

DEPARTMENT OF THE ARMY
HEADQUARTERS 19TH ENGINEER BATTALION (COMBAT)
APO San Francisco 96493

EGACBB-OP

30 April 1970

SUBJECT: Operational Report Lessons Learned for the 19th Engineer Battalion (Combat)(Army) for the period ending 30 April 1970 RCS; CSFOR-65 (R2).

THRU: Commanding Officer, 35th Engineer Group (Construction),
APO 96312

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

SECTION I, OPERATIONS: SIGNIFICANT ACTIVITIES

The 19th Engineer Battalion, organized under TOE-36G, consists of Headquarters and Headquarters Company and four (4) line companies. Attached units include the 572nd Engineer Company (Light Equipment), the 687th Engineer Company (Land Clearing), and the 547th Engineer Platoon (Asphalt). One platoon of Company C, 577th Engineer Battalion (EM) has been located at Camp Brown B'Sar since 2 April 1970. A platoon (minus) of the 815th Engineer Battalion has also been at Camp Brown since 15 April 1970. One platoon of Company D, 27th Engineer Battalion has been located with Company D, 19th Engineer Battalion at their construction site since 1 April 1970.

During the reporting period, the major portion of the battalion has been concerned with the battalion's primary mission of upgrading 81 kilometers of National Highway QL-20 from Di Linh to the II/III CTZ Boundary. However, the major emphasis has been placed on upgrading the 42 kilometers from Camp Smith to the II/III Boundary. Units involved in this effort are Headquarters and Headquarters Company, Company B, the 572nd Engineer Company (IE), and the 547th Engineer Platoon (AP) located at Camp Smith, Bao Loc, and Company A at Camp Brown, B'Sar. Company D has been concerned with project "Spirited Bayonet", the construction of a Special Forces Camp, since the beginning of the reporting period. On 3 March 1970 the 687th Engineer Company (LC) was attached to the 19th Engineer Battalion and began land clearing operations between Nhon Co and Gia Nghia. Company C has been attached to the 864th Engineer Battalion since 19 November 1969.

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Changes in the command and staff of the 19th Engineer Battalion during the reporting period were as follows.

10 Feb 70 - CW2 Raymond W. Lovett returned to CONUS with assignment instructions for Germany.

15 Feb 70 - LTC Wilson P. Andrews was reassigned to 18th Engr Bde as Bde Executive Officer.

LTC Morris L. Gardner became Battalion Commanding Officer, replacing LTC Andrews.

18 Feb 70 - 1Lt Ronald E. Perry returned to CONUS for separation.

21 Feb 70 - Maj Michael B. Ash was reassigned to 35th Engr Gp.

1Lt Richard W. Jackson, former HHC equipment platoon leader, was assigned as platoon leader in Co A.

Maj James H. Scott, former assistant to the battalion commander, was assigned as S-3 Officer.

1Lt Michael M. Haas, former Co A platoon leader, was assigned as battalion Engineer Equipment officer.

Cpt Maury D. Maurel, former battalion Engineer Equipment officer, was assigned as battalion S-4 officer.

1Lt David F. Jones, former battalion S-4 officer, was assigned as assistant S-4 officer.

1Lt Philip J. Caruso, former 547th platoon leader, was assigned as assistant S-3 officer.

1Lt Paul C. Williams, former assistant S-4 officer, was assigned as assistant S-3 officer.

1Lt Kenneth Brown, former assistant S-3 officer, was assigned to Co B as platoon leader.

1Lt David Kohli, former Co B platoon leader, was assigned as 547th platoon leader.

25 Feb 70 - Cpt Carl Smith was further assigned to Co B as Commanding officer, replacing Cpt Jack R. Bishop.

Cpt Jack R. Bishop, former Co B commander, was assigned as assistant S-3 officer.

