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ENGME-RD (30 Jan 69)

SUBJECT: Operational Report of 39th Engineer Battalion (Combat) for
Period Ending 31 October 1968, RCS CSFOR-65 (RI)

TO: C/Opns Spt Div

FROM: C/Res Dev Div/ME

DATE: 6 FEB 1969 GMT2
Mr. Price/slb/50381

1. We ~~were~~ previously aware of the reported problem as a result of liaison ~~units~~ ^{visits} made to Vietnam by representatives of the USA Engineer Waterways Experiment Station (WES). Redesign of the anchor may be feasible and will be considered in future R&D on landing mat systems. Cutting-off the anchor tips as indicated in the report is an unsatisfactory solution; the diameter and configuration of the helix (screw) tip is required to restrain vertical movement of the mat incident to aircraft landing and take-off.

2. In order to provide an early solution to the problem, in February 1968, WES was directed to explore feasibility of utilizing military and commercially available power drills and augers as a means of emplacing mat anchors. A WES report on their evaluation will be published in April 1969. The report indicates that the pneumatic wood-borer, a component of the pneumatic tool set organic to engineer combat and construction units, can be employed for this purpose by use of an expedient drill-chuck adapter which can be fabricated in the field. The report includes drawings needed to fabricate chuck adapter in unit shops. The report also discusses commercially available equipment which can be used..

3. Dissemination of the WES report will include distribution to all major Army component commands and the USA Engineer School.

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When separated from attachments this
document becomes *Unclassified*

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DEPARTMENT OF THE ARMY
HEADQUARTERS, 39TH ENGINEER BATTALION (COMBAT)
APO San Francisco 96325

AGD-Ba-3

9 November 1968

SUBJECT: Operational Report of 39th Engineer Battalion (Combat)
for Period Ending 31 October 1968, RCS CSFOR-65 (RI)

THRU: Commanding Officer
45th Engineer Group
ATTN: S-3
APO 96337

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

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

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

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

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~~DOWNGRADED AT 3 YEAR INTERVALS:
DECLASSIFIED AFTER 12 YEARS~~

FOR OTUT
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Classified by EGD - BA - 3
SUBJECT TO GENERAL DECLASSIFICATION
SCHEDULE OF EXECUTIVE ORDER 11652
AUTOMATICALLY DOWNGRADED AT TWO
YEAR INTERVALS
DECLASSIFIED ON DECEMBER 31 1974

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1. (C) Section 1. Operations: Significant Activities.

a. (C) General:

(1) (C) Organization:

During the report period, the 39th Engineer Battalion (Combat) consisted of a Headquarters and Headquarters Company, and four lettered line companies. The 3rd Platoon, 630th Light Equipment Company, attached during the previous report period, remained attached to Company C. The 1st Platoon, 511th Panel Bridge Company was attached to the Headquarters and Headquarters Company for rations, maintenance, and operational control on 29 October 1968. See Inclosure 1.

(2) (C) Command. The 39th Engineer Battalion (Combat) remained under the command of the Commanding Officer, 45th Engineer Group. The battalion remained in support of the Americal Division throughout the reporting period, with Hq and Hq Co at the same location within the CHU LAI base perimeter (BT 533037). Incumbent commanders at the close of the reporting period were as follows:

- CO, 39th Engr Bn - LTC Tenho R. Hukkala
- CO, Co A, 39th Engr Bn - CPT George R. Paul II
- CO, Co B, 39th Engr Bn - CPT Torrence M. Wilson
- CO, Co C, 39th Engr Bn - CPT Paul A. Reh
- CO, Co D, 39th Engr Bn - CPT David R. Tanner
- CO, HHC, 39th Engr Bn - LLT Coleman C. Knott

(3) (C) Major Activities. In addition to LOC minesweeping and maintenance missions on Route QL-1, major activities during the reporting period included: the completion of the opening of Route 533 from TAM KY (BT 306204) to TIEN PHUOC (BT-118139) in support of Operation Burlington Trail; the upgrading and minesweeping of Route 535 from LZ BALDY (BT 142452) to BT 081389 in support of Operation Wheeler/Wallowa; the upgrading of Route QL-1 from BS 695635 to BS 733543 to MACV standards; the lengthening of drainage structures and upgrading and repair of bridges on Route QL-1 from BS 601920 to BS 695635; and the repair and renovation of the runway and parking apron at Duc Pho Airfield (BS 812385). Projects within the CHU LAI base area included completion of 1200 feet of fixed wing aircraft revetments; construction of two thirty-five foot observation towers; and repair of 75,444 square feet of aircraft maintenance hardstand. The battalion also constructed revetments for an automatic data processing center in DA NANG.

(a) The opening of Route 533 from TAM KY (BT 306204) to TIEN PHUOC (BT 118139) was completed during the reporting period. The purpose of opening the twenty-three lane of one lane, class 50, limited all-weather road was to allow civilian vehicular traffic into the TIEN PHUOC valley which has a population in excess of 17,000 people and to pass military convoys into LZ YOUNG (BT 189159) and the SF/CIDG Camp at TIEN PHUOC. Security for the work parties was provided by the 2nd ARVN Division. Throughout the period Company A experienced heavy enemy resistance to their efforts to open the road. In spite of this enemy activity, upgrading was essentially completed by 30 September 1968.

(b) Upgrade operations on Route 535 from LZ BALDY (BT 142452) to LZ ROSS (BT-028342) were initiated by Company D on 4 October 1968 to provide a one lane, limited all-weather, class 50 road. Inadequate drainage structures are being en-

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larged and additional drainage structures added as required. Security for work parties is provided by the 196th Light Infantry Brigade, Americal Division. Heavy rains in mid-October caused extensive damage to the road, causing it to be closed for a period of ten days. This damage was repaired, and primary work effort is now directed to placing a rock surface course on the road along with improving drainage structures to carry anticipated monsoon rains.

(c) Widening of Route QL-1 to MACV standards between BS 733543 and BS 695635 continued. In addition, Company C continued to lengthen culverts and widen bridges from BS 695635 to BS 653711 in order to prepare for widening of the road at a later date. Heavy rains during the month of October caused such damage to the road that the upgrading schedule has been set back by at least two months.

