which would provide cover and concealment to the

## FOR OFFICIAL USE ONLY

enemy. Debris was piled into "hay-sticks" and after a few days burned. Any remaining debris was then scattered by dozer.

(4) During March the company assisted the 815th Engr Bn in improving the defensive perimeter at Connell Quarry. The work involved placing 5 bands of triple concertina around the quarry and emplacing trip flares.

(5) On 10 April, A Company moved out on a classified mission. This mission cannot be reported until its completion. The work will be reported in the ORLL for the next quarter.

### B Company

(6) Company B continued its work on Polei Kleng Airfield. The project was started 31 October 1967 and was completed on 10 March with the completion of the anchorage and the welding of the joints between taxiway and runway.

(a) On 22 Feb the company minus one squad (which remained at Polei Kleng to complete the welding and anchoring) departed Polei Kleng by convoy arriving in Pleiku on 23 Feb.

(b) The completed project consisted of a class II C-130 airstrip 3300' long by 60' wide with parking apron connected by two taxiways all surfaced with MBAL matting.

(7) Company B assumed a platoon mission to secure Waterman Quarry on 27 Feb. The platoon clears the quarry approach road, checks the quarry for enemy activity then mans prepared positions at the top of the quarry and surrounding area. The security platoon stays in position during the day and at the close of operations it returns to base camp when the last piece of equipment has left the quarry.

(8) The company began land clearing at the Log Depot ASP on 7 March. To date 482 acres have been cleared at the site and work is continuing with one Rome Plow and one Bulldozer.

(9) Company B began providing the security platoon for the engineer convoys between Pleiku and Kontum on 7 April. The rock and sand convoy began making two trips daily on 24 April and will continue to do so. The security vehicles used are five 5-ton dump trucks with armor plating on the cab. MBAL matting and sandbags are used to protect the security personnel riding in the truck beds. An armored 3/4 ton truck is the command vehicle. There have been no enemy incidents since the security was provided for the convoy.

(10) At the request of the senior advisor to the 3rd ARVN Armored Squadron, the battalion has been providing minesweep teams each morning for Rt 14N. Company B was assigned the mission on 8 April. The advisor selects the section of road to be cleared each day.

## FOR OFFICIAL USE ONLY

9  
The road shoulder and unpaved portions of the road (potholes etc) are swept with mine detectors, the surfaced portions are visually inspected. One man goes ahead of the minesweep team to check for wire to command detonated mines.

### C Company

(11) At the beginning of the quarter the advance platoon from Company C continued to support the units at Camp Coryell, Ban Me Thuot.

(a) From 1 Feb to 21 Feb, the advance element worked on construction of MACV TOC, assisted the improvement of the defensive berm at Camp Coryell, provided equipment support to tactical elements during the TET Offensive and assisted in the defense of Camp Coryell.

(b) Headquarters and 1st platoon moved by convoy from Pleiku to Ban Me Thuot on 19 Feb. They arrived in Camp Coryell without incident after a ten hour motor march.

(c) One platoon was assigned the land clearing mission on QL 21. The platoon moved out on 21 Feb to meet the 35th land clearing team at B. Ea Yong. The project consists of clearing a 100 meter strip on each side of the road from AQ 988068 east to the province border. The land clearing team consists of 8 Rome Plows and 2 Bull dozers. To date 2058 equipment hours have been expended to achieve clearing of 1876.6 acres. Enemy activity against the project has been light, one ambush and one mining incident. The fire fight during the ambush resulted in 2 US and 2 ARVN soldiers WIA, enemy losses unknown. The mining damaged one 5 ton dump truck and one Bulldozer, two mines were involved. Estimated completion is the last week in May.

(12) Revetment construction for "Huey" and FAC aircraft was begun on 21 Feb. Seventeen helicopter and 4 FAC revetments are to be constructed. As of 30 April, 12 revetments (Huey) are under construction or have been completed.

<u>No. of Revetments</u>	<u>Percent Complete</u>
3	100%
1	95%
1	75%
3	45%
4	35%

The four FAC Revetments, located at Ban Me Thuot East Airfield are 80% complete. An expenditure of 7510 sq ft of M8A1 matting, 1666 ft of rebar, and 220 cu yds of fill has been used in the construction.