1 Mar 70 - 1Lt Richard Repeta further assigned as battalion Quality Control officer.

2 Mar 70 - 1Lt Phillip Reeve, former platoon leader from Co A, assigned as battalion Communications officer.

3 Mar 70 - The 687th Engr Co (LC) was a battalion gain to include the following officers:

Cpt David Birkman: Company Commander

Cpt Theodore Bauer: platoon leader

1Lt Christopher Tilden: platoon leader

WO1 Lawrence Trucax: Engineer Equipment maintenance officer.

5 Mar 70 - Maj McCoy L. Jolley gained as duties unassigned.

7 Mar 70 - CW2 Ludek Marik was assigned as Unit Supply technician.

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8 Mar 70 - Maj McCoy L. Jolley was assigned as battalion Executive Officer to replace Maj Dan Connor.

Maj Dan A. Connor: duties unassigned.

9 Mar 70 - 1Lt David F. Jones, former assistant S-4 officer, assigned as battalion Rear Commander.

10 Mar 70 - Maj Dan A. Connor returned to CONUS for assignment at HQ MDW.
Cpt David Sigafos, former battalion Surgeon was reassigned to the 937th Engr Gp.

12 Mar 70 - 1Lt Thomas Wilczak returned to CONUS for separation.

13 Mar 70 - Cpt Marvin Stephens became battalion Surgeon.

14 Mar 70 - Cpt John Ray became HHC commander replacing Cpt Stephen Borg.
Cpt Stephen Borg became battalion Engineer Equipment officer, replacing 1Lt Michael Maes.

1Lt Michael Maes became HHC equipment platoon leader.

17 Mar 70 - 1Lt Stanton Digelow was reassigned to 35th Engr Gp.

26 Mar 70 - Cpt John Strain became 687th Engr Co (LC) commander, replacing Cpt David Berkman.

Cpt David Berkman was reassigned to 577th Engr Bn.

2 Apr - 1Lt Robert Drake, former Co D platoon leader, was assigned to 687th Engr Co (LC) as platoon leader.

7 Apr 70 - Maj James M. Scott was reassigned to 577th Engr Bn.

9 Apr 70 - Cpt Edward Haggerty was reassigned to 589th Engr Bn.
Cpt David Darwin became 572nd Engr Co (LF) commander, replacing Cpt Haggerty.

10 Apr 70 - Cpt Edward Wildrick III assigned as S-3 officer.

15 Apr 70 - Cpt Theodore Bauer, former 687th Engr Co (LC) platoon leader, reassigned to 35th Engr Gp.

16 Apr 70 - Cpt Terry Taylor assigned as battalion Engineer Equipment officer.
Cpt Stephen Borg, former battalion Engineer Equipment officer, assigned as special assistant to the battalion Commander.

Cpt Jack R. Bishop, former assistant S-3 officer, assigned as Co D commander.

Cpt Raymond Gajewski, former Co D commander, assigned as assistant S-3 officer.

At the end of the reporting period, total assigned strength was 905 of 927 authorized (assigned and attached units). During the period, 325 personnel were assigned to the battalion and 280 rotated. High morale continued as indicated by 125 requests for extension of EST and 16 reenlistments.

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During this period, S-4 has worked steadily to procure required construction materials which continue to be a major problem due to this headquarter's remoteness and long supply distances from Cam Ranh Bay. Coordination is difficult and convoys are few in number.

The movement of Co D to an outlying area and the attachment of the 687th Engineer Company (LC) greatly increased the logistical support complexity of this headquarters. Supplies had to be flown from Cam Ranh to Nhon Co and shipped from there by CH47. Due to shifting priorities, backlogs often resulted. However, an effective supply of materials has been delivered in spite of these problems.

During this period, construction projects have consumed approximately 114,000 board feet of lumber, primarily on the construction of a Special Forces camp by Company D. Also consumed have been 5,000 pounds of nails and spikes, 860 pieces of culvert, 7,200 barrels of asphalt products, 800 bags of cement, 80 rolls of barbed wire, 1,000 pickets and 600 sandbags.