(d) One platoon from Company C was engaged in repairing the parking apron and in replacing the MX-19 matting which had been previously removed from the runway at DUC PHO airfield. This task was found to be necessary since it was noted that penepime-treated laterite would not effectively withstand the monsoon season on an airfield subjected to moderate to heavy traffic by C-7A, C-123, and C-130 aircraft.

(e) Company B continued to lengthen culverts and upgrade bridges on Route QL-1 from BS 642747 to BS 601992 in order to accommodate a two-lane road to be constructed to MACV standards at a later date. Heavy enemy activity directed at culvert and bridge destruction coupled with the heavy rains of mid-October caused extensive damage to this section of Route QL-1. Primary effort since that time has been directed toward repairs to keep the road open during the monsoon season.

(4) (C) Activities of Headquarters and Headquarters Company:

During the report period Headquarters and Headquarters Company remained at CHU LAI with the Battalion Headquarters. Its primary mission was to support the line companies and to accomplish engineer support tasks for the Americal Division within the CHU LAI Base area. Principal tasks completed include:

(a) Fill, compaction, and surface treatment of a 30,000 square foot materials storage yard.

(b) Periodic grading of Route QL-1 from CHU LAI (BT 525038) to BINH SON (BS-597727).

(c) Restoration and movement of several SFM huts within the CHU LAI base area.

(d) Construction of new facilities in the headquarters area as a result of a USAF's call on 8 August 1968, viz., a motor pool dispatch office, a company arms room, and ammunition storage facilities.

(5) (C) Activities of Company A:

At the beginning of the reporting period, Company A was located at LZ YOUNG (BI 189159) and remained there until 7 October 1968 when the unit moved to the Battalion Headquarters area in CHU LAI (BT 533037). The mission while at LZ YOUNG was the construction of a class 50, limited all-weather, one lane road on Rte 533

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from BT 230172 to TIEN PHUOC (BT 118139). The mission of the unit at CHU LAI was to provide engineer support within the Americal Division Headquarters area.

On 6 August 1968, the second platoon was displaced to TIEN PHUOC to work east on Rte 533 while the remainder of the company continued to operate from LZ YOUNG. This move permitted the use of an excellent source of river run located within the secure area at TIEN PHUOC. Enemy activity during August became increasingly heavy as VC/NVA forces attempted to stop the engineers with mines, snipers, ambushes, and mortar attacks. During the month sweep teams detected and destroyed nineteen mines and five booby-trapped grenades. Four undetected mines caused the loss of four dump trucks; two other mines caused minor damage to a dump truck and a personnel carrier. In these incidents only two drivers were lightly wounded. During nine mortar attacks, 70 rounds fell within the CP area at LZ YOUNG or at work sites. Three men were lightly wounded, and one quarter-ton truck was lost through a direct hit by a mortar. In spite of one ambush and sixteen sniper incidents, no other A Company personnel were injured during August by enemy action. During the month Company A hauled and compacted 10,827 cubic yards of fill, placed 482 linear feet of culvert, placed 6,200 sandbags for headwalls, and cleared two acres of potential ambush sites. By the end of August all but 4.5 km of Route 533 in Company A's area of operations had been upgraded.

Enemy activity continued at a high level during September. The number of mines detected decreased to two, and no vehicles were damaged by mines. However, mortar attacks, ambushes, and ground attacks increased significantly. On 2 September, three rounds of 81mm mortar hit inside LZ YOUNG causing two wounded requiring evacuation and one lightly wounded among Company A personnel. On 7 September, the Special Forces compound at TIEN PHUOC received 15 rounds of mortar fire; however, there were no Company A casualties. On 17 September, Company A experienced their heaviest contact with NVA forces. A 29 man work party at BT 167134, having observed the ARVN security force leaving their positions at about 1715 hours, loaded on their vehicles to return to LZ YOUNG. As the vehicles started moving, the lead dump truck received a direct hit from a recoilless rifle. As the remainder of the vehicles stopped, a reinforced NVA company opened fire on the work party with automatic weapons, mortars, and recoilless rifles. The work party took cover and set up defensive positions. Two attempts were made to reach the trucks before dark, but both times the men were driven back by heavy fire. A relief force was dispatched from LZ YOUNG at 1745 hours, but was unable to reach the ambush site until 1900 hours because of congestion due to ARVN elements moving in the opposite direction and enemy fire. At the ambush site, the relief force came under heavy fire and all radio contact with both elements was lost. Artillery or gunships could not be employed without radio contact for fear of hitting friendly forces. Once radio contact was regained, artillery fire was called and the NVA broke contact. Eight engineers from Company A were killed in action and twenty three wounded. The engineers, however, were credited with forty three confirmed NVA kills. Equipment damage was heavy, with the loss of two dozers, two dump trucks, and one quarter ton truck. On 18 September, all work on Rte 533 was stopped by order of the Commanding General, Americal Division due to lack of security and heavy enemy activity. In the early morning of 26 September 1968, LZ YOUNG came under ground attack in conjunction with a mortar/rocket barrage. Company A received no casualties, however, thirteen enemy bodies were found both inside and outside the perimeter. During September, Company A had hauled and compacted 6,328 cubic yards of fill, placed 134 feet of culvert, and placed 3,355 sandbags for headwalls. In that

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month there were a total of fifteen separate mortar and rocket attacks against LZ YOUNG and TILN PHUOC and five sniping incidents. When the work was stopped on Route 533, approximately one-and-a-half kilometers of road had not yet been re-shaped and graded. However, all drainage structures had been installed; and the road could pass division loads.

On 7 October 1968, Company A departed LZ YOUNG and closed into the CHU LAI Base area on 8 October 1968. The company was then permitted to stand down for maintenance and repair of equipment prior to assuming the responsibility for engineer support tasks in the Americal Division headquarters area. One of these tasks was a continuation of a project started by Company D which was the repair of 2600 square yards of helicopter maintenance hardstand at Ky Ha. Responsibility for a daily minesweep of Route QL-1 from CHU LAI to BINH SON, a distance of 11.4 km, was also assumed from Company D. Construction of the Battalion Headquarters TOC bunker and secure crypto facility was initiated on 26 October 1968.

(6) (C) Activities of Company B:

Throughout the reporting period, Company B remained at LZ DOTTIE (BS 632854). The assigned mission included the road maintenance and upgrade of bridges and drainage structures on highway QL-1 from Quang Ngai (BS 642747) to Binh Son (BS 601922), a total distance of 18 km. In addition, Company B conducted a daily minesweep of Route QL-1 between BS 601922 to BS 633811, a distance of 1.2 km.

During the previous report period, construction had been started on the emplacement of six each 60-inch culverts to replace the failing lifted bridge at I-443 (BS 637781). Reinforced concrete headwalls were placed and construction was completed by 30 August. Also during the previous report period, construction was started on a 40-foot, two lane, timber trestle bridge at I-444 (BS 633811) to replace the concrete and steel structure. Construction was completed on 24 August; however, the bridge was blown and burned by the VC on the evening of the same day. On 25 August, the bridge was removed and construction was begun on the emplacement of five each 60-inch culverts with reinforced concrete headwalls to replace the bridge. The culvert system has been redesigned on the basis of heavy rains experienced in mid-October, and three additional culverts will be added. At bridge site I-445 (BS 623835) efforts were begun on 3 August to repair the two southern spans that had been damaged by the enemy. Reconstruction was completed by 14 September. On 30 August, the timber trestle bridge at I-446 (BS 610909) was destroyed by enemy activity. A joint effort by Company B and Company A, 104th ARVN Engineer Battalion was started to repair damaged portions of the bridge. Bridge I-446 was in the final stages of completion, when it was again destroyed by the enemy on 25 September. A joint reconstruction effort was again initiated, but was delayed by a shortage of materials. After the heavy rains of mid-October washed out the bypass, the gap was bridged by an expedient one-lane timber deck 40 feet long connected to a 45 foot M4T6 dry span. This was possible since the damaged pile piers had been replaced prior to the rains. On 7 September, the northern abutment of bridge I-442 (BS 633757) was destroyed. Repairs were delayed pending availability of materials; however, since the bypass was open, this was not critical. Reconstruction will also be a joint effort between Company B and the 104th ARVN Engineers. On 9 October 1968, a 100-foot span of the triple single bailey bridge at I-447 (BS 596927) was collapsed by two M-48 tanks attempting to cross the bridge together. The two

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M-48 tanks were removed and a new triple single span was emplaced by the 26th Engineer Battalion. The bridge was opened on 24 October.

An increase in enemy activity was noted throughout the report period. On 22 August, the 2nd Platoon was airlifted to HA THAN Special Forces Camp (BS 395702) to construct bunkers. The following day, intelligence estimates indicated that the camp would be hit by NVA forces. On 23 August, the camp came under mortar attack and three men of the 2nd Platoon were evacuated for wounds from shrapnel. The following day, the entire platoon was extracted. On 23 August, at 0215 hours, LZ DOTTLE, came under heavy mortar attack. Under cover of the mortar attack, an enemy sapper squad breached the defensive perimeter and attacked artillery pieces and bunkers with grenades and satchel charges. The attack continued for one hour, and an early morning body-count netted a total of eight enemy killed within the perimeter and in the wire by Company B personnel. At 1330 hours the same day, Company B's minesweep team came under heavy small arms fire on highway QL-1 at BS 634807. The minesweep team was immediately reorganized as infantry to engage the enemy. The encounter lasted two and a half hours and resulted in three enemy KIA's. Additional enemy activity during the report period included twenty mining incidents, sixteen sniper attacks, eight barriers across Route QL-1, and six encounters with enemy mortar fire. Ten consecutive days of rain, ending on 21 October, with three days of very heavy rain, caused extensive flooding along Route QL-1. When the water receded, six places along Route QL-1 were impassable due to washouts. However; the road was pioneered open by 24 October. On 30 October, the 1st Platoon of the 511th Panel Bridge Company delivered 80 feet of double-single Bailey bridge to LZ DOTTLE for stockpile in the event of further washouts. Beginning on 31 October, the dump trucks of the Panel Bridge Platoon were employed in hauling crushed rock from CHU LAI for road maintenance and bypass/culvert site restoration along Route QL-1. Company B is presently in the process of upgrading drainage structures and bridges to withstand further damage by the monsoon rains.

(7) (C) Activities of Company C.

During the reporting period, Company C was located at LZ SNOOPY (BS 705610). The assigned mission included the widening of Route QL-1 to MACV standards, i.e., a 24-foot roadway with 4-foot shoulders; between MO DUC (BS 733543) and the SONG VE RIVER (BS 695635). It also included the widening and upgrade of bridges and drainage structures between MO DUC and QUANG NGAI (BS 642745), a total distance of 20.5 km. Company C conducted a daily minesweep between MO DUC and the SONG VE RIVER, a distance of 12.4 km. The 3rd Platoon, 630th Light Equipment Company remained attached to Company C and was utilized primarily for the purpose of hauling fill.

The widening of Route QL-1 between MO DUC and the SONG VE RIVER was divided into three approximately equal segments. Segment 1, beginning at MO DUC and extending north for 4.2 km, was completed during the previous report period. Segment 2 was begun on 22 May, and Segment 3 was begun on 9 August. Segments 2 and 3 have not yet been completed due to the heavy rains; however, a total of 52,018 cubic yards of earth have been placed and compacted. During the reporting period, a total of two quadruple 60-inch culvert sites and two double 60-inch culvert sites were back-filled and completed with reinforced concrete headwalls. The 3rd Platoon of Company C relocated to DUC PHO airfield (BS 812385) on 18 September to replace the MX-19 matting on the runway and spot-repair the parking apron. The project was hampered to some extent by wet weather and lack of sufficient serviceable locking bars. At

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the end of the report period approximately 3,000 feet of MX-19 matting had been laid. Completion has been deferred pending a USARV decision on whether to extend the strip to 3,800 feet (with turnaround) or to end the strip at 3,000 feet.

Increased enemy activity was evident throughout the reporting period. On 1 August, a 290M tractor scraper struck a mine at BS 717593 resulting in heavy damage to the tractor; however, the operator escaped without injury. On the following day, another 290M struck a mine in the same area. The tractor was declared a combat loss, and the operator was medevaced. On 6 August, a local Vietnamese truck struck a mine at BS 724572. Of the three Company C personnel standing near the vehicle, one was killed and two were wounded. At the same location on the following day, a sheepsfoot roller struck another mine, destroying the roller. On 8 August, the company commander of Company C and two AM were killed when their vehicle hit a mine at BS 721584. All of these mine incidents were attributed to a new type firing device employed by the Viet Cong. Visual detection must be utilized since the current metallic mine detectors will not detect this type firing device (see para 1b, Intelligence). The minesweep teams working south from LZ SNOOPY during 1-8 August received sniper fire on a daily basis in the vicinity to of BS 717593. The intent of the sniper fire appeared to have been directed toward harassing the sweep teams and causing them to speed up the sweep and miss emplaced mines.

On 22 August, the northern abutment to the 580 foot bailey bridge at I-438 (BS-695635) was blown. Approximately 30 feet of the bridge was destroyed. The damaged portion of the bridge was replaced and the bridge was again open for traffic on 24 August. Also on 22 August, the 105-foot concrete and steel bridge at J-438 (BS-660700) was destroyed. By 26 August this bridge was pioneered open for light traffic with earth fill. On 30 August, an M4T6 float bridge was installed to make the site passable for all normal military traffic. On 26 August, the northern abutment and span of the concrete and steel bridge at I-435 (BS 691646) were destroyed. A 70-foot double single bailey bridge was erected by 28 August. On 26 September 1968, the northern abutment of the single lane timber trestle bridge I-436 (BS 685-658) was destroyed. A bypass was constructed; however, it was abandoned because of heavy rain. As a temporary expedient, a 68 foot M4T6 dryspan was placed over the damaged spans utilizing a damaged pier as the intermediate support. Throughout the reporting period, a total of 28 enemy mines were discovered on C Company's section of Route QL-1. Fifteen of these mines were found on 23 August. The heavy rains which ended on 21 October, caused extensive flooding along Route QL-1. When the water receded, eleven places along QL-1 were impassable due to wash outs. Through intensive effort, Route QL-1 was pioneered open by 27 October. Company C is presently continuing the maintenance and upgrading of Route QL-1 to withstand further damage by monsoon rains.

(8) (C) Activities of Company D:

At the beginning of the report period, Company D was collocated at CHU LAI with the Battalion Headquarters. The primary mission of the Company was to provide engineer support generally within the Americal Division headquarters area and to minesweep Route QL-1 from CHU LAI (BT 538027) to BINH SON (BS 596927).

One construction project continued from the previous report period was the erection of 1200 feet of sand-filled plywood protective revetment walls for the 21st Reconnaissance Aircraft Company at CHU LAI airfield. Work continued through August

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and was completed on 18 September. The plywood construction provided the necessary protection for the aircraft and also furnished a more permanent-type construction than the common sand-filled barrel type. Another project assigned to Company D was to assist the Headquarters Company Heavy Equipment Section in the construction of a 30,000 square foot materials storage yard. Work started on 1 August; 3,371 cubic yards of fill were hauled and compacted, after which the surface was sealed with penepreme. The yard was completed and ready for use on 10 October. Company D also relocated and renovated four 16x32 foot buildings for the Americal Military Intelligence Detachment. This work was completed on 9 August. The final project carried over from the previous report period was the construction of two each thirty-five foot observation towers for the 9th Support Battalion's sector of the CHU LAI Defense Perimeter. Each structure consisted of four timber piles set in concrete and laterally braced with 3x12 inch lumber; 12x12 inch caps and stringers decked with 3x12 inch lumber completed the platform upon which a plywood observation post was placed. The using service sandbagged the roofs and floors and installed armor plate on the walls. Both towers were completed on 18 September.

An interesting development in the month of August was the deployment of the 2nd Platoon of D Company to LZ YOUNG during the period 20-29 August in order to augment a Company's forces during a period of increased enemy activity in that area. The Platoon's sole mission was night-time perimeter security, plus dump truck assistance during the day. This action was necessitated by the temporary commitment elsewhere of the US infantry company which normally manned the LZ perimeter. (ARVN forces were also assigned a section of the LZ perimeter during this period.) No significant action took place, except for the combat loss of one of the platoon's dump trucks which detonated a mine.

Company D also moved its 3rd Platoon to DA NANG on 10 August to construct 392 feet of sand-filled plywood revetment walls for the 34th Supply and Service Battalion. The walls were constructed to protect a data processing center. Work was completed on 28 August. The final project undertaken by Company D in the CHU LAI area on 18 September, was the repair of 2600 square yards of helicopter maintenance hardstand for the 335th Aviation Company at Ky Ha. The subgrade under the old matting had failed because of water and mud pumping up through the matting and creating potholes which endangered the aircraft. By 28 September, all the old matting had been removed. The project was then turned over to Company A as Company D prepared to move to LZ BALDY (BT 134443).

On 29 September, Company D (-) convoyed to LZ BALDY. A reinforced squad was left in the CHU LAI area to minesweep Route QL-1 until Company A closed in from LZ YOUNG. The squad rejoined the company on 9 October. The mission of Company D was to support operation Wheeler/Wallowa by upgrading 20 km of Route 535 from a pioneer road to a one-lane all-weather road. Exceptionally heavy rains in mid-October washed out the road in a number of places. On 26 October, Rte 535 was again open to traffic. During the one-month working period, 4,476 cubic yards of laterite and 180 cubic yards of rock were hauled, 360 feet of culvert were assembled, and 240 feet of culvert were placed. There were no enemy-initiated incidents on Company D's section of Route 535 during this period.

b. (C) Intelligence:

- (1) Reconnaissance.

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During the reporting period the Battalion Reconnaissance Section updated route information for planning future maintenance and upgrade operations on Routes QL-1, HL-533, and HL-535. When an aircraft was available, the section conducted an aerial reconnaissance from CHU LAI (BT 522043) to MO DUC (BS 733543) early each day to check road conditions and possible damage to bridges or drainage structures. Two ground reconnaissance missions were conducted to obtain information on possible rock quarry sites in the vicinity of BS 6865 to BS 6664 and BT 1114 to BT 2317. A total of eight other ground reconnaissance missions were conducted to update information on routes within the battalion AO. Complete updated reconnaissance reports of route QL-1 from CHU LAI (BT 522043) to MO DUC (BS 733543), Route 533 from BT - 317221 to BT 117139, and Route 535 from BT 143457 to BT 026345 were compiled.

(2) Enemy activity. Enemy activity remained relatively heavy through August, decreased during September, and was moderate during October.

(a) Mines: During the reporting period the battalion discovered 89 mines within its AO. The majority of the mines employed varied in size from 15 to 40 pounds of explosive with bamboo pressure type firing devices. One new type bamboo-plunger firing device was encountered several times. The device consists of a wooden plunger which is fitted inside a slightly larger diameter hollow piece of bamboo. Metal straps are wrapped around the end of the plunger and across the end of the bamboo tube. Pressure on top of the plunger causes it to depress and complete an electric firing circuit. The 12 to 24 inch length of the plunger makes detection impossible with current metallic mine detectors, since detectable components are too deep underground. All mines detected of this type were located visually. Penetrating road shoulders aided in visual detection. There were also scattered instances of the enemy using US manufactured anti-personnel mines M-14 and M-16A1. The following is a breakdown of mines detected versus detonated by month; 5 of the mines detonated were anti-personnel mines:

<u>MONTH</u>	<u>DETECTED</u>	<u>DETONATED</u>	<u>TOTAL</u>
August	48	13	61
September	11	5	16
October	7	5	12
	<u>66</u>	<u>23</u>	<u>89</u>

(b) Booby Traps: During the reporting period, the battalion discovered 16 booby traps. The majority of these consisted of trip-wired hand grenades. In two incidents, US-manufactured smoke grenades were filled with explosive and set with trip wires for instantaneous detonation. The following is a breakdown by month:

<u>MONTH</u>	<u>DETECTED</u>	<u>DETONATED</u>	<u>TOTAL</u>
August	8	0	8
September	1	0	1
October	2	1	3
	<u>11</u>	<u>1</u>	<u>12</u>

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(c) Other enemy-initiated activity during the report period was as follows:

<u>TYPE</u>	<u>AUGUST</u>	<u>SEPTEMBER</u>	<u>OCTOBER</u>	<u>TOTAL</u>
Sniper Attacks	35	8	6	49
Ambushes	3	3	0	6
Mortar Attacks	17	17	9	43
Bridges Blown	8	2	0	10
Culverts Blown	8	2	6	16
Ground Probes	1	3	0	4
Road Obstacles	6	1	2	9
TOTAL	78	36	23	137

(3) Weather Data. The heavy monsoon rains in mid-October compensated for the relative lack of enemy activity during that month. Three days of extremely heavy rain from 19 through 21 October caused extensive damage to Routes QL-1 and 535. Route QL-1 was closed between BINH SON (BS 596927) and MO DUC (BS 733543) from 16 to 27 October due to numerous washouts of culverts, bridge abutments, and bypasses. Route 535 was closed due to washouts of culverts and the roadway from 14 to 26 October. Average rainfall by month was as follows:

<u>MONTH</u>	<u>AVERAGE RAINFALL FOR PERIOD*</u>
August	4.9
September	12.1
October	26.4
	<u>43.4</u>

*Average from readings at LZ YOUNG, LZ BALDY, LZ SNOOPY, DUC PHO, and CHU LAI.

c. (C) CASUALTIES: Casualties during the report period were extremely heavy, and in proportion to the increased enemy activity:

	<u>WHI</u>	<u>KHA</u>	<u>KNH</u>
HHC	3	2	0
A	35	8	0
B	11	0	1
C	12	4	1
D	0	0	0
TOTAL	61	14	2

d. (C) OPERATIONS AND TRAINING:

(1) During the report period, the battalion worked a normal seven day work week. Time was allotted on Sundays for mandatory training, religious services, and maintenance of equipment. A total of 21 hours of mandatory training was conducted for the battalion. During October, in addition to tool box safety lectures and daily motor stables, one hour per week was allotted to maintenance and safety training.

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This additional mandatory training will be continued on a permanent basis because of increased command emphasis in these areas. Seven potential career NCO's attended the Combat Leadership Course conducted by the Americal Division Combat Center, as opposed to 19 during the previous report period. The decrease was caused by a cut back in allocations from the Combat Center. A total of 231 new in-country personnel attended the Americal Replacement Training Center during the period.

(2) During the report period, units of this battalion were engaged in 91 company days of direct combat support operations. The remaining time was spent on construction tasks not directly related to combat operations.

e. (C) MOVEMENTS:

(1) Company Moves:

(a) 29 September, Company D from CHU LAI (BT 532037) to LZ BALDY (BT 134443).

(b) 7 and 8 October, Company A from LZ YOUNG (BT 189159) back to CHU LAI.

(2) Platoon Moves:

(a) 6 August, Second Platoon, Company A from LZ YOUNG to TIEN PHUOC (BT 118-139); and return on 6 October.

(b) 15 August, Third Platoon, Company D from CHU LAI to DA NANG (BT 050790); and return on 14 September.

(c) 20 August, Second Platoon, Company D from CHU LAI to LZ YOUNG; and return on 29 August.

(d) 21 August, Second Platoon, Company B from LZ DOTTIE (BS 632854) to HA THAN (BS 392701); and return on 24 August.

(e) 19 September, Third Platoon, Company C from LZ SNOOPY (BS 705610) to DUC PHO (BS 812385).

(3) Summary: A total of six company days were expended in moving units of the battalion.

f. (C) SUPPLY:

(1) General: During the report period all supply support for Companies A and B was provided through the battalion supply section. Company D was supported by the supply section until 6 October when the company deployed to LZ BALDY (BT 133453) at which time class I and III supplies were drawn from the 8th Support Battalion at LZ BALDY. The other classes of supply continued to be issued from the battalion supply section. Company C continued to be supported by the FSA at DUC PHO (BS 814-583) for class I and III supplies, except for a short period in October when supplies were air-lifted from the battalion supply section while the road was closed between CHU LAI and DUC PHO. All other classes of supply for Company C were provided by the battalion supply section.

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(2) Logistics Support: Logistics support, with the exception of maintenance and repair parts, was provided by the following organizations:

(a) Task Force 80-2, located at DUC PHO, a 1st Logistical Command FSA.

(b) 8th Support Battalion, located at LZ BALDY, an organic support battalion of the 196th Brigade, Americal Division.

(c) 23rd Supply and Transport Battalion, located at CHU IAI, organic to the Americal Division.

(d) 3rd Naval Construction Brigade, located at DA NANG, for provision of materials for LOC construction.

(3) A number of major equipment shortages continued to inhibit the operational capabilities of the battalion. The critical shortages were:

- (a) Scoop loader 6 ea
- (b) Air Compressor, 250 CFM 5 ea
- (c) 5-Ton Dump Truck 10 ea
- (d) D7E Tractor 2 ea

(4) The battalion operated four water points through September with an approximate total daily output of 28,000 gallons. During the month of October, three water points were operated with an approximate total daily output of 27,000 gallons.

g. (U) MAINTENANCE:

(1) General: As a result of a USARV CMI conducted in Headquarters and Headquarters Company on 6 August, in which the overall unit rating was UNSATISFACTORY, an intensive program of improving the materiel readiness posture of the unit was initiated. A complete inspection of all vehicles, equipment, weapons, and facilities was conducted. Emphasis was placed on supervisor responsibilities for equipment readiness and maintenance monitoring. Excess and unserviceable end items and repair parts were turned in. The motor pool was reorganized to facilitate maintenance management operations, specifically in the areas of accurate, complete posting of logbooks and repair parts requisitioning and accountability. More stringent standards for the technical inspection of vehicles/equipment were instituted battalion-wide, with the result that the overall deadline rate has increased. Vehicles and equipment were not permitted to operate under marginal conditions. The success of the program was realized in the CMI re-inspection of 11 October, when Headquarters and Headquarters Company achieved a SATISFACTORY rating in all categories, with a score of 85 per cent for Materiel and 83 per cent for Maintenance Operations. The accomplishment of the Battalion Communications Section was noteworthy, in that the category of Electronics and Communications Equipment was scored as 100 per cent.

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(2) Prescribed Load List (PLL). Revised PLL's for each company have been prepared, and a copy has been furnished the DS unit. Demand supported fringe items were added to the PLL's as necessary. At the end of the report period, the overall percentage of PLL line items at zero balance for the entire battalion was 55 per cent, ranging from a high of 89 per cent in C Company to a low of 36 per cent in D Company. Priority requisitions have been submitted for all PLL items at zero balance.

(3) Support. The 588th Maintenance Company (Direct Support) continued to provide higher echelon maintenance support to the battalion. The Authorized Stockage List (ASL) of the 588th Company, which must back up the PLL of supported units and also provide repair parts for in-shop repairs, was at approximately 76 per cent zero balance for 3,200 line items at the end of the report period. Particular problems still continued with long lead times for repair parts for engineer equipment.

(4) Requisitions. Following is a summary of percentage fills of regular and Red Ball requisitions, respectively, during the report period:

(a) Regular Requisitions

Number Submitted	5,499
Cancelled	480
Filled	631
Per Cent Filled	11.5%

(b) Red Ball

Number Submitted	592
Cancelled	161
Filled	211
Per Cent Filled	35%

A significant improvement in the above percentages must be achieved before repair parts availability through normal channels will alleviate the overall deadline rate of the battalion. An aggressive follow-up program for all requisitions will continue in an effort to improve these statistics.

11. (U) MEDICAL:

(1) The medical section continued to stress the importance of preventive medicine through routine inspections, immunizations, and guidance to the medical aidmen located at each company. The major health problem was gastrointestinal disorders. One outbreak occurred in Company C during September and was attributed to beer cans which had rusted causing the beer to become contaminated. A minor outbreak of viral gastroenteritis also afflicted eighteen men in the battalion in September. A third outbreak of diarrhea occurred in October in Headquarters Company

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as a result of partial food spoilage caused by a temporary lack of refrigeration when the battalion's generator was inoperational.

(2) There were only eight cases of malaria during the report period, compared to thirty-three during the previous period. These eight cases were directly attributed to lack of preventive measures on the part of the individuals. Command emphasis on this program continues.

(3) Combat injuries were the most significant factors affecting available manpower during the report period. A total of 766 man-days were lost due to injuries incurred from hostile action.

i. (C) CIVIC ACTION:

(1) Increased emphasis was placed on civic action by the battalion during the report period. A total of 190 man-days of assistance was rendered, as opposed to 70 man-days during the previous period. The projects included grading and furnishing bridging material for a road at LONG BINH (BT 505070), hauling fill for a school at NUI DEP (BS 714606), and furnishing materials for upgrading a road at XON XLET (BS 621689). Twenty-five feet of 60-inch culvert, 40 feet of 18-inch culvert, 576 board feet of lumber, five gallons of paint, and 100 sheets of roofing tin were contributed to these projects.

(2) During the report period the turn-ins under the Volunteer Informant Program increased. Since December 1967, the 39th Engineer Battalion has paid out over \$ 1 million piasters through this program. Turn-ins during this period were:

<u>ITEM</u>	<u>AUGUST</u>	<u>SEPTEMBER</u>	<u>OCTOBER</u>
Mines	3	26	233
Grenades	47	79	52
40mm Rounds	31	61	43
60mm Rounds	7	18	73
81mm Rounds	3	53	44
90mm Rounds	1	0	0
105mm Rounds	6	32	82
155mm, 175mm, 8in Round	8	4	6
4.2 inch Rounds	1	0	0
Small Rockets	3	12	16
Flares	0	0	12
<u>EXPENDITURES</u>	<u>28,000 \$ VN</u>	<u>105,800 \$ VN</u>	<u>285,320 \$ VN</u>
TOTAL EXPENDITURES:	419,120 \$ VN		

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

a. PERSONNEL: None

b. OPERATIONS:

(1) (U) Mortar Attacks

(a) OBSERVATION. During mortar attacks on fire bases, enemy sappers generally attempt to penetrate the perimeter wire while the mortar attack is still going on.

(b) EVALUATION. On occasion, units have experienced mortar attacks during which the enemy has penetrated the defensive wire without resistance. It has also been noted that explosions in or near the wire have often been demolition charges, placed with the purpose of cutting a hole in the defensive perimeter wire. These charges are often mistaken for mortar fire.

(c) RECOMMENDATIONS. Commanders should require all personnel to fire protective fires, immediately upon receipt of incoming mortar fire. Throughout the mortar attack, at least one man per bunker should observe his assigned sector.

(2) (U) Modification of MX-19 Airfield Panel Anchors

(a) OBSERVATION. The present design of the MX-19 airfield panel anchors is unsatisfactory.

(b) EVALUATION. The diameter of the auger tip of the panel anchors is too large for use in compacted soil. Cutting off the auger tip allows anchors to be driven into the ground readily; however, this may reduce their effectiveness against vertical movement of the panel.

(c) RECOMMENDATION. The design of the anchor should be altered. The diameter could possibly be reduced; or a design similar to a screw-type picket could be developed for use in well-compacted soil.

(3) (C) Lack of Organic Helicopter Capability.

(a) OBSERVATION. Units of the battalion are operating from and at five widely separated base areas within the AO's of the Americal Division and 2nd ARVN Division. The distance from the southernmost element of the battalion to the unit farthest north is approximately 80 miles.

(b) EVALUATION. Effective command and control of the various projects assigned to the companies of the battalion require almost daily contact by the battalion commander or one of his staff officers with each company. At the present time helicopter transportation is provided on an as-available and unpredictable basis through the Division Engineer, Americal Division.

(c) RECOMMENDATION. That the battalion be provided organic or on-call helicopter support on a full-time basis.

(4) (C) Engineer Equipment Operating at a Remote Location.

(a) OBSERVATION. When an engineer work party is employed at a remote location for an extended period in a hostile or insecure area, equipment and vehicles must operate at a optimum efficiency in order to minimize total time required away from the parent unit.

(b) EVALUATION. It has been noted that a breakdown in a single, vital piece of equipment, such as a scoop loader, at a remote location can make a unit ineffective if rapid repairs are not possible.

(c) RECOMMENDATION. If feasible, commanders should make certain that a one-of-a-kind make and model item of equipment is not employed at a remote work site. Thus, controlled substitution from other like end items may be utilized, if necessary, to keep the equipment operational.

c. TRAINING:

(1) (C) Lack of Experienced Key Personnel.

(a) OBSERVATION. The rapid turnover of key personnel and a shortage of qualified squad leaders within a unit in RVN often leaves the unit with inexperienced personnel to fill key positions.

(b) EVALUATION. It was noted that with the use of checklists and mandatory review training periods, selected personnel could develop their leadership qualities more quickly and efficiently.

(c) RECOMMENDATION. Commanders should utilize "by-the-numbers" checklists and daily training sessions to motivate and develop acting squad leaders and job supervisors.

d. INTELLIGENCE:

(1) (C) Voluntary Informant Program

(a) OBSERVATION. The Voluntary Informant Program (VIP) is more effective if timely reward is given.

(b) EVALUATION. The VIP can be an effective means of gathering ordnance and preventing its use by enemy forces. Immediate reward was found to be extremely effective in getting additional or multiple items delivered or pointed out.

(c) RECOMMENDATION. That commanders insure that a timely reward is made to participants and contacts in the Voluntary Informant Program.

(2) (C) Vietnamese Cattle Near Defensive Perimeter

(a) OBSERVATION. Vietnamese civilians often graze their cattle near defensive perimeters.

(b) EVALUATION. Vietnamese bring cattle close to defensive perimeters for the apparent purpose of grazing. It was noted that this often resulted in trip flares being marked, pickets being removed, and wire being cut.

(c) RECOMMENDATION. The area within 100 meters of the defensive perimeter should be placed off limits to all Vietnamese personnel.

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e. LOGISTICS:

(1) (U) Availability of Repair Parts

(a) OBSERVATION. The lack of timely availability of repair parts to remove equipment off deadline inhibits the operational capabilities of companies assigned to the battalion.

(b) EVALUATION. A low percentage fill of the PLL of the companies assigned to the battalion and a long-time for receipt of requisitioned repair parts makes "scrounging" and controlled substitution mandatory expedients for keeping mission-essential equipment operational.

(c) RECOMMENDATION. That the DSU which supports the battalion operate a cannibalization point as an additional source for sorely needed repair parts.

f. ORGANIZATION: None

g. OTHER:

(1) (U) Escape and Evasion: None

DISTRIBUTION:

6 - CO, 45th Engr GP, ATTN: S-3
8 - CG, 18th Engr Bde, ATTN: AVBC-G
3 - CG, USARV, ATTN: AVHCG (DST)
2 - CINCUSARPAC, ATTN: GPOF-DT

T. R. Hukkala
T. R. HUKKALA
LTC, CE
Commanding

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EGD-3 (9 Nov 68) 1st Ind

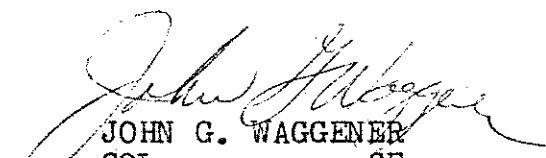
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SUBJECT: Operational Report of the 39th Engineer Battalion
(Combat) for Period Ending 31 October 1968, RCS
CSFOR-65 (R1)

DA, Headquarters, 45th Engineer-Group (Construction), APO
96337 21 November 1968

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

The Operational Report - Lessons Learned of the 39th Engi-
neer Battalion (Combat) has been reviewed by this headquar-
ters and is considered to be an excellent account of the
battalion's activities during the reporting period ending
31 October 1968.


JOHN G. WAGGENER
COL CE
Commanding

NOT CLASSIFIED AFTER
ATTACHED DOCUMENTS
ARE REMOVED

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AVEC-CS (31 Oct 68) 2nd Ind
SUBJECT: Operational Report of the 39th Engineer Battalion (Combat)
for the Period Ending 31 October 1968, RCS CSFOR - 65 (R1)

DA, Headquarters, 18th Engineer Brigade, APO 96377 7 DEC 1968

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

1. This headquarters has reviewed the Operational Report - Lessons Learned for the 39th Engineer Battalion (Combat) as indorsed by the 45th Engineer Group. The report is considered to be an excellent 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.



JOHN H. ELDER, JR.
Colonel, CE
Commanding

REGRADED UNCLASSIFIED WHEN
SEPARATED FROM BASIC DOCUMENT
OR INCLOSURE

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AVHGC-DST (9 Nov 68) 3d Ind
SUBJECT: Operational Report of 39th Engineer Battalion (Combat)
for Period Ending 31 October 1968, RCS CSFOR-65 (R1)

HEADQUARTERS, UNITED STATES ARMY VIETNAM, APO San Francisco 96375

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

24 DEC 1968

1. This headquarters has reviewed the Operational Report-Lessons Learned for the quarterly period ending 31 October 1968 from Headquarters, 39th Engineer Battalion (Combat).


2. Comments follow:

a. Reference item concerning modification of MX19 airfield panel anchors, page 14, paragraph 2b(2). USAECAV has been tasked to investigate the anchor design to determine necessary modifications for improvement.

b. Reference item concerning lack of organic helicopter capability, page 14, paragraph 2b(3). Nonconcur. The 39th Engr Bn is not authorized aircraft by TOE, and no MTOE action requesting authorization has been received by this headquarters.

c. Reference item concerning availability of repair parts, page 16, paragraph 2e(1): Concur. The 588th Maintenance Company (supporting the 39th Engineer Battalion) has received permission to operate a cannibalization point.

FOR THE COMMANDER:


W. C. ARNTZ
CPT, AGC
Assistant Adjutant General

Cy furn:
HQ 18th Engr Bde
HQ 39th Engr Bn (Combat)

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GPOP-DT (9 Nov 68) 4th Ind (U)
SUBJECT: Operational Report of HQ, 39th Engr Bn (Cbt) for Period
Ending 31 October 1968, RCS CSFOR-65 (R1)

HQ, US Army, Pacific, APO San Francisco 96558

9 JAN 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:

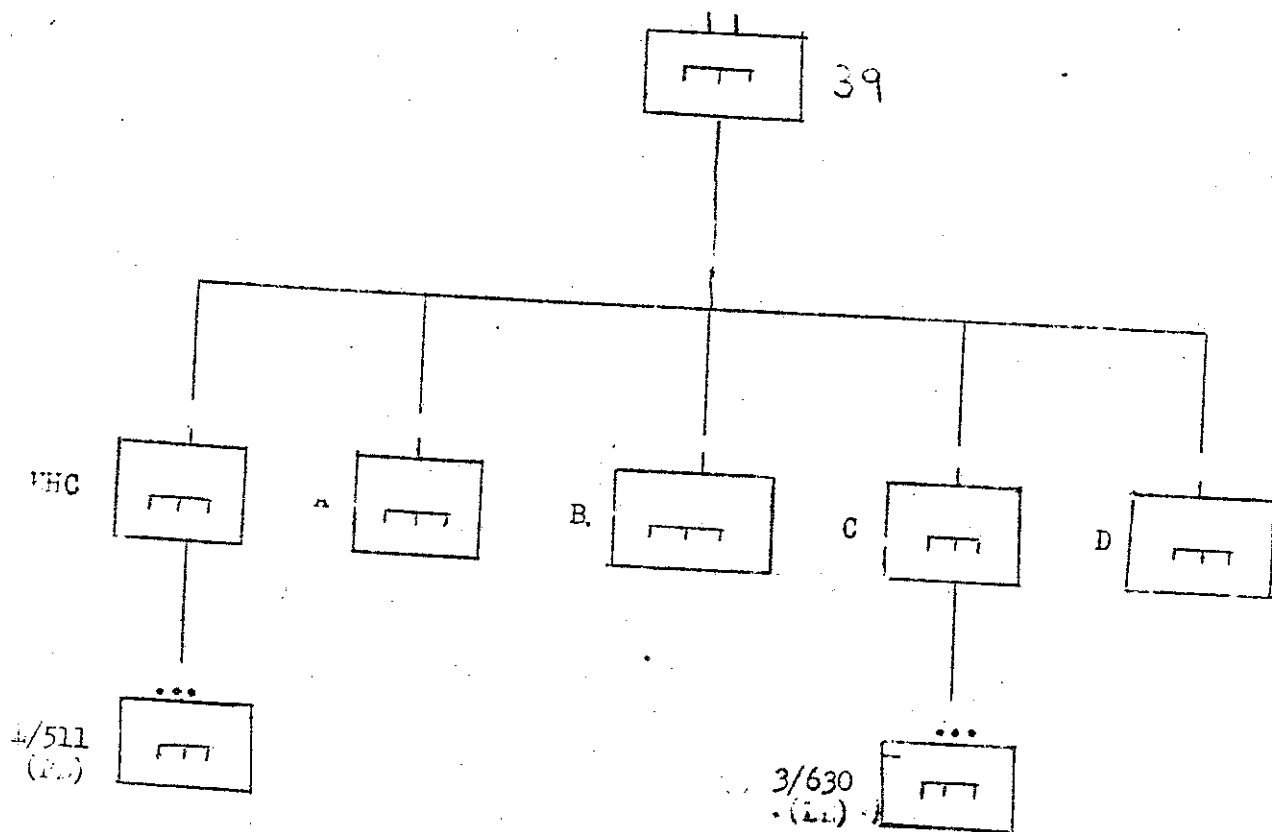


C. L. SHORT
CPT, AGC
Asst AG

1 Incl
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Organization 39th Engineer Bn (CBT)



Inclosure 1