## FOR OFFICIAL USE ONLY

10.

(13) The 2nd platoon remained in Pleiku until 27 Feb. At that time they convoyed to Cheo Reo to repair the south runway. The project involved removal of the remaining PSP on the airfield and upgrading it to a C-123 dry weather strip. After the removal of the PSP, a grader was used to scarify the asphaltic surface and subgrade. 1550 cu yds of select fill were hauled, mixed with the scarified material, and compacted. Prior to the application of RC-3, 135,000 gallons of water were sprayed on the field to insure an even penetration of the RC-3. The truck mounted distributor spread a mixture of 750 gallons of RC-3 and 150 gallons of diesel, on the compacted runway. A total of 4900 gallons of RC-3 and 1100 gallons of diesel were used. The platoon also provided equipment support to the ARVN engineers working on the repair of the north runway. The project was completed on 22 April. On 25 April the platoon moved back to Pleiku. 8100 MH and a total of 1750 equipment hours were expended on this project.

(14) Enemy activity in the Ban Me Thuot area increased since C Company's arrival. This has resulted in increased commitments by the company to the defense of Camp Coryell. 4550 cu yds of fill have been hauled for the camp's defensive berm. Three protective bunkers have been built on the camp, one for the QRF platoon, one each for the 185th AVN Company officers and enlisted men. The MACV bunker is a 24'x14' personnel bunker constructed to withstand a direct hit from a 122 mm rocket. In the company area, three bunkers have been constructed to protect company personnel.

(15) In March a four man team from Company C moved to Duc Lap to repair a T-17 membrane airfield used by the Special Forces. The runway and parking apron required 9000 linear ft of patching membrane and 125 gallons of glue. No problems were encountered during the operation.

### D Company

(16) D Company continued to work on land clearing between Mang Giang Pass and Pleiku. The project is 99% complete with only the burning of windrows left to be accomplished. 600 gallons of diesel fuel were used during the quarter.

(17) Constant emphasis was placed on the road maintenance effort on QL 19. From 1 Feb to 30 April, 2198 cu yds of hot mix were placed on critical areas between Pleiku and Mang Giang Pass. During April, 290 M scrapers were used along with a grader to haul and grade D.G. for shaping and upgrading the shoulders along 4.0 miles of road. This project was begun on 19 Oct and continued throughout the reporting period.

(18) By 7 April 68, the last of four AVLB abutments were completed. The project was started on 28 Oct 67 and consisted of 4 sets of AVLB abutments to be constructed at bridges 29, 33, 34 and 36.

8 FOR OFFICIAL USE ONLY

## FOR OFFICIAL USE ONLY

Three of the abutments were constructed on 4"x4" lumber and 8" diameter piles with a 16"x16" deadman anchored by 1" cable. Approximately 800 cu yds of blast rock were placed to form an abutment without need for the construction mentioned above. The abutments were tamped and choked with 3"(-) rock prior to final grading.

(19) Repair was started on Bridge 33 on QL 19 on 29 Jan 68. The concrete located over the expansion joints between adjacent spans had cracked and created a hole. The concrete that failed was removed, the hole squared and concrete placed. Repair was completed 5 Feb.

(20) On 24 March the Viet Cong blew concrete culverts at grid coordinates AR 945479 in an effort to halt traffic on QL 19. That same day a by-pass was constructed consisting of 3 each 36" CMP culverts. Repair of the culverts began on 25 Mar. Two of the three 60" concrete culverts were removed and repairs made to the third. Two 60" CMP culverts 90' long were placed, a borrow pit was opened near the site to provide backfill. Fill was compacted and hot mix patch was placed on the roadway. The north headwall was formed and 26 cu yds of concrete was placed. The south headwall will be completed by 4 May.

(21) While in support of the 1/2nd Cavalry Squadron, D Company constructed an observation post on Keng Toor Mountain. The project was started on 14 Feb and consisted of clearing timber from the site with a Rome Flow and construction of 3000 meter all purpose-all weather road from QL 19 to the OP. 1135 cu yds of D.G. and 175 cu yds of 3"(-) rock were used to surface the road. Required to complete the project is the installation of culverts and placing of rock from the borrow site at Mang Giang Pass.

(22) On 1 April a quarry was opened at Mang Giang Pass. The quarry provides rock for stabilizing hardstands and roads. Approximately 150 to 200 cu yds of rock are loaded out per day.

(23) In preparation for the monsoon, Bailey Bridge No 30 on QL 19 was raised 16 inches. The project began on 5 April and involved jacking the bridge, installing 2 new panels, adding 26 pieces of chess, and replacing 4 end posts. 600 cu yds of fill and 200 cu yds of rock were placed on the approaches. Bridge decking was replaced with 400BF of 4"x12" lumber. The project is complete.

### 630th Engineer Company (Light Equipment)

(24) The 630th Engr Company (LE) supported company B 70th Engr BN (C) in the construction of the C-130 field at Poloi Kleng from 1 Feb to 25 Feb. Heavy equipment support was given for sub-grade preparation in the form of 290 M scrapers and compaction equipment. Graders and asphalt distributors were also provided for this operation.

## FOR OFFICIAL USE ONLY

(25) On 1 March a platoon moved to Ban Mc Thuot to support C Company 70th Engr Bn (C). Land clearing and base camp development were the main areas in which support was required. However, assistance was given in the construction of several fire bases for the 1/12 Arty. There was heavy damage to equipment during a mortar attack on 26 April. Most of the damage was repaired by the end of the quarter.

### c. Construction Support

#### A Company

(1) Company A began construction on 5 Feb of 2 tent kits, a 3 hole latrine with attached shower, and 14'x60' concrete generator pad for the Pleiku Psyops Radio Station. The shower and latrine were constructed on site. The tent kits were "prefabbed" in the company area and the lumber transported to the site where the kits were erected.

(2) From 7 Feb to 2 March the company worked on a "Chinaman" for Waterman Quarry. An auger was used to dig the holes for the posts which were anchored in concrete. M8A1 was used in lieu of sheathing. After a few days use it was apparent that the sloped walls did not allow for the necessary periodic clearing of the platform. These were removed and 6"x16" material was used to form vertical walls.

(3) Minor grader work was performed during the quarter to improve drainage on Artillery Hill.

#### B Company

(4) Company B assumed the maintenance of roads at Camp Holloway, Pleiku on 4 March. The project consisted of recutting drainage ditches, placing and/or repairing of several culverts and repairing the surface of the roads by placing 3"(-) rock choked with D.G. and then regrading them. The work continued through the reporting period.

(5) On 21 March, Company B started construction on a 20'x48' prefab quonset hut and the repair of two others for the 330th Radio Research Company. No problems were encountered and the work was quickly completed on 7 April.

#### C Company

(6) At the beginning of the reporting period, Company C was engaged in road repair and drainage work at Camp Holloway and the construction of the battalion TOC at Engineer Hill.

(a) Work at Holloway consisted of recutting drainage ditches, repair or replacement of culverts, and maintenance of the

## FOR OFFICIAL USE ONLY

road network. The work continued without difficulty until the company moved to Ban Mo Thuot.

(b) The work accomplished on battalion TOC prior to the departure of the company was the excavation of the site and the placing of two 14'x22' concrete slabs. The project was turned over to B Company when C Company moved out.

### D Company

(7) The work that was begun by Company D for the 219th AVN Company on 2 Dec 67 was completed on 14 April. The project included 3 OH-6 aircraft revetments. They were 40' wide, 20' deep and 4' high. The revetments were filled with earth and covered with T-17 membrane for water proofing. Four U-1A aircraft revetments were constructed on the north west extension at Holloway. These revetments measured 46'x66'x13'. They were filled and water proofed.

(8) Two 100'x300' hardstands were constructed using MBAL matting supplied by using facility.

(9) Work on the GH-54 Flying Crane area began on 5 Jan is almost complete. Six 36'x30' revetment hardstands of MBAL matting were constructed. A 600'x200' hardstand was covered using 660 bundles of MBAL matting. Estimated completion date is 6 May.

(10) Work began on Soui Doi Firebase for the 5/22 Arty on 17 April. The project consists of four ten sided 8" reinforced concrete slabs approximately 40' in diameter for 175 mm artillery, a road network and drainage and four hardstands for direct fire armored vehicles.

(a) Two pads have been covered with 4"x12" lumber and require only a treadway type cover of 2" lumber. The remaining pads require all docking and treadway.

(b) When the gunpads are completed, the construction of the fire hardstands will complete C Company's scope of work this project.

(11) Materials and technical assistance will be provided for construction of bunkers and covered ASP's to be built through self-help by the battery at the Firebase.

### 630th Engineer Company (Light Equipment)

(12) From 1 Feb to 30 March the 630th Engr Co operated Waterman Quarry. 89,915 cu yds of decomposed granite were removed for use in road construction and soil stabilization. This figure is exclusive of the volume of material removed by the 815th Engr Bn (Const) with scrapers. D.G. is bulldozed off the various ledges in the quarry to the loading points where it is placed on trucks using front loaders and the Chinaman. A sand bag point was also operated by the company at the quarry, 158,750 sand bags were filled by local national labor.

## FOR OFFICIAL USE ONLY

(13) Despite equipment damages received during TET the work of removing overburden from OP-10 continues. On 6 Feb, the core samples taken by a track drill revealed a large amount of basalt and tuff available under heavy overburden. An estimated (1) million cu yds of rock from this source will ultimately be available for use in the Pleiku area.

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

#### a. Personnel

##### (1) Line Company Motor Sergeant

(a) Observation: The E-5 pay grade currently authorized by TO&E 5-36E for the line company motor sergeant position (MOS 63C40) is not in keeping with the grade structure of other enlisted supervisory positions. As an example, the maintenance and equipment section of an engineer line company is larger than an engineer squad which is authorized an E-6 as squad leader. The motor sergeant is of necessity a supervisor and organizer which requires mature thinking and a logical approach to difficult and varied situations. Therefore, the motor sergeant cannot take time to repair a vehicle himself, but must insure that the repair activity continues uninterrupted. Problems have occurred in the areas of general shop operations and organization, analysis of mechanical deficiencies in vehicles and equipment, and the supervision of subordinate personnel.

(b) Evaluation: Maintenance of equipment is a key element in successful engineer operations and the individual directly responsible to the commander should be authorized a grade commensurate with these responsibilities.

(c) Recommendation: That the grade E-6, MOS 63C40, be authorized each engineer line company as motor sergeant.

##### (2) Fork lift Operator

(a) Observation: Each combat army engineer battalions ~~T&E~~ has been augmented with a 5 ton rough terrain forklift truck to assist in handling engineer supplies. No personnel augmentation accompanied the addition of this constantly used and essential piece of equipment.

(b) Evaluation: Augmentation of equipment without increase of personnel detracts from achieving maximum utilization of that equipment.

FOR OFFICIAL USE ONLY

## FOR OFFICIAL USE ONLY

15  
(c) Recommendation: That augmentation of equipment be accompanied by personnel augmentation of operators.

### (3) Ration Breakdown Personnel

(a) Observation: This battalion is not authorized a ration breakdown section. A ration breakdown section is required as supporting Class I Facility will not issue to below battalion level. This requires that personnel authorized in the S-4 section for other functions be trained in ration pickup, breakdown, issue and accountability. This takes men from their primary responsibilities and hampers the efficiency of the section.

(b) Evaluation: That OJT of personnel, school trained to perform other supply functions, defeats the basic principles of personnel management and imposes a burden upon the organizational structure of the S-4 section.

(c) Recommendation: That either the supporting Class I supply organization issue at company level or that an augmentation be made of trained personnel for operation of a battalion ration breakdown section.

### b. Operations

#### (1) Driving U shaped pickets with Front Loader

(a) Observation: When a large number of "U" shaped pickets are to be driven into the ground conventional methods of driving them have proved too slow. To increase the rate that pickets can be driven, a front loader can be used. One individual moves along the ground to hold the pickets, which should be pre-positioned, up right while the loader bucket is lowered on to the picket, driving it into the ground. When soil conditions are similar to those found in RVN Highlands the hydraulic system exerts enough force to push the picket into the ground.

(b) Evaluation: Pickets driven in this manner are placed faster and with less damage to pickets than occurs when other methods are used.

(c) Recommendation: When large numbers of "U" shaped pickets are to be placed a front loader should be used when available.

#### (2) Placing MBAL Matting

(a) Observation: When working with MBAL matting it was found that the various producers of MBAL apparently manufacture to different tolerances and allowances. Variances between different producers prevent easy connection.

## FOR OFFICIAL USE ONLY

(b) Evaluation: Matting from different producers does not mate and makes assembly difficult.

(c) Recommendation: MBAL matting should be segregated by producer and laid using all matting of one make before switching to another.

### (3) Destruction of Land Clearing Debris

(a) Observation: The windrows of fallen timber and undergrowth left by land clearing teams provide good cover and concealment for enemy troops. Burning the debris in the windrows is time consuming and not very productive. Debris should be pushed into "haystacks" 75 to 100 meters from the road and left to dry out for a few days, then burned and the ashes scattered.

(b) Evaluation: Excellent results were obtained using this "haystack" method. When the dry piles are ignited they burn with great intensity and require little care to keep them burning. The debris is thoroughly destroyed and the remains are easily scattered. Most important, no cover or concealment is left to provide the enemy with positions close to the road.

(c) Recommendation: That current practice of placing debris from land clearing in windrows be discontinued. Instead debris should be piled into "haystacks" and burned and the remains scattered.

### (4) Mine Sweep Security

(a) Observation: Personnel conducting minesweep operations are vulnerable to command detonated mines.

(b) Evaluation: A careful search of the road sides can often detect the wire for command detonated mines.

(c) Recommendation: All minesweep teams should detail one or two men to precede the team and check road sides for wires to command detonated mines.

### (5) Use of 3/4" rebar in revetment Construction

(a) Observation: When constructing USARV Standard FAC revetments using 1/2" rebar for internal bracing of the MBAL matting it was found that the 90° bends on each end of the rebar didn't provide the strength when the revetment was filled to prevent buckling.

(b) Evaluation: 3/4" rebar was substituted and provided the necessary strength. The 3/4" rebar fit more snugly and provides a more stable structure.

(c) Recommendation: That 3/4" rebar be substituted for 1/2" the construction of rebar in USARV Standard FAC revetments.

## FOR OFFICIAL USE ONLY

### (6) Use of a Grader in Preparing Road Edges for Repair

(a) Observation: Hot mix patching operations on a thin bituminous surfaced LOC with ragged edges is hindered by the time taken to prepare a patch with air compressor and jack hammer. Production can be increased by using a grader to prepare the edges, which can then be trimmed with a pick.

(b) Evaluation: A grader increases the efficiency and productivity of repairing thin bituminous surfaced road edges.

(c) Recommendation: That graders be used where possible to prepare for patching of the edges of asphaltic wearing surfaces.

### (7) Modification to Letourneau-Westinghouse Grader

(a) Observation: The blade lift arms on the Letourneau-Westinghouse grader are similar to those of the Cat 12 grader but are positioned in a way that requires a longer lift arm. When downward pressure is applied the lift arm has a tendency to bend which results in the grader being deadlined. This can be prevented by replacing the steel shear pins with brass pins.

(b) Evaluation: The brass shear pin will shear easier than the steel, thereby preventing bent or broken blade lift arms.

(c) Recommendation: That the steel shearpins for the blade lift arms on the Letourneau-Westinghouse grader be replaced by brass shear pins.

### (8) Modification of D7E end bits

(a) Observation: The availability of left and right end bits for dozers is irregular and frequently causes delays in operations. By counter-sinking the bolt holes with a cutting torch a left end bit can be substituted for a right, and vice versa.

(b) Evaluation: When the needed end bit is not available the dozer can be kept in operation by substituting one that is made for the opposite side.

(c) Recommendation: When necessary to keep a dozer operational, substitute a modified right end bit for a left or vice versa.

o. Training: None

d. Intelligence: None

## FOR OFFICIAL USE ONLY

FOR OFFICIAL USE ONLY

e. Logistics:

(1) Recommendation for M-16 Rifle

(a) Observation: The battalion has not been issued the M-16 rifle. One company of the battalion provides security for a daily round trip convoy between Kontun and Fleiku along Rt 14. Five ambushes occurred during the reporting period along this route. Three line companies of the battalion are either deployed in the field or working in locations of frequent enemy activity. Work parties are usually platoon size or smaller with the element maintaining its own security at the job site.

(b) Evaluation: That the fire power provided by the M-16 would greatly increase the ability of these personnel to defend themselves.

(c) Recommendation: That the M-16 rifle be issued to this battalion as soon as possible.

f. Organization: None

g. Other: None

1 Incl  
as

*C. G. Willard*

C. G. WILLARD  
LTC, CE  
Commanding

DISTRIBUTION:

5 - 937th Engr Gp (C)

8 - 18th Engr Bde

3 - USARV

2 - USARPAC

1 - USAES

FOR OFFICIAL USE ONLY

19  
EGC-CO (30 April 1968) 1st Ind.

SUBJECT: Operational Report of the 70th Engineer Battalion (C) (A) for  
Period Ending 30 April 1968, RCS CSFOR-65 (R1)

HEADQUARTERS, 937TH ENGINEER GROUP (COMBAT), APO 96318, 22 May 1968

TO: Commanding General, 18th Engineer Brigade, ATTN: AVBC-C, APO 96377

1. The subject report, submitted by the 70th Engineer Battalion (Combat), has been reviewed and is considered to contain an accurate account of significant organizational activities.

2. I concur with the observations and recommendations of the Battalion Commander with the following addition: ref Para 2 e. (1): The 70th Engineer Battalion (Combat) is listed on the USARV schedule of units to receive the M-16 rifle in the near future.



WILLIAM J. TALBOTT  
Colonel, CE  
Commanding

11 JUN 1968

AVBC-C (30 Apr 68) 2nd Ind

SUBJECT: Operational Report of 70th Engineer Battalion (C) (A) for  
the Period Ending 30 April 1968, RCS CSFOR-65 (R1)

20.

DA, Headquarters, 16th Engineer Brigade, APO 96377

TO: Commanding General, U.S. Army Vietnam, ATTN: AVHGC-DST, APO 96375

1. This headquarters has reviewed the Operational Report - Lessons Learned for the 70th Engineer Battalion (Combat) for the quarterly period ending 30 April 1968. The report is considered to be an adequate account of the Battalion's activities for the reporting period.

2. This headquarters concurs with the observations and recommendations of the Battalion and Group Commanders with the following comments added:

a. Reference: Paragraph 2a(1). TOE 5-37G, Combat Engineer Company, provides for a motor sergeant in the grade of E-6. It is expected that upon approval of the current MTOE action which is anticipated to occur in mid-summer 1968, all Combat Engineer Companies (Army) will be reorganized under the G-series TOE. The MTOE does not alter the grade of motor sergeant authorized by the G-series TOE.

b. Reference: Paragraph 2a(2). A fork lift operator has been added by current MTOE action to each Combat Engineer Battalion (Army). As stated above, this action is expected to occur in mid-summer 1968.

c. Reference: Paragraph 2b(2). The problem of mismatching MSA1 matting has been reported in previous ORLL's. While an expedient, partial solution is to segregate the matting by producers, the only complete solution is to provide various manufactures with an identical set of tolerances thereby eliminating the problem. It is recommended that the responsible procurement agency take the necessary action to accomplish this.

*Douglas K Blue*

DOUGLAS K. BLUE  
Colonel, CE  
Deputy Commander

FOR OFFICIAL USE ONLY

21  
AVHGC-DST (30 Apr 68) 3d Ind CPT Arnold/ms/LBN 4485  
SUBJECT: Operational Report of 70th Engineer Battalion (C)(A) for  
Period Ending 30 April 1968, RCS CSFOR-65 (R1)

HEADQUARTERS, US ARMY VIETNAM, APO San Francisco 96375  
10 JUL 1968

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

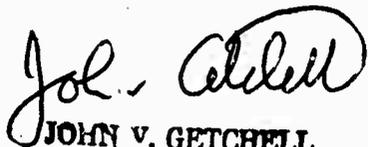
1. This headquarters has reviewed the Operational Report - Lessons Learned for the quarterly period ending 30 April 1968 from Headquarters, 70th Engineer Battalion (Combat)(Army).

2. Comments follow:

a. Reference item concerning ration breakdown personnel, page 13, paragraph 2a(3): Concur. USARV Admin Order 1-68 requires Class I to breakdown rations to divisions, brigades and separate battalions only. In view of the above, recommend unit submit MTOE action for the augmentation of one E-6, 94B40 and one E-4, Clerk/Driver to function as the battalion ration breakdown section. Individuals will be responsible for requesting and issuing rations to each of the six messes within the battalion.

b. Reference item concerning placing M8A1 matting, page 13, paragraph 2b(2); and 2d Indorsement, paragraph 2c: Concur. The Office of the Chief of Engineers has forwarded comments on the failure of M8A1 matting to lock properly to the Defense Construction Supply Center (DCSC) for necessary action.

FOR THE COMMANDER:

  
JOHN V. GETCHELL  
Captain, AGC  
Assistant Adjutant General

Copies furnished:  
HQ, 18th Engr Bde  
HQ, 70th Engr Bn

GPOP-DT (30 Apr 68) 4th Ind

SUBJECT: Operational Report of HQ, 70th Engr Bn (C)(A) for Period  
Ending 30 April 1968, RCS CSFOR-65 (R1)

HQ, US Army, Pacific, APO San Francisco 96558 16 JUL 1968

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:

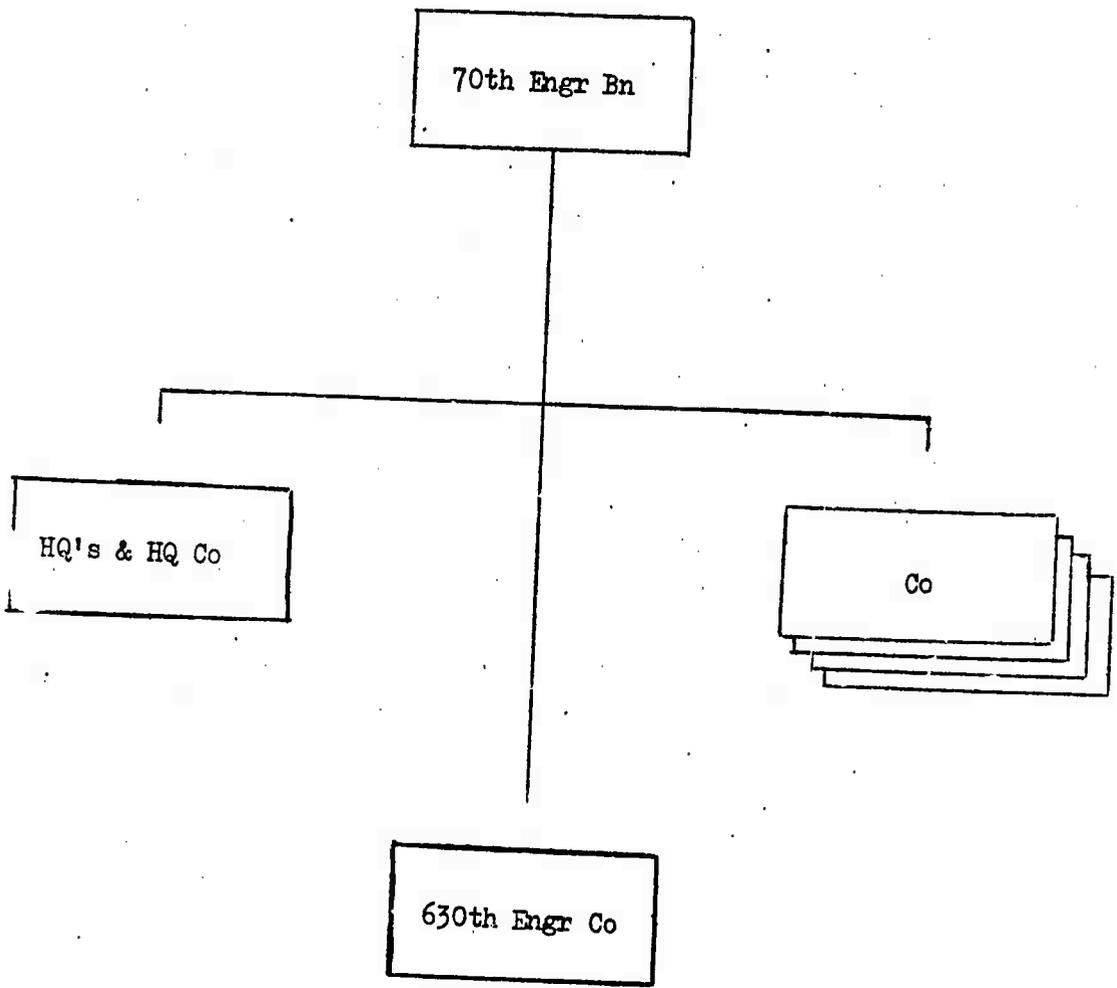


K. F. OSBOURN  
MAJ. AGC  
Asst AG

23

FOR OFFICIAL USE ONLY

Incl 1



Incl. 1

FOR OFFICIAL USE ONLY

## DOCUMENT CONTROL DATA - R &amp; D

24

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

1. ORIGINATING ACTIVITY (Corporate author) OACSFOR, DA, Washington, D.C. 20310		2a. REPORT SECURITY CLASSIFICATION For Official Use Only	
		2b. GROUP Cancelled 8 July 1969	
3. REPORT TITLE Operational Report - Lessons Learned, Hq, 70th Engineer Battalion (Cbt) (Army) (U)			
4. DESCRIPTIVE NOTES (Type of report and inclusive dates) Experiences of unit engaged in counterinsurgency operations, 1 Feb - 30 April 1968			
5. AUTHOR(S) (First name, middle initial, last name) CO, 70th Engineer Battalion			
6. REPORT DATE 30 April 1968		7a. TOTAL NO. OF PAGES 22	7b. NO. OF REFS
8a. CONTRACT OR GRANT NO.		9a. ORIGINATOR'S REPORT NUMBER(S) 682197	
8b. PROJECT NO. N/A		9b. OTHER REPORT NUMBER(S) (Any other numbers that may be assigned this report)	
8c.			
8d.			
10. DISTRIBUTION STATEMENT			
11. SUPPLEMENTARY NOTES N/A		12. SPONSORING MILITARY ACTIVITY OACSFOR, DA, Washington, D.C. 20310	
13. ABSTRACT			

25

The following items are recommended for inclusion in the Lessons Learned Index:

ITEM 1

\* SUBJECT TITLE \_\_\_\_\_

\*\* FOR OT RD # \_\_\_\_\_

\*\*\*PAGE # \_\_\_\_\_

ITEM 2

SUBJECT TITLE \_\_\_\_\_

FOR OT RD # \_\_\_\_\_

PAGE # \_\_\_\_\_

ITEM 3

SUBJECT TITLE \_\_\_\_\_

FOR OT RD # \_\_\_\_\_

PAGE # \_\_\_\_\_

ITEM 4

SUBJECT TITLE \_\_\_\_\_

FOR OT RD # \_\_\_\_\_

PAGE # \_\_\_\_\_

ITEM 5

SUBJECT TITLE \_\_\_\_\_

FOR OT RD # \_\_\_\_\_

PAGE # \_\_\_\_\_

\* Subject Title: A short (one sentence or phrase) description of the item of interest.

\*\* FOR OT RD # : Appears in the Reply Reference line of the Letter of Transmittal. This number must be accurately stated.

\*\*\*Page # : That page on which the item of interest is located.

26

- - FOLD - - - -

DEPARTMENT OF THE ARMY  
OACSPOR  
Washington, D.C. 20310

POSTAGE AND FEES PAID  
DEPARTMENT OF THE ARMY

STAPLE

**OFFICIAL BUSINESS**

Office of the Assistant Chief of Staff for Force Development  
ATTN: Operational Reports Branch  
Headquarters, Department of the Army  
Washington, D.C. 20310

STAPLE

DA Label 18, 1 Apr 59 PREVIOUS EDITIONS OF THIS LABEL ARE OBSOLETE.

16-73643-1

- - FOLD - - - -