During the reporting period several ARVN Affiliation programs were continued. The joint program with ARVN Engineers involving Bridge 5 was completed at the end of April, as the ARVN's finished work on the bridge itself. In another affiliation program, ARVN forces supported, when necessary, the sandstone haul from Di Linh to the industrial site at Camp Smith. This support was rendered in the form of trucks. Finally, ARVN forces provided continuous security along QL-20, thus enabling more U.S. troop effort to be put to use on IOC construction.

In the past three months the number of Direct Hire Personnel working for the 19th Engineer Battalion and attached units has increased. There are now a total of 74 persons employed within the battalion. The total number of housegirls is now 68, with the remainder of the personnel employed as crusher and asphalt plant workers.

The battalion Chaplain has responsibility for all US Troops in Lam Dong Province to include the 19th Engineer Battalion and attachments, MACV, LSA, and MILFAP. As in the past, Roman Catholic services are provided at Camp Smith by a Vietnamese priest. The battalion Chaplain has continued to provide a flexible program of religious and personal guidance for the men of the battalion, including as many trips to the outlying elements as is possible.

During the past quarter, the 19th Engineer Battalion's authorized newspaper, The Seahorse News was published on a monthly basis by the Public Information Office. The issues were distributed on 28 Feb 70, 31 Mar 70 and 30 Apr 70. The newspaper was distributed to all companies in the battalion on a basis of one for every three men. In accordance with instructions from the 18th Engineer Brigade Information Office, the newspaper was distributed to higher echelons.

Also during the quarter, the Information Office of the 19th Engineer Battalion received and distributed the following material: Kysu (Engineer Troops Vietnam), Uptight (USARV), Army Digest (DA) and Commander's Digest (DD). To help insure an effective command information program the Battalion Information Office also distributed newspapers and command information material received from Engineer Troops Vietnam, USARV, MACV, 18th Engr Bde and 35th Engr Gp. A series of fact sheets were distributed to help keep the battalion informed on command and general information. These fact sheets covered such subjects as reclassments, Operation Last

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Chance and available R&Rs both out of country and in country.

The following DA Forms, news releases and photographs were forwarded by the 19th PIO to higher headquarters for further distribution.

DA Form 1526 (Information for Hometown News Release.....246
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During this period the Quality Control section has endeavored to improve its operation by the addition of personnel to assist in the testing of materials used in the upgrading of QL-20. The section now consists of a Quality Control officer and three trained technicians. In addition, key personnel in the line companies have been instructed in the basics of soils analysis. Regular testing on road subbase, base course and asphalt has been the key to the success of the Quality Control program. This testing includes sieve analysis, Atterburg limits and compaction criteria. Hot bin and cold bin gradations are taken daily and temperature readings are taken of each asphalt truck that arrives at the paving site. During the quarter there has been a continual investigation for new and better base course borrow pit locations, to facilitate the LOC program.

During the quarter, A/19 was concerned mainly with the upgrading of QL-20. Extensive roadwork consisting of final compaction of surface and ditchwork was completed from YT896623 to YT938640 and from YT843623 to YT830626. In some areas large amounts of subbase had to be removed and new fill added and compacted. The old roadway was widened in several places by blasting, filling and cutting, with hill sloping and clearing on each side of the road, particularly in the area from YT841623 to YT833623. Two new bypasses were constructed from YT893623 to YT887623 and from YT880624 to YT865624. Both approaches to Bridge 6 required extensive reworking and filling. During the quarter a total of 56 culvert headwalls were constructed by A/19.

On the first of April, one platoon of Company C, 577th Engineer Battalion moved in to help support A/19 with the road building project. Later in the month an element of the 815th Engineer Battalion joined this effort also.

In the reporting period A/19 also performed base camp maintenance including the construction of 40 feet of 48" culvert in the compound's ravine, the revetment of the propane gas tanks at the mess hall and installation of a cement slab in front of the mess hall to facilitate drainage. Also, a second building was erected for a 100 KW generator and a revetment consisting of MC-70 barrels was placed around it.

A total of 42 acres was cleared along QL-20 to eliminate potential sniper locations.

The efforts and manpower of B/19 were spread over a variety of projects initiated this quarter. LOC restoration consumed the majority of man and equipment hours during the period. Recurring projects such as patholing, ditch work and check dams were given special attention from ZT027755 to YT964666. Beginning at YT999702 the scarifying and recompaction of the subbase was continued. The base course material consisted of 4 to 6 inches of compacted lift. After compaction it was shot with a prime coat of MC-70. B/19 used a total of 11,090 cy of base course in the upgrading of QL-20. Extensive ditching was done during the reporting period.

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The construction of a 20' x 50' ammunition bunker at Camp Smith required 1602 linear feet of 3x10 material, 1300 sandbags, 436 asphalt drums, 1300 linear feet of 10x12 material and 60 feet of 18" culvert.

Recurring maintenance was required on the runway matting at the Bao Loc Airfield. Also, two (2) 60 foot revetments were constructed for aircraft protection and a 175 mm gun emplacement was constructed in the vicinity of the airfield. Materials used in these projects included 332 asphalt drums, 12 feet of 36" culvert, and 340 linear feet of 3x10 material.

Towards the end of the period the Industrial complex began undergoing changes with the movement of the 500 KW generator to a new location. Remodeling of the crusher feeder chutes was 80% complete and construction of stand-off fencing for the crusher site was 40% complete.

During the quarter D/19 was primarily concerned with project 'Spirited Bayonet', the construction of a Special Forces Camp. The third platoon pre-cut lumber all through February for the eventual construction of 63 living-fighting bunkers. The second platoon was airlifted to the worksite on 2 February 1970. While waiting for equipment to get out to them, the 2nd platoon strung wire around the inner perimeter, and dug fox-holes and machinegun positions for their initial defense. On the 6th of February work began on the construction of the 15x40 living-fighting bunkers. The 2nd platoon was reinforced by the 1st platoon on 10 February. By the end of February, each platoon was putting in a bunker and a half per day, being limited only by the amount of materials that they had to work with and the speed with which holes were dug by the dozers.

Due to a lack of air support, work on the bunkers slowed down during March. In addition, a backlog of needed material was created in Cam Ranh Bay. In order to meet completion dates a convey was organized and sent out on the 12th of April, returning on 13 April. Construction of the 15x40 bunkers was completed on 18 April and the remaining portion of the month was spent on the construction of a 20x100 living bunker and a 20x80 TOC. Work began on the airfield on 8 March and continued through the reporting period.

During the reporting period the 572nd Engineer Company (IE) continued its support of the 19th Engineer Battalion. Support to the restoration of QL-20 consisted of quarrying and crushed rock production, support of paving efforts, major equipment support to A/19 and minor equipment support to D/19. During the reporting period the 572nd Engr Co (IE) assumed operational control of the 547th Engr Plt (AP) and the equipment platoon of HHC/19.

The industrial complex has been undergoing a period of revision in order to compensate for inadequate plant design. The Cedar-Rapids 250 TPH rock crusher was not designed to produce fines for the asphalt plant. As a result production was barely able to meet the needs of the asphalt plant. Base course production was no problem due to the availability of natural base course in many areas. A 75 TPH secondary unit has been added to the 250 complex to aid in production of fines for asphalt mix. A 35 TPH secondary unit has seen limited use in production of additional fine aggregate.

The Chi Cong quarry has undergone an extensive face lifting. The working area has been expanded to include the entire available working face of rock. Total production for the period was 19,380 cy of blast rock. A second quarry has been opened at Di Linh to produce additional fines for the asphalt plant.

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The major problem with this source of fines is the excessive haul distance which allows only two hauls per day. Total production for the period was 6,975 cy. During the quarter 11,689 cy of 2"(-), 11,783 cy of 3/4"(-), and 12,216 cy of fines have been produced at the industrial site.

This reporting period was a time of increased production at the asphalt plant. The production total was 17,488 tons of asphaltic concrete. The 547th Engr Plt (AP) paved a total of 12.1 kilometers of double lane road on QL-20. Numerous mechanical difficulