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

FOR OT UT 702034

18 August 1970

SUBJECT: Operational Report - Lessons Learned, Headquarters, 39th Engineer Battalion (Combat) for Period Ending 30 April 1970 (U)

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DEPARTMENT OF THE ARMY
HEADQUARTERS 39TH ENGINEER BATTALION (COMBAT)
APO SAN FRANCISCO 96323

30 April 1970

SUBJECT: Operational Report of 39th Engineer Battalion (Combat)
for Period Ending 30 April 1970, RCS CSFOR-65 (R1)

THRU: Commanding Officer
45th Engineer Group
ATTN: S-3
APO 96308

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: GFSR-DT
APO 96536

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

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Inclosure
During the report period, the 39th Engineer Battalion (Combat) consisted of Headquarters and Headquarters Company and four lettered line companies. The 311th Engineer Company (Panel Bridge) and the 137th Engineer Company (Light Equipment) remained attached to the Battalion throughout the report period. The 39th Engineer Battalion Provisional Land Clearing Platoon remained assigned to Headquarters and Headquarters Company and under the operational control of the Land Clearing Company of the 9th Fleet Marine Force Engineer Battalion.

2. Command:

The 39th Engineer Battalion (Combat) remained under the command of the Commanding Officer, 45th Engineer Group (Construction). The Battalion remained in support of the Americal Division throughout the reporting period, with Headquarters and Headquarters Company located within the CHU L.A. Base (BT 534036). Incumbent commanders at the close of the report period were as follows:

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<tr>
<th>Company</th>
<th>Commander</th>
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<tr>
<td>CO, 39th Engr Bn</td>
<td>LTC Hugh G. Robinson</td>
</tr>
<tr>
<td>CO, HHC, 39th Engr Bn</td>
<td>CPT James W. Neuhaus</td>
</tr>
<tr>
<td>CO, C, 39th Engr Bn</td>
<td>CPT Bruce L. Elliott</td>
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<td>CO, B, 39th Engr Bn</td>
<td>CPT Harry O. Taylor</td>
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<tr>
<td>CO, C, 39th Engr Bn</td>
<td>CPT David J. Atius</td>
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<tr>
<td>CO, D, 39th Engr Bn</td>
<td>CPT Larry W. Timwell</td>
</tr>
<tr>
<td>CO, 137th Engr Co (LE)</td>
<td>CPT Luis Rivero</td>
</tr>
<tr>
<td>CO, 511th Engr Co (PB)</td>
<td>CPT Perry H. Taylor</td>
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3. (C) Major activities:

During the report period the Battalion completed the upgrade and paving of QL-1 between NO DUC (BS 740525) and DUC PHO (BS 877378). The repair of QL-1 between DUC PHO and vic. L2 DaB Lz (BS 882305) was also completed. The Land Clearing Platoon continued land clearing for the Third Marine Amphibious Force and XXIV Corps under the operational control of the 9th FMF Engineer Battalion. The reconstruction of the SONG 50 NA bridge (BS 691646) was completed on the last day of the report period while construction of the SONG VE bridge (BS 697635) was initiated in March. The 27'44'6' bridge and causes (BS 900101) and an 80 foot, class 60, timber pile bridge at (BS 633811) were completed. Living bunkers, fighting bunkers, powder and projectile bunkers, and gun pads were constructed at LZ OSE (AT 940240), L2 CENTER (BT 097251), FSB HAJO KILL (BT 227322), L2 LIZ (BS 752435), L2 DOTTIE (BS 627346), L2 FAT CITY (BT 423079), and L2 DRAGON (BS 725538). The L2 LIZ access road was upgraded and paved. An armored cavalry base camp was constructed. Artillery observation towers were prefabricated, air transported and emplaced on OP-1 (BS 517778) and OP-3 (BS 754435). During
the report period the upgrading to simple line all weather standards of
Route 518 from CHOC WOOL (BS 644728) to JI KY (BS 544740), Route 59
from CL-1 (BS 638728) to N. TH. MAI (BS 399708), and Route 533 from TAH
KY (BT 318221) to TIEN PHUOC (BT 120140) was initiated. The rehabil-
itation of the Tinh DIENG Airfield to Type II C-123 airfield with new
subgrade surfacing began during the latter part of the report period.
Other projects initiated but not completed included the construc-
tion of an SP Security Fence at LZ BRONCO (BS 914503) and the reconstruc-
tion of a Halipad at CHU L.I (BT 572034). Work continued to place the
Stabilization Plant into operation at the Battalion area in CHU L.I and a
primary rock crusher was placed into operation. Continuous missions
throughout the report period on CL-1 included minesweeps of 71 kilo-
meters from CHU L.I to DUC PHO, repair of enemy damage, and route mainte-
nance which included repair of pot holes and construction of concrete
headwalls.

a. The paving of the 32 lane kilometers of CL-1 from DUC PHO to 10
DUC was completed on 4 February. On 24 February this section of pri-
mary LOC was officially transferred to the Government of Vietnam. In
early March work began south of DUC PHO to repair approximately 10 kilo-
meters of damaged portions of CL-1 between DUC PHO and LT DEBBIE. This
work was completed on 17 April. The overall paving operations were de-
layed because of breakdowns in the Navy operated asphalt plant and re-
quirement to transfer some of the paving equipment to another unit.

b. The Land Clearing Platoon cleared 5560 acres at two different
locations for Third Marine Amphibious Force and XXIV Corps. All land
clearing operations were joint army-Marine corps operations as the
platoon remained OPCON to the 9th ACR Engineer Battalion.

c. The reconstruction of the Song Go Ma Bridge was completed on 30
April, after being started in the previous report period. During this
report period twenty-three of the twenty-nine reinforced concrete deck
slabs were placed. The reinforced concrete abutment was placed and a
hole caused by artillery in the original reinforced concrete deck was
repaired. Six 50 foot and six 60 foot 36 & 130 steel stringers were
welded together from 40 foot stringers and placed for the two new span.
Forty steel diaphragms were welded and placed and the concrete deck
slabs were welded to the stringers. The abutment was backfilled, con-
creted, graded and shot with soil binder.

d. On 6 March 1970 work began to prefabricate 105 reinforced con-
crete bridge deck slabs for the SONG VE Bridge. Concrete for the first
slab was placed on 12 March. At the end of the report period 41 slabs
had been placed. Work began on site in April to continue construction
of the reinforced concrete fluted piles which had been started by the
Vietnamese Ministry of Public Works. The 30 meter causeway leading to
the south abutment was begun on 23 April.

e. The construction of a 120 foot timber bent bridge and 650
foot causeway at TAH PHU was completed on 19 February. On 10 February
the bridge was burned to the water level by the Viet Cong. The bridge
was

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was reconstructed and the causeway completed on 26 March.

f. A two-way, class 60, 80-foot timber pile bent bridge was constructed on OL-1 at (BS 633811). Work started on 3 February and ended on 15 March. Work was delayed several times due to lack of a crane with pile driving loads.

g. Throughout the report period a number of bunkers and gun pads were constructed for the 53rd Division and MAGW within the area of operations. At LZ WEST fourteen 12x24 living bunkers, six 12x24 living bunkers, and three 150 gun pads with powder and projectile bunkers were constructed. Thirty-two 8x12 living/flighting bunkers were also completed which had been started by infantry troops. Eighteen 8x12 living/flighting bunkers were constructed at LZ CENTER and an additional eight were reinforced. At FSB HAK HILL twelve 12x24 bunkers, six 24x24 bunkers, and eight 18x20 bunkers were constructed. Three 8x12 flighting bunkers were constructed at LZ LIZ. One 32x10 TOC bunker, one 20x32 living bunker, and two 12x24 bunkers were constructed at LZ DOTL. At LZ DRQCC: a 36x12 living/TOC bunker was constructed. .. 60x20 TOC was constructed at LZ LIZ.

h. The upgrading and paving of the LZ LIZ access road, begun during the last report period, was completed on 7 March. The project included placing, grading, and compaction 13,456 cubic yards of interrite 2011 table yard 1 base rock, and 1220 tons asphalt in the 2.4 kilometer's of road.

i. At CHU L.I.: base camp was constructed for the 1st Squadron, 1st Cavalry, among the facilities constructed were 50 STL huts, three 10C command huts, eight latrines, and three showers. Construction began during the last report period and was completed on 15 March.

j. Two observation towers, on 25 foot high and on 70 foot high, were constructed for the 53rd Division Artillery. The towers were prefabricated, airlifted, and emplaced into place on OP-1 and OP-2. Work began on 1 February and was completed on 12 February.

k. The Secondary IOC program began on 12 February with an engineer recon of Routes 5B and 518. The recon party on 5B was ambushed via BS 377775 and suffered 2 KIA, 2 FPIs KIA, but six Viet Cong were killed and 2 prisoners captured. On 21 April work began on Route 533 with an engineer recon. All roads were to be 4 meters wide with 1 meter shoulders, six inch wearing surface of compacted rock and turnouts every 500 meters. At the end of the report period 1,730 cubic yards of interrite had been placed on RT 5B, and 13,467 cubic yards of interrite had been placed on RT 518.

l. On 5 April a work force moved to FL PHUCC to upgrade the existing runway to Type II C-123 specifications. The air field was closed on 19 April and within two days the existing HMA matting had been removed. New elevations and a drainage system were established on the runway, soft spots were removed, and new fill placed and compacted. Work was temporarily suspended on the runway during 20-22 April, 25-26 April, and 28 April so that it could be used for tactical operation.

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a helicopter refueling area and a chinook pad were also constructed.

m. On 15 March work began at LZ HUSTLE to construct 6500 linear feet of chain link security fence around an ammunition supply point. Actual work included placing steel pipe in concrete at 10 foot intervals, stringing chain link fence, welding angle iron to the pipe and stringing three strands of barbed wire on the angle iron.

n. A helipad renovation project began on 30 March for the Americal Division at CUU L.I. The scope of the work required included the removal of approximately 66,000 square feet of MBZ matting which had been badly damaged, reshaping and reconstructing the landing area, spraying the landing area with MG-250, and relaying MBZ matting for a new landing pad.

o. A continuous effort during the entire report period was devoted to placing the stabilization plant into operation. A 300m water distribution system was constructed with a 5000 gallon tank placed on a tower to feed the plant. The plant was placed into operation on 3 April after being delayed for a considerable period due to a damaged circuit breaker. However, on 6 April the plant was declassified again with a torn feeder belt after being in operation for only 2 days. The cement product is to be used on the secondary LCO's.

p. The 75 TPH primary rock crushe was placed into operation on 24 March. The crusher was declassified for eight days while a Pitman bearing was being replaced. Despite this the crusher produced over 7000 cubic yards during the report period.

4. (c) Activities of Headquarters Company:

Throughout the report period, Headquarters Company, 39th Engineer Battalion was located at CUU L.I (BT 52432). Headquarters Company continued its mission of supporting the line companies with heavy equipment, accomplishing engineer support tasks for the Americal Division within the CUU L.I Base area, and land clearing for III Marine Amphibious Force and XV Corps. Headquarters Company supported Company B for messing throughout the report period.

Throughout the period, the Heavy Equipment Platoon was employed assisting the line companies as needed. A 20 ton rough terrain crane was placed O.P.110 to Company B for driving piles, placing bents, and laying strainers for the TIA C393 Bridge (BS 920101). A sheepfoot roller and 13 wheel rubber-tired roller were attached to Company C for the construction of Route 518 and Route 58 respectively. When available, Company A used a crane from the Heavy Equipment Platoon for moving prefabricated concrete slabs within the pre-fabrication yard and to the SONG 20 Kilometer Bridge site (BS 691646). The crane was also used to place steel stringers on the SON1 20 Kilometer Bridge. The Heavy Equipment Platoon supported other units within the Americal Division with bulldozers, front loaders, and low bed trailers throughout the report period.

At the beginning of the report period the Land Clearing Platoon was clearing the DR. HANG Rocket Belt south of the city of DR. HANG (BT 105505).
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During this operation a total of 2122 acres were cleared during this report period. After a fifteen day maintenance stand down from 3 – 18 March the platoon moved by road and began clearing an area east of LZ BILLY (BT 132453). At the end of this report period over 3500 acres had been cleared during this operation. The platoon found and destroyed 92 artillery rounds, mortar rounds, and mines, and captured 5 individual weapons. The platoon destroyed 514 bunkers and 1766 feet of trenches and tunnels. The platoon was credited with killing 4 NVA.

Headquarters Company continued working on improving Battalion defenses at CHU L.I. The bunker line was strengthened and reinforced and individual foxholes were installed. Under the self-help program all buildings at Battalion Headquarters were painted and the mess hall was extended.

4. (C) Activities of Company A:

At the beginning of the report period, Company A Headquarters, First, and Second Platoons were located at CHU L.I. (BT 534036). The Third Platoon was located at LZ SNOOPY (BS 700607). Assigned missions included reconstruction of the SONG CO. Bridge (BS 69646), installation of a water system for the stabilization plant located at CHU L.I., mine-sweep of QL-1 from LZ SNOOPY to the bridge at (BS 659700), and support of the 5th Engineer Company (PB) with dump trucks and security for the road and asphalt haul. Projects initiated during the report period were the construction of an 32'x60' TOC bunker for the 1st Squadron, 1st Cavalry in CHU L.I., completion of the SONG VE Bridge (BS 696635), and mine-sweep of QL-1 from CHU L.I. to LZ DOTIE (BS 629056).

Reconstruction of the SONG CO. Bridge consisted of the prefabrication of 29 reinforced concrete slabs for the required 110 feet of decking, removal of 140 feet of temporary Bailey Bridge, construction of reinforced concrete abutment, removal of the two damaged spans of reinforced concrete T beam construction, placement of 12 steel stringers and the prefabricated concrete deck, and repair of the southern span that had been damaged by an artillery round. The First Platoon with one squad from the Second Platoon had the mission of constructing the reinforced concrete deck slabs at CHU L.I. Six slabs were placed during the previous report period and the remaining twenty-three were completed by 5 March. The Third Platoon started on site work on 1 February by clearing a minefield and preparing approaches for a float bridge bypass. A 255 foot M476 float bridge bypass was then constructed by the 26th Engineer Battalion, 1st Cavalry Division. Once the float bridge was constructed, the Bailey Bridge was removed and work began to remove the damaged spans. Removal of the damaged spans proceeded rapidly, but with care so that the existing pier would not be damaged. Using a combination of interval charges, cut off charges, cutting torches, and air hammers, the damaged spans were removed by 25 February. At the same time, the damaged southern span was being repaired. Concrete for this damaged span was placed on 9 March. The footing for the reinforced concrete abutment was placed on 16 March over the four existing piles. On 23 March concrete for the remaining sections of the abutment was
wingwalls were placed. In the meantime masonry plates were placed on the existing two spans and then on the abutment. Stringers were placed on the first span on 6, 7, and 8 April and on the second span on 16 and 17 April. Previously prepared diaphragms were welded between the stringers and the concrete decks were all placed and welded by 26 April. On 30 April the last head rolls had been installed and the bridge was complete.

On 2 February the Second Platoon began installing a water system for the stabilization plant located at CIU L.I. The mission included installing one 36" culvert, 1800 ft of 6" pipe and construction of a timber tower to hold a 5000 gallon tank body. The project was completed on 2 March.

The Second Platoon began construction of a 32'x60' TOC bunker for the 1st Squadron, 1st Armored Cavalry Regiment at CIU L.I on 10 February. The bunker was a standard TOC design bunker with a concrete floor, modified to make the ceiling one foot higher. The bunker was completed on 12 March.

On 7 March work began on the SONG Va Bridge, a 600 foot reinforced concrete bridge which had been started by the Vietnamese Ministry of Public Works in 1965. The existing bridge consisted of two 60 foot reinforced concrete T beam spans, four completed piers with caps, on piers without cap, and three piers requiring extension of the piers, reinforcing bars, and concrete. Work to be done includes completing the four unfinished piers, constructing a 180 foot causeway leading to the south abutment, constructing the south abutment, proceed with 640 feet of reinfornced concrete deck, fabricating 48 steel stringers, and placing the superstructure. The estimated time of completion of this project is 31 October 1970. On 7 March, the Second Platoon supported by the Third Platoon, First Platoon started precasting the slabs for the deck in CIU L.I. By the end of the report period 41 of the 106 required slabs were placed. On 16 March the Second Platoon relocated to LZ SNOOPY and began work on site. By 30 April the river had been rechannelized under the two existing spans, an access road to all piers requiring work had been constructed, and all piling had been completed on two piers. Masonry plates had been placed on the existing caps and the first stringers had been welded.

On 3 April Company A assumed responsibility of CIU L.I to LZ DORIL from Company D.

Company 4 provided dump trucks under the operational control of the 51st Engineer Company (PB) for rock and asphalt haul from CIU L.I to various work sites throughout the report period. Security and control for asphalt haul was also provided by vehicle mounted patrols.

Enemy activity was extremely light during the report period. At 0600 hours on 15 April LZ SNOOPY was hit with ten 60mm mortar rounds. Company A received no casualties or damage.
During the report period, Company A constructed 23 concrete slabs for the SONG CO H. Bridge; outside to outside curb dimension - 29.42; roadway width, 24.67; slab length, 5.01 and slab thickness - 0.71. 41 concrete slabs for the SONG VE Bridge; outside to outside curb dimension 31.45; roadway width 24.67; slab length, 5.01 and slab thickness - 0.71 and spliced 12 on - 36" x 150 steel stringers. A water system for the stabilization plant, a 32' x 60' 10C bunker and a living bunker at LZ Snoopy were also constructed. Company A conducted mine sweeps on 30 km of QL-1 daily, as well as job site and road pit mine sweeps.

6. (C) Activities of Company B

at the start of the report period, Company B, was located at LZ DOTTLE (BS 627856) with the mission to maintain and upgrade the bridges, drainage structures, and roadway of QL-1 from Bien Hoa (BS 601922) to the north bank of the SONG VE River (BS 694636), approximately 28 kilometers. Second Platoon, Company B, was located at LZ NORTH ENGLISH with the mission to construct a 660 foot causeway and a 120 foot bridge at TaN UHL (BS 921041). In addition, Company B conducted a daily mine sweep of QL-1 between LZ DOTTLE and QUANG NGU (BS 624747).

Projects under construction at the start of the report period were as follows: asphalt and rock haul from QU L.I. (BS 534036) to the landing area via DUC PHO (BS 807378), construction of a 6 span, 120 foot timber pile bent bridge and 660 foot causeway at TaN UHL, the construction of two observation towers for the 1st Battalion Division, and the construction of a two way, class 60 tim or pile bridge at QL-1.

Company B trucks hauled 980 tons of asphalt and 940 cubic yards of base rock in support of the battalion's paving operations and QL-1 upgrades via DUC PHO. Company B trucks only hauled on days when maximum effort was required to complete large un-paved portions of QL-1. The majority of Company B trucks remained at LZ DOTTLE and LZ NORTH ENGLISH to support company operations.

The construction of the 6 span, 120 foot timber pile bent bridge and 660 foot causeway at TaN UHL, which started during the last report period, was completed on 19 February 1970. On 20 February 1970, a Viet Cong force drove off the Popular Forces securing the bridge and burned the bridge to water level. At same time, the burned piles were capped at water level and a timber truss bridge was built on top of the existing capped piles. The second bridge was started on 25 February 1970 and completed on 26 March 1970. Six thousand one hundred and eighty five cubic yards of blast rock and base rock were required to complete the 660 foot causeway.

Two observation towers were constructed for the 1st Battalion Division. Construction of one 25 foot tower began on 1 February 1970 and ended on 17 February 1970 when the tower was airlifted by QL-4 to OP-1 (BS 717 778). The second tower, a 20 foot tower, was constructed and airlifted by QL-4 to OP-3 (BS 766386) on 23 February 1970.
On 6 February 1970, work began to construct one 32'x80' TDC bunker for the 1/6 (HQ) Battalion at LZ DOTTIE. In addition, three living bunkers (one 32'x80' and two 14'x24') and one 8'x8' shower were completed. All work was completed on 26 March 1970.

On 10 February 1970, work began on the upgraded construction of Route 58 from QL-1 (BS 637758) to LZ Thanh (BS 393704), approximate distance 68 kilometers. The road is to be an all-weather, 15-foot road, with turnouts every 500 meters. To date, 542 linear feet of culvert have been installed at 11 different culvert sites to complete all drainage structures from (BS 637758) to (BS 393704). Nineteen thousand three hundred and thirty cubic yards of material have been hauled, graded, and compacted from (BS 637758) to (BS 393704) to prepare the road for base course. Eight turnouts have been constructed.

On 31 March 1970, the Second Platoon redeployed from LZ NORTHウキャを to LZ DOTTIE. On the same day, work began on rebuilding a 200'x80' bunker at Cu Lai. The project required the removal of the existing building, reexcavation of the embankment, and replacing the old metal with new high-strength material. At present, the project is 46% complete.

Company B received the mission to replace all of the timber headwalls at multiple culvert sites along QL-1 between (BS 690004) and (BS 780423). The old timber headwalls are to be replaced with concrete headwalls. Work began on 6 April 1970 and to date is 5% complete.

On 12 April 1970, the Third Platoon arrived at LZ DOTTIE (BS 763427) to provide additional security for the closeout of the LZ and to work on concrete headwalls at portions of QL-1. LZ LAX was closed out and the Third Platoon returned to LZ DOTTIE on 18 April 1970.

At LZ DOTTIE, two new living/lighting bunkers were constructed, in addition to the normal fuel and welding shop, and constructed in a motor pool, all work was completed by 25 April 1970.

In addition to these assigned projects, Company B completed 160 man hours repairing other units in their area of operations. This included work in QL-1 (BS 690004) for the 1/6th (HQ), the clearing of a road; clearing debris; the unit housing development at 50% (BS 664792), and the construction of a new market place along Route 58 (BS 690759).

Enemy activity within the report period was moderate. There were 2 minor and no major sniper incidents. One small altercation at LZ DOTTIE, a door was burned. This is an
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serious incidents were the ambush on Route 5B and the burning of the
T-shirt U.S. bridge. On 12 February 1970, a recon team was ambushed on
Route 5B approximately 11 kilometers west of CL-1. The ambush resulted
in two friendly KIA's. Two infantry companies were combat assaulted
into the area and the end result was 6 enemy KIA and 2 enemy WIA. On
20 February 1970, the T-shirt U.S. Bridge was burned to water level. The
result was a platoon effort for 29 days to replace the destroyed bridge.

During the report period, Company B assembled and installed 552
linear feet of culvert, hauled 980 tons of asphalt, 18,730 cubic yards
of limestone and 7,125 cubic yards of rock. Company B constructed two
timber pile bridges, one TOC bunker, 5 living bunkers, two observation
towers, and built 4 kilometers of road.

7. (C) Activities of Company C:

at the beginning of the report period; Company C was located at LZ
M.A. (BS 763472). Projects in progress included minesweeps in the AOR;
Route Maintenance and Repair on CL-1 from the SONG VE River, (BS 655653)
to DUC PHO, (BS 807368); construction of culverts on the LZ L7 access
road from (BS 776494) to BS 755361; construction of a bunker at LZ
DR.GOL (BS 725538) for the 4th Regimental Advisory Team; Essential Facili-
ties at Engineer Base Camps; security for 137th Engineer Company
(LE) work parties on QL-1; civic actions in the AOR; and preparation for
the close out of LZ M.A.

During the report period construction of a ammo Supply Point security
fence at LZ BaODO (BS 815983); the upgrade of Route KL-418 from
(BS 645726) to (BS 544740); the construction of concrete hardwells on
QH-1; the preparation of pot holes for paving on QL-1; the repair of the
hospital roof at LZ BaODO; and Engineer Support to units in the AOR
were initiated.

Company C was responsible for minesweep operations on QL-1 from the
SONG VE River to the I/II Corps Border (BS 908149) a total of 55 kilo-
meters. On 1 March 1970, the 26th Engineer Battalion, 26th Division
assumed the minesweep from DUC PHO to I/II Corps Border and on 21
February 1970, Company C assumed the minesweep from LZ SHOOTY (BS 700607)
to the SONG VE River.

Construction of a 36 foot by 48 foot bunker was started during the
first report period at LZ DR.GOL for the 4th CV 4th Regimental Advisory
Team. Materials were furnished by the user and the bunker was completed
on 1 March 1970.

Company C was given the mission of extending the previously instal-
lled culverts on the LZ L7 access road and installing one 48 inch culvert.
This work was started on 14 February 1970 and was completed on 20 Feb-
uary 1970. Assistance in hauling asphalt from CIU LI (BS 534036) to
the road for paving was also provided. The paving was completed on 7
March 1970.

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two bunkers and a generator shed, started the repair of hospital roof, moved to CHU L.I., and renovated the new command area. Potholes on CL-1 were prepared for paving and one concrete culvert headwall was constructed.

8. (CL) Activities of Company D:

Throughout the report period Company D was located at CHU L.I. (RF 534037). The assigned missions of the company at the start of the period included daily mineworks of CL-1 from CHU L.I. to L. DOTTE (RF 067-965), continuation of rock and asphalt hauls for the upgrading and paving of QM-1, construction of a headwall and other facilities for the Battalion rock-crusher operations, bunker construction at LZ CENT (RF 067-253) and LZ WEST (RF 990290), and operation of the Battalion Stabilization Plant. During the report period Company D was tasked to construct additional bunkers and 155mm gun pads at LZ WEST, construct bunkers at FST HILL EAST (RF 227320), move 25 5E. Huts into the company area, construct bunkers at LZ WEST (RF 426089), rehabilitate the TWIN PHUOC airfield (RF 127140), and upgrade Route 533 from BM KY (RF 318221) to TWIN PHUOC as part of the secondary LOC program.

From the start of the report period until 15 March, Company D continued to construct a permanent base camp for the 1st Squadron, 1st Armored Cavalry Regiment at CHU L.I. During this period twenty-three 5E. Huts, two 180 mm miss. halls, eight 4 hole latrines, and three 6 head showers were constructed. A total of 9617 man hours were expended on the project.

Work was completed at the Battalion rock-crusher site on 22 February. A fifteen foot headwall was built, a 340 motor, 5 strand cable, a new roof was placed around the project site, and a 100 Kw generator was strung and shed were constructed. A total of 1090 barrels of pureprim and 72 wide flange steel stringers had to be moved from the site.

From the start of the report period until 2 April, Company D conducted a visual mineworks of CL-1 from CHU L.I. to LZ WEST before initial rock or asphalt haul. The company also continued to haul rock and asphalt for CL-1 upgrading and paving. During the period, Company D hauled 4423 cubic yards of rock and 610 tons of asphalt. Until 2 April Company D provided security and control vehicles OPCOM to the 21st Engineer Company (PF) for rock and asphalt convey.

From the beginning of the report period until 16 February Company D constructed living bunkers for the 3rd Battalion, 21st Infantry at LZ CENT and for the 4th Battalion, 31st Infantry at LZ WEST. Nine 8'x12' bunkers were constructed at LZ CENT and eight existing bunkers were rehabilitated. At LZ WEST five 8'x12' bunkers were constructed and twelve 6'x6' bunkers were repaired.

Throughout the report period Company D assisted civilian technicians from Martin Bulldog Engineers in preparing the stabilization plant for operation at CHU L.I., a generator shed was constructed and numerous calibrations were made. Initial test strips were begun on 3 April.

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However, on 6 April, Sector HILL was torn down and the plant was moved to an
inoperable. On 28 April the plant was once again placed in a operating
and test strips were placed in the battalion area.

On 19 February the First Platoon moved to LZ "ST" and began con-
struction of bunkers and runways for the 3rd Battalion 16th Artillery.
The scope of the project included constructing one 12'x24', one 26'x24',
and three 10'x20' powder and projectile bunkers, and three timber gun pads for 155mm howitzers. Since LZ "ST" is accessible only by helicopter, bad weather and non-availability of
helicopter sorties because of higher priority requirements caused the
project to be delayed a number of times for lack of materials. Never-
theless, by 13 April the project was completed and the platoon returned
to CHU L.I.

On 20 February Company D received the mission to construct two 18'x20'
living bunkers with concrete floors and one 60' long connecting pass-ag-
dy with an overhead covering at PSW H.M. HILL for the 470th, 5th Rec-
imental Advisory Team. Although all concrete mixing and excavation of
approximately 20 cu yd of earth had to be done by hand, the project was com-
pleted by one squad on 8 March.

On 9 March, Second Platoon, D Company moved to PSW H.M. HILL to con-
struct two 12'x24' living bunkers, seven 26'x36' living bunkers, and six
10'x20' powder and projectile bunkers for the 3rd Battalion, 16th Arti-
illery. The entire project was completed by 14 April.

After living in GF medium tents for six months Company D was tasked
to salvage and relocate 25 SE. Huts from the 9th Engineer Battalion (FEM)
entrenchment area at CHU L.I to the company area. A total of 20 SE. Huts
were moved intact by using cranes and low boy. Five others were disas-
ssembled and moved on 5 ton dump trucks. The relocation of SE. Huts began
on 14 March and continued until 8 April.

Upon completion of bunker construction at H.M. HILL, the Second Platoon
relocated directly to LZ JOHIE (BT 295231) with the mission of upgrad-
ing Rt 533 to single lane all weather standards. From 14-27 April the
platoon upgraded the existing facilities and required the perimeter wire
and lights. On 28 April work began on Rt 533.

On 5 April Third Platoon, Company D moved by convoy to TIN PHUC
with the mission of upgrading and rehabilitating the existing runway in
conjunction with the 137th Engineer Company (LE) to Type II C-193 standards.
From 5-15 April a base camp was established, additional equipment was moved to TIN PHUC, and plans were finalized on site. On 15 April
the runway was closed and within two days Company D removed all existing
72'1 netting which had been placed on the first 400 feet of each end of
the runway. While the 137th Engineer Company upgraded the airfield
and accomplished the necessary earth work, Company D removed the netting
from the parking area, preassembled culverts, and constructed fortifi-
cations at the base camp. Work was held up on three occasions as con-
voy continued to maintain contact to the airfield and the airfield was.
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used as a stringer area for combat operations. When the earth work is
completed, Company D will place HD41 matting over the entire airfield.

On 17 April Company D began construction of six 21' x 30' living
bunkers and one 155mm gun pad for the 3rd Battalion, 15th Artillery at
LZ F.T. CITY (BT 426089). By the end of the report period two bunkers
had been completed.

Early activity was light during the report period. One BM was cut
by flying glass when the windshield of the 5 ton dump truck he was
driving was struck by a sniper round on CL-1 (BS 629830). On 10 April
a 25 ton lowboy trailer carrying a front loader on its 333 3/4 foot
TH Rock Crusher struck an estimated LO-50 pound mine. The lowboy
and front loader were both slightly damaged.

During the report period Company D constructed an area consisting
of 25 SE. Huts, 2 mess halls, showers, and latrines, constructed 51
bunkers of various sizes and three gun pads, replaced 25 SE. Huts for
the company tally including 143 cubic yards of fresh Lt
of a CL-1 upgrading and paving, and began work to upgrade an airfield and
secondary LOC.

9. (C) Activities of the 137th Engineer Company (Light Equipment)

From 1 February until 18 April the 137th Engineer Company (Light
Equipment) was located at LZ L.I. (BS 765172). On 16 April the company
moved to DUC L.I. (BT 531105) when LZ L.I. was transferred to the Governor
of Vietnam. The Quartermaster Section of the Support Platoon was located at
DUC L.I. throughout the report period with the mission of operating the
quarry for the 39th Engineer Battalion and operating the 55 TPH Rock
Crusher. At the beginning of the report period the primary
mission of the company was the continued upgrading and paving of CL-1
from H0 DUC (BS 760525) to DUC PHO (BS 807378). Later in the report
period this mission was expanded to include repair of CL-1 between DUC
PHO and the vicinity of LZ DEBB (BS 802305). The company was also
assigned the upgrading and paving of the LZ LIZ access road, BS 775436
to BS 776449, routine maintenance and repair of CL-1 on an as required
basis, and grading of banks of CL-1 from BS 725556 to BS 805386. During
the report period the 137th Engineer Company supported Company B,
Company G, and Company D with Engineer equipment for the secondary LOC
program. In early April the company was tasked to rehabilitate and up
grade the TISN PHUOC airfield (BT 120140) to Type II, C-123 standards.

The primary mission of the 137th Engineer Company (LZ) was the up
grading and paving of CL-1 from H0 DUC to DUC PHO to CENCOI Class III
Standards. At the beginning of the report period all base course had
been placed, graded, and compacted and only 2.74 lane kilometers remain
ed to be paved of the 32.0 lane kilometers between H0 DUC and DUC PHO.
Two thousand one hundred and ninety tons of asphalt were placed between
1-4 February to complete the paving. Base rock was then placed and
graded on the shoulders, and the shoulders were penciped and stabi
lized. On 21 February this section of CL-1 was formally transferred to

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the Government of Vietnam and on 8 March the road was officially opened and dedicated in a joint Vietnamese-American ceremony.

Work began to repair LZ-1 south of DUC PHO, about 5.5 km south of the road. Progress was continually slowed because of heavy rains and the use of break-downs in the Navy asphalt plant and the paving equipment in use was transferred to another unit. Delays were encountered in obtaining other paving equipment. The repair was completed on 17 April. Over 5000 cubic yards of base rock were placed, graded, and compacted and L420 tons of asphalt were placed.

The upgrading and paving of the 2.4 kilometer single-lane LZ-LIZ access road initiated during the last report period was completed on 7 March. During this period 21,000 cubic yards of base rock were placed, graded, and compacted. Twelve hundred and twenty tons of asphalt were placed in two days to pave the road. The road was paved because of frequent enemy mine incidents. Since completion of the paving on 7 March no personnel or equipment have been lost on this road because of mines.

On 8 March the primary 75 TPH rock crusher arrived at LZ-LIZ and repairs were started immediately to place the crusher into operation. On 24 March the first 2 inch minus base rock was crushed. By the end of the report period over 7000 cubic yards of base rock had been produced. This rock will be used to provide a wearing surface for the secondary LOC's. The crusher was downlined for eight days while the Pitman bearing was replaced.

A total of 13,900 barrels of soil binder was used to stabilize the shoulders of LZ-1 between NO DUC and DUC PHO. The project was terminated on 22 April because of the non-availability of a hydrasulder to dispense the binder as need.

Throughout the report period the 137th Engineer Company supported the 137th Engineer Battalion with engine room equipment for the secondary LOC program. Support was provided in the form of augmented haul capability, compaction equipment, and road graders.

The upgrade of the TISI PHUOC airfield was initiated during the report period. On 5 April the First Platoon moved to TISI PHUOC to upgrade the existing airfield to Type II, C-123 specifications. The airfield was chosen on 15 April and after Company D removed the existing Macpaving, the 137th Engineer Company began reshaping, grading, and compaction of the runway. Numerous delays were encountered as the 137th Engineer Company used the runway as an unloading area and as a staging area for 3 different tactical operations. A helicopter refueling pad was constructed for each operation.

Activity was light during the report period. On 10 February a bulldozer struck a mine while working on the LZ LIZ access road and was destroyed. The 137th Engineer Company received several light mortar attacks at LZ-1 LIZ in early April but no casualties or damage were sustained.
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During the reporting period the 137th Engineer Company (LE) completed paving the portion of CL-1 in I Corps for which the 10th Engineer Brigade was responsible. Completed the upgrading of the L2 LIZ access road, began upgrading the TIN PHOC infield, erected a rock-crusher at CHU L.I., and provided equipment support for the construction of three secondary roads. A total of 15,850 cubic yards of base rock were placed and compacted, 9,440 tons of asphalt were placed, 7,000 cubic yards of base rock was crushed, and 7,850 tons of asphaltic materials were sprayed.

10. Activities of the 511th Engineer Company (Panel Bridge):

Throughout the report period the 511th Engineer Company (Panel Bridge) was located at CHU L.I. (BS 534036) with the mission of supporting the 39th Engineer Battalion. During this period the 511th Engineer Company (Panel Bridge) continued its mission of organizing and supervising rock and asphalt hauling from CHU-301 in CHU L.I. to the work sites on CL-1 between NO DUC (BS 740525) and DUC PHO (BS 807778) and in other locations. The company provided organizational maintenance support to all OPCON vehicles and provided security and control vehicles for asphalt and rock conveyors.

On 26 March the Second Platoon was placed OPCON to Company B at THI-301 (BS 920101) to haul base rock and base rock for the construction of the casernary. Approximately 1500 cubic yards of rock were hauled from the abandoned casernary and casernary site at L2 HIBOY (BS 913145). The mission was complete and the platoon returned to CHU L.I. on 31 March.

From 2 to 10 April and from 20 to 25 April the 511th Engineer Company assisted Company B in hauling litarite for the upgrade of RT-55. From five to ten trucks hauled each day. A total of 4,500 cubic yards of litarite were hauled by trucks of the 511th Engineer Company.

From 1 February until 17 April, 6000 cubic yards of base rock and approximately 8000 tons of asphalt were hauled to complete the paving of CL-1 from NO DUC to DUC PHO and the repair of CL-1 from DUC PHO to L2 DEBIDE (BS 882305). Approximately 1500 tons of asphalt were hauled on 6-7 March to pave the L2 LIZ access road after 3000 cubic yards of base rock had been hauled.

On 15 February the 511th Engineer Company was tasked to haul 140 foot of double single Bailey Bridge from the 300th C.R. Bridge (BS 816 6) to CHU L.I. On 26 April the company provided 80 foot of double single Bailey Bridge and technical advice and assistance to Company C as Company C constructed the bridge for training.

'However the 511th Engineer Company hauling capability was not fully required by the 39th Engineer Battalion, the Company hauled base rock to the vicinity of FSB HAWK HILL (BS 227320) for the upgrade of CL-1 north in support of US Naval Mobile Construction Battalion Seven. On the return trip to CHU L.I. and was hauled to the CHU-301 industrial complex for use in producing ready mix concrete and asphalt. Sand was also hauled to the stabilization plant in the battalion area by CHU L.I.
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No casualties or damage to equipment were sustained by the 511th Engineer Company during this report period from enemy-initiated action.

In accomplishing its primary mission of rock and asphalt haul, 6 vehicles of the 511th Engineer Company (PB) drove over 102,000 miles and hauled 23,738 cubic yards of b-s rock, 1,560 tons of sand, 4,370 cubic yards of sand, 4,500 cubic yards of laterite, and 1,498 cubic yards of blast rock.

B. (C) INTELLIGENCE

1. (C) RECONNAISSANCE:

Helicopter and ground reconnaissance missions were conducted as needed to check for enemy damage on LOC's, to evaluate possible sources of enemy construction materials. During the period, six aerial reconnaissance and fourteen ground reconnaissance missions were made. Included in the ground reconnaissance were one quarterly un-dated and three monthly un-dated of LOC's, four bridge reconnaissances, and two route reconnaissances of secondary LOC's, Route HL-518 and Route HL-518. Reconnaissance initiated last quarter were completed.

2. (C) ENEMY ACTIVITY:

Except for the high point of enemy activity experienced throughout the 4th during the first three days of February, the months of February and March were characterized by light enemy contact. Enemy activity was mainly directed against Government of Vietnam Pacification programs and installations, and Vietnamese army units. These activities were conducted chiefly by Local Force Units and Guerrillas. Activity directed against the Heng rive effort was characterized by sniper fire against daily mine sweeps and vehicles involved in LOC operations. There were few mine/booby trap incidents reported; however, there were seven attacks for fire against LZ Max. These attacks were generally mortar fire and never more than four rounds. During the 1st week of March, the La Gomeral Planned was deployed to BT 1966 an area occupied by 3 VC Batallions and 2 VC Companies. After the unit received 60 and 120 rocket fire accompanied by automatic weapon fire, the project was stopped for 3 days while security forces cleared the area. An R/W minefield Batallion and Ranger Batallion were moved to the area so the work could continue.

The end of March witnessed an increase in enemy activity to a high point on the night of 31 March - 1 April. The activity was conducted throughout the Batallion area by Local Force and Guerrilla units supported by Main Force Heavy A-10s and Spiders. This period was characterized by attacks by fire on installed LZ's and installations, and CON Pacification efforts. The number of sniping incidents against the Engineers along LOC's increased and on 1 April LZ Max was again mortared. After this high peak (which is designated as the initial effort of the IV/VC Spring/Summer Campaign) enemy activity declined to a very light level.

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level. Activities directed against engineer effort occurred dis- proportionately, however, sniping incidents remained the main enemy activity affecting this battalion. Since 1 February 1970, 43 percent of the total sniping incidents recorded (see Chart 1) in the Engineer Divisions were directed against the 39th Engineer Battalion (Combat) and attached companies.

a. Min.s: During the reporting period 15 mines were encountered in the Battalion. Most of the mines ranged in size from 4 pounds to 40 pounds, with bamboo type firing devices, electrical blasting caps and batteries. A total of four mines were detonated resulting in 6 US WIA, 0 US KIA, and 0 WV casualties during the period. The following is a break down of mines detected versus mines detonated. It is important to note that 8 of the 11 mines detonated were detonated by the Land Clearing Platoon where no effort is expended in locating mines before clearing an area.

<table>
<thead>
<tr>
<th>MONTH</th>
<th>DETECTED</th>
<th>DETONATED</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>February</td>
<td>0</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>March</td>
<td>2</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>April</td>
<td>3</td>
<td>4</td>
<td>7</td>
</tr>
</tbody>
</table>

b. Booby Traps: During this period the Battalion encountered 17 booby traps. These booby traps resulted in 7 US WIA and 0 US KIA, and 0 WV casualties. The following is a break down of booby traps by month. It is important to note that all of the detected booby traps were detonated by the Land Clearing Platoon where no effort is expended in locating booby traps before clearing an area.

<table>
<thead>
<tr>
<th>MONTH</th>
<th>DETECTED</th>
<th>DETONATED</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>February</td>
<td>2</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>March</td>
<td>0</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>April</td>
<td>4</td>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>

c. Other initiated activities during the report period were as follow:

<table>
<thead>
<tr>
<th>TYPES</th>
<th>FEBRUARY</th>
<th>MARCH</th>
<th>APRIL</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambushes</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Culverts Blown</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Road Obstacles</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Sniper Attacks</td>
<td>6</td>
<td>16</td>
<td>5</td>
<td>27</td>
</tr>
<tr>
<td>Bridges Blown</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
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3. (U) Weather Data:

<table>
<thead>
<tr>
<th>MONTH</th>
<th>R.F.I.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>February</td>
<td>2.0&quot;</td>
</tr>
<tr>
<td>March</td>
<td>.17&quot;</td>
</tr>
<tr>
<td>April</td>
<td>1.83&quot;</td>
</tr>
<tr>
<td>TOTAL</td>
<td>3.8&quot;</td>
</tr>
</tbody>
</table>

4. (C) CASUALTIES:

During the report period, the battalion suffered the following casualties:

<table>
<thead>
<tr>
<th>COMPANY</th>
<th>KIA</th>
<th>WIA</th>
<th>KNH</th>
<th>WNH</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHC</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Co A</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Co B</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Co C</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Co D</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>137th (LI)</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>51st (PI)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Of the 16 KIA casualties suffered none was serious enough to require evacuation out of Vietnam.

D. (U) OPERATIONS AND TRAINING:

1. (U) Operations:

The Battalion continued to operate on a seven day work week with Sunday afternoon normally used for maintenance, training, Command Information, and when possible, Commander's Time.

a. The combat and operational support missions were conducted in coordination with the Americal Division, providing support in southern I Corps Tactical Zone. Hineswaps and Operational Support missions accounted for approximately 68% of the effort expended by the Battalion during the period.

b. LOC upgrading projects originally assigned by US.C.V as part of the overall M.C.LOC Program were continued. Major sub-projects of the primary LOC Program were completed including the upgrading and covering of QL-1 and the construction of the Son Gia Bridge. Construction of the Song Yo Bridge was initiated. During the period approximately 34% of the Engineer effort of the Battalion was devoted to LOC Programs.
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c. Land clearing missions were coordinated initially through III Marine Amphibious Force and later through XIV Corps. The Provisional Land Clearing Company, composed of personnel and equipment of the 9th PMF Engineer Battalion and the 39th Engineer Battalion, cleared in support of the Americal Division and 1st Marine Division tactical operations. This accounted for approximately 5% of the engineer effort expended.

b. Base construction, Civic action and other projects accounted for the remaining 3% of the engineer effort expended by the Battalion.

2. (U) Training:

Regularly scheduled weekly training was conducted throughout the period. Additionally, the remainder of Consolidation Month Training, in accordance with 18th Engineer Letter, was conducted. Training was also conducted on special mandatory subjects directed by higher headquarters.

3. (U) MOVEMENTS:

1. (U) Company Moves:

a. 18 April 1970 - Company C (-) relocated from LZ M-X (BS 763472) to CHU L.I (BT 534036)

b. 18 April 1970 - 137th Engineer Company (Lz) (-) relocated from LZ M-X (BS 763472) to CHU L.I (BT 534036)

2. (U) Platoon Moves:

a. 17 March 1970 - Land Clearing Platoon (P) relocated from CHU L.I (BT 534036) to new operations area (BT 191420)

b. 26 March 1970 - 2/511th (PB) relocated from CHU L.I (BT 534036) to LZ NORTH ENGLISH (BS 880049)

c. 31 March 1970 - 2/511th (PB) relocated from LZ NORTH ENGLISH (BS 880049) to CHU L.I (BT 534036)

d. 1 April 1970 - 2/8/9 relocated from LZ NORTH ENGLISH (BS 880049) to LZ DOTTIE (BS 627836)

e. 6 April 1970 - 3/2/39 relocated from CHU L.I (BT 534036) to TISI PHUC (BT 115135)

f. 6 April 1970 - 1/137th (Lz) relocated from CHU L.I (BT 534036) to MLN PHUC (BT 115135)

g. 8 April 1970 - 2/4/39 relocated from LZ SNOOPY (BS 700607) to LZ M-X (BS 763472)

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h. 12 April 1970 - 3/3/39 relocated from LZ DOTTL (BS 627856) to LZ H.I.X (BS 763472)

i. 13 April 1970 - 1/4/39 relocated from LZ H.I.X (BS 763472) to LZ SNOOPY (BS 700607)

j. 14 April 1970 - 1/D/39 relocated from LZ "LTB" (BS 990250) to CHU L.I (BT 534036)

k. 18 April 1970 - 3/B/39 relocated from LZ H.I.X (BS 763472) to LZ DOTTL (BS 627856)

l. 18 April 1970 - 2/0/39 relocated from LZ H.I.X (BS 763472) to LZ BRONCO (BS 807378)

m. 18 April 1970 - 2/137th (LE) relocated from LZ H.I.X (BS 763472) to LZ BRONCO (BS 807378)

3. (U) Sound Movements:

a. 1 February 1970 - 1/3/4/39 relocated from CHU L.I (BT 534036) to LZ SNOOPY (BS 700607)

b. 14 February 1970 - 1/3/D/39 relocated from LZ ENTER (BT 527839) to CHU L.I (BT 534036)

c. 17 February 1970 - 3/3/D/39 relocated from LZ "LTB" (BS 990250) to CHU L.I (BT 534036)

d. 19 February 1970 - 1/23/1/D/39 relocated from CHU L.I (BT 534036) to LZ H.I.X (BS 763472)

e. 19 February 1970 - 2/1/D/39 relocated from CHU L.I (BT 534036) to LZ H.I.X (BT 227320)

f. 9 March 1970 - 2/1/D/39 relocated from LZ H.I.X (BS 763472) to CHU L.I (BT 534036)

g. 9 March 1970 - 2/63/2/D/39 relocated from CHU L.I (BT 534036) to LZ H.I.X (BT 227320)

h. 17 March 1970 - 3/3/D/39 relocated from LZ H.I.X (BS 763472) to CHU L.I (BT 534036)

i. 6 April 1970 - 1/63/1/D/39 relocated from CHU L.I (BT 534036) to LZ SNOOPY (BS 700607)

j. 10 April 1970 - 1/2/D/39 relocated from CHU L.I (BT 534036) to T.M.KY (BT 325215)

k. 12 April 1970 - 2/3/2/D/39 relocated from LZ H.I.X (BS 227320) to T.M.KY (BT 325215)

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1. 25 April 1970 - 1/3/137th (L) relocated from CHU L.I. (BT 534036) to Nhi Ki (BT 525215).

F. (C) SUPPLY:

1. (U) General:

All companies continued to receive Class II and IV support from CHU L.I. (BT 534036). All companies, with the exception of C Company and 137th Engineer Company (L), received Class I, III, and V from CHU L.I. while C Company and 137th Engineer Company (L) received Class I, III, and V support out of LZ AMVCO (BS 815383), until the evacuation of LZ LX at which time support was received from CHU L.I.

2. (U) Logistics Support:

Logistics support was provided by the following organizations:

a. 23rd Supply and Transportation Battalion, located at CHU L.I., organic to 90th Division.

b. 596th Light Maintenance Company, organic to 90th General Support Group.

c. 661st Ordnance Company (Arm), located in CHU L.I. and LZ "A" CO, organic to 528th Ordnance Battalion, D. N. J. G. (BT 0275).

3. (C) Equipment Status:

The transfer of equipment to the 595th ARVN Engineer Company, combat losses and the retrograde of equipment has considerably changed the equipment status during the reporting period. The following items are now critically short:

<table>
<thead>
<tr>
<th>HOMENCLATURE</th>
<th>A/M#</th>
<th>C/1#</th>
<th>SHORTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semi-trailer, 25 ton</td>
<td>23</td>
<td>14</td>
<td>9</td>
</tr>
<tr>
<td>Truck, Dumper, 5 ton</td>
<td>100</td>
<td>90</td>
<td>10</td>
</tr>
<tr>
<td>Crane, 20 ton</td>
<td>6</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Grader, Road, Motorized</td>
<td>13</td>
<td>8</td>
<td>5</td>
</tr>
</tbody>
</table>

4. (C) Combat Losses:

Combat losses during the report were as follows:

<table>
<thead>
<tr>
<th>FSN</th>
<th>HOMENCLATURE</th>
<th>USA#</th>
<th>C/1#</th>
<th>D/TE</th>
</tr>
</thead>
<tbody>
<tr>
<td>230-317-6448</td>
<td>Semi-trailer, Lowbed, 25 ton</td>
<td>5F999</td>
<td>1</td>
<td>1 Feb 70</td>
</tr>
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</table>

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<table>
<thead>
<tr>
<th>FSN</th>
<th>DESCRIPTION</th>
<th>US. #</th>
<th>CYT</th>
<th>DTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1005-073-9421</td>
<td>Rifle, 5.56mm, M-16</td>
<td>577696</td>
<td>1</td>
<td>10 Feb 70</td>
</tr>
<tr>
<td>3805-931-7021</td>
<td>Grader, ind., Motorized</td>
<td>08074767</td>
<td>1</td>
<td>10 Feb 70</td>
</tr>
<tr>
<td>4730-742-9983</td>
<td>Tank, Liquid, Stor. 20</td>
<td>1399</td>
<td>1</td>
<td>17 Mar 70</td>
</tr>
<tr>
<td>2410-782-1130</td>
<td>Tractor, Tracked, D7E</td>
<td>805699</td>
<td>1</td>
<td>15 Mar 70</td>
</tr>
<tr>
<td>2410-782-1130</td>
<td>Tractor, Tracked, D7E</td>
<td>06382066</td>
<td>1</td>
<td>1 Apr 70</td>
</tr>
<tr>
<td>2330-317-6448</td>
<td>Snit trailer, Lowbed, 25 ton</td>
<td>708010</td>
<td>1</td>
<td>10 Apr 70</td>
</tr>
<tr>
<td>3805-051-9359</td>
<td>Loader, Scoop</td>
<td>08498569</td>
<td>1</td>
<td>10 Apr 70</td>
</tr>
<tr>
<td>1005-073-9421</td>
<td>Rifle, 5.56mm, M-16</td>
<td>1064937</td>
<td>1</td>
<td>10 Apr 70</td>
</tr>
</tbody>
</table>

5. (C) NAV Modernization and Improvement Program (Switch Four)

During the reporting period, no transfers of equipment were made under this program.

6. (U) Water Supply:

With the evacuation of LZ H-4X, the water point was moved to the new C Company area located in CHU L-1. Presently the battalion is operating three (3) water purification vans in CHU L-1, one (1) at LZ BET828 (85 627856), and planning to add one more (1) at TM XX (RT 325215). The present output is 50,000 gallons of water a day.

7. (U) in-DTNIAC:

1. General:

The maintenance program showed increased effectiveness throughout the reporting period. The battalion maintenance section continued to operate as a separate section at CHU L-1 with headquarters company motor pool personnel and equipment incorporated into the section. The average overall deadline rate was 7.61%; the average CCR deadline rate was 8.51%.

The TOE fill of maintenance personnel has decreased to a low of 70% from a high of 96% at the beginning of the period.

Repair parts for the 20 Ton (RT) Cranes and Motorized Road Graders are still running a critical shortage. Additionally, repair parts for Steel Wheeled rollers and Rock Crushers are in critically short supply. All of the above and items are critical due to the effort in LOC's scheduled for this Battalion.
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2. (U) Support:

The 396th Maintenance Company (U) located at CHU L.I provided direct support maintenance to the battalion through the reporting period. The battalion was provided with special pieces of equipment, bridge construction, and industrial plants, and civilian technical representatives from HECOL, Canton-Belden, and Dynatron Corporations.

A total of 153 items of equipment were job ordered to support maintenance, of which 72 items were returned. Ninety-nine pieces of ordnance equipment and 54 pieces of engineer equipment were job ordered to support maintenance. Of the 81 pieces of equipment job ordered to support maintenance and returned to unit, the average delivery time of each piece of equipment was 5.4 days. Trailers, connectors, cranes, and 5 ton dump trucks have the highest rework attrition rate throughout the report period.

3. (U) Prescribed Load List (PLL) and Repair Parts:

The Zero Balance of repair parts in the battalion rose to 31 percent. This figure is only a slight increase from the 27% Zero Balance of the last report period.

II. (U) MEDICAL:

During the report period there was a marked increase in upper respiratory tract infections, to a total of 92 cases. This was attributed to the change of season from monsoon to summer. The number of skin infections (dermatitis and eczema) rose to 41 cases. During March, 3 cases of malaria and 2 cases of meningitis were experienced and positive preventive measures were taken. There were no fatalities within the battalion during the reporting period. Behavioral and psychiatric disorders did not show a significant trend with 9 cases of psychiatric disorders and 21 cases of behavioral disorders. Most of these cases indicated disorders before entry into the armed forces.

I. (C) CIVIC/CTMA/PSMP/TTP

1. Civic actions:

During this period company H/D/B/C was accompanied by the mine sweepers on daily mine-sweep missions of CL's and secondary LOC's. Local Vietnames were treated and H/D/B/C was coordinated when necessary. The Battalion H/D/B/C's, one of which was conducted on Route 5B, and the other conducted on CHU L.I (BS 757518) were accomplished with the assistance of the 201 ARVN Division, G5 Medical and Armed Forces teams which provided five (5) medics and the necessary security. A total of 529 Vietnamese civilians were treated and/or evacuated during the period, with an expenditure of 1,495 man hours.

Materials and equipment were also provided to assist KLV Civic Action Projects: 30 cubic yards of gravel and 591 cubic yards of...
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Interites were hauled for M.C. and market of an equipment projects, and 10 tons of scrap lumber were donated to M.C. for TRU Village (BS 770466). A crane was furnished to assist the U.N.G. I. Ministry of Public Works erect sugar mill smoke stack near U.N.G. I. A total of 168 equipment hours were expended during the period. Coordination is being effected with the 27th R. N. Division, U.N.G. I., to further the development of U.N.G./American Affiliation Program.

2. (U) Payoffs:

A ground Payoffs was conducted; a campaign on Route 5B, from its junction at QB 4 to BS 619760 to explain G.V. policy and the presence of the American Engineers, road safety and the Voluntary Informant Program.

3. (C) Voluntary Informant Program

<table>
<thead>
<tr>
<th></th>
<th>February</th>
<th>March</th>
<th>April</th>
<th>TOT.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grenades</td>
<td>26</td>
<td>16</td>
<td>98</td>
<td>140</td>
</tr>
<tr>
<td>60mm rounds</td>
<td>55</td>
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<td>245</td>
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<tr>
<td>81mm rounds</td>
<td>38</td>
<td>32</td>
<td>12</td>
<td>82</td>
</tr>
<tr>
<td>4.2 rounds</td>
<td>4</td>
<td>5</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>90mm rounds</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>10.5in rounds</td>
<td>19</td>
<td>52</td>
<td>53</td>
<td>124</td>
</tr>
<tr>
<td>15in rounds</td>
<td>14</td>
<td>6</td>
<td>5</td>
<td>25</td>
</tr>
<tr>
<td>RG-2</td>
<td>6</td>
<td>7</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>Mines</td>
<td>81</td>
<td>3</td>
<td>0</td>
<td>84</td>
</tr>
</tbody>
</table>

Plaster Paid: 66,450$VN 56,750$VN 38,660$VN 161,860$VN

(U) SECTION II. Lessons Learned: Commander's Observations, Evaluations and Recommendations:

... (U) Personnel: None.

B. (U) Operations:

1. (U) Improved Bolster Design

a. Observation: During the placement of concrete, the impact the concrete has on rebar in the form tends to force the rebar down to the bottom of the form.

b. Evaluation: Bolsters, used to support the rebar, are often not sturdy enough, to take the impact of the concrete.

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2. (U) Pile Driving Template:

   a. Observations: Much time is wasted finding the proper alignment and spacing for each pile when driving piles.

   b. Evaluation: By constructing a template with the proper spacing, the efficiency of pile driving operations can be increased.

   c. Recommendation: Construct a template with appropriate pile spacing before driving piles. It will save time in the end. (See enclosure 2)

3. (U) Recapping Partially Destroyed Pile Bents:

   a. Observation: When building timber pile bent bridges, the most time-consuming activity is driving piles. Recently, a timber pile bent bridge was destroyed by fire and a time-saving technique was employed.

   b. Evaluation: The existing burned piles can be capped just below water level or ground level and a timber trestle bridge built on the capped piles.

   c. Recommendation: Cap burned piles below water level or ground level and build a normal timber trestle bridge on the capped piles using the caps as footers. (See enclosure 3)

4. (U) Improved Buffer Design Saves Pile Caps

   a. Observation: Usually, when driving piles, the buffer between the hammer and cap has to be replaced after two or three piles have been driven. If no buffer is used, the cap usually becomes damaged.

   b. Evaluation: By placing two pieces of 3/4" plywood between the hammer and cap, the above problem can be eliminated. The plywood is compressed and will not shatter. Recent tests have proven that this type of buffer will last for more than 30 piles driven to refusal.

   c. Recommendation: Construct pile cap buffers out of 3/4" plywood. (See enclosure 4)

5. (U) Profabricated Cable Cutters:

   a. Observation: When cutting large amounts of cable, cable cutters tend to wear out rapidly and are very difficult to replace.

   b. Evaluation: Valuable time could be saved by profabricating an efficient cable cutter.

   c. Recommendation: That a cable cutter be made by placing an axe
b. (U) Stretching Chain Link Fence:

1. Observation: When installing chain link fence, it is imperative that it be as tight as possible.

2. Evaluation: The fence should be tightened evenly to provide maximum protection. It can be done by hand but is inefficient.

3. Recommendation: That a simple device be constructed using a seven-foot length of 2 inch pipe. Five hooks are welded evenly spaced on one side of the pipe. Two hooks are welded on the opposite side of the pipe. One end of the fence to be stretched is secured to a previously erected section of fence or a fence post at which fence construction starts. The opposite end is attached to the 2" pipe by the five hooks which have been welded on. A skid or light cable is hooked from two hooks on the opposite side of the 2" pipe to the front of the 2 1/4 ton truck and the vehicle is used to stretch the fence. Caution must be taken not to overtighten the fence.

7. (U) Security Fence Construction:

1. Observation: Uniformity is necessary when welding angle iron to the top of fence posts during chain link fence construction.

2. Evaluation: A bracket or form would allow for maximum speed and uniformity.

3. Recommendation: That a two-foot length of 2x4 cut at the desired angle on one end be held next to the vertical post. The angle iron can then rest on the 2x4 and be welded easily. (See Inclosure 5)

8. (U) Salvage of SE. Huts:

1. Observation: Salvage or relocation of SE. Huts involves a considerable expenditure of men and equipment hours.

2. Evaluation: Salvaging or relocating SE. Huts by dismantling the buildings, sorting materials, transporting materials to the new location, and reconstructing the buildings consumes many valuable man-hours and waste of construction materials. Movement of the buildings intact is the desirable solution.

3. Recommendation: The following methods are recommended for moving SE. Huts intact:

   (1) In areas where movement distances are relative short (5-10 miles), a skid is first constructed as shown in Inclosure 6. All
supports were removed except those on the two longitudinal sides. The skid is then pushed under the hut with a dozer blade. If the hut is very low, the building is first raised (4 jacks on each side); if clearance is sufficient to accept the skids, jacks are placed after it is inserted. Remaining supports are removed and the building jacked down until it rests on the skid. A heavy chain is then tied to the skid, attached to the dozer and is ready to be moved. The process is reversed when hut is unloaded in new location. Skids are reusable.

(2) In other areas where the buildings must be transported great or distances the buildings are jacked up and beams or L-beams are laid underneath for support. Crane cables are then attached to the beams or L-beams and the building is lifted onto a low bed and hauled to the new location. The process is reversed for unloading. The building is let down on jacks, leveled, and foundation supports are built underneath.

9. (U) New Bunker Design:

a. Observation: A new living bunker design is recommended for improved perimeter defense.

b. Evaluation: The improved bunker design with adjoining fighting positions allows for quick response in a defensive mission, thus strengthening perimeter defense.

c. Recommendation: The new living bunker design for L2 perimeter defense utilizes a 10'x10'x8' size bunker with the 8' axis parallel to the perimeter line. The front (enemy) side of the living bunker has the doors which exist perpendicular to the perimeter. To either side of the living bunker are fighting positions with a communication trench connecting them and running in front of the bunker. A four foot over hang of bunker roof protects the communication trench. The roof is sloped down hill to facilitate drainage and prevent leakage.

C. (U) Training: None

D. (U) Intelliglence: None

E. (U) Logistics: None

F. (U) Organization: None

Hugh G. Robinson
LTC, CS
Commanding
ZiJ-J (30 Apr 70) 1st Ind
SUBJET: Operational Report of 39th Engineer Battalion (Combat) for Period Ending 30 April 1970, (ACS CSFOR-65) (R1)

DA, HEADQUARTERS, 45TH ENGINEER GROUP (CONSTRUCTION), AM 96308 15 May 1970
RC: Commanding General, 18th Engineer Brigade, AM 963-G, AP 96377

1. This Headquarters has reviewed the Operational Report - Lessons Learned of the 39th Engineer Battalion (Combat) and considers it to be an accurate account of the Battalion's activities during the reporting period.

2. This Headquarters concurs with the observations and recommendations of the Battalion Commander.

WILLIAM K. WRAY
Colonel, CE
Commanding
1. This Headquarters has reviewed the Operational Report - Lessons Learned for the 39th Engineer Battalion (Combat) as indorsed by the 45th Engineer Group (Construction). The report is considered to be an accurate account of the Battalion's activities during the reporting period.

2. This Headquarters concurs with the observations and recommendations of the Battalion and Group Commanders.

H.E. STRADER
Brigadier General, USA
Commanding

CC:
CC, 45th Engr Gp
CC, 39th Engr Bn
TO: Commander in Chief, United States Army Pacific, ATTN: CPOP-DT,
APO 96558

1. This Headquarters has reviewed the Operational Report—Lessons Learned
for the quarterly period ending 30 April 1970 from Headquarters, 39th
Engineer Battalion and concurs with comments of indorsing headquarters.

2. Reference item concerning "Maintenance", page 22, paragraph G1: concur.
Projects IME and IMG were initiated to improve the stockage of repair parts to support engineer construction equipment. Project IME, of which 90% of the parts have been received, was implemented to support higher density engineer equipment. Project IMG, of which 50% of the parts have been received, was implemented to support low density engineer equipment (rock crushers, asphalt plants, quarry equipment, and pavers). Recently Department of the Army initiated a special Red Ball Program to improve the support of key mission essential construction equipment. To effectively monitor the repair parts support, Department of the Army receives weekly operational readiness reports reflecting the status of engineer construction equipment. The percentage of zero balances of repair parts lines in the prescribed load lists should be reduced as a result of the special Red Ball Program. No action by USARPAC is recommended. It is recommended that DA continue to monitor the weekly operational readiness reports for key mission essential construction equipment.

FOR THE COMMANDER:

[Signature]

Clark W. Stevens Jr.
Captain
Assistant Adjutant General

Cy furn:
18th Engr Bde
39th Engr Bn
GPOP-DT (30 Apr 70) 4th Ind (U)

SUBJECT: Operational Report of HQ, 39th Engineer Battalion (Combat)
for Period Ending 30 April 1970, RCS CSFOR-65 (R2) (U)

HQ, US Army, Pacific, APO San Francisco 96558 22 JUL 70

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

This headquarters concurs in subject report as indorsed.

FOR THE COMMANDER IN CHIEF:

[Signature]

L.E. Ozaki
CPT, AAC
Asst AG

31
Angle Iron

2" x 4"

Weld

Wire to Secure
2" x 4" to Fence Post

Fence Post

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C - 2" x 4" transverse bracing as rep

B - 3.5' pile

A - 4" x 12" support timbers

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**Operational Report - Lessons Learned, 39th Engineer Battalion**

**Experiences of unit engaged in counterinsurgency operations.**

**30 April 1970**

**N/A**

**N/A**

**OACSFOR, DA, Washington, D.C. 20310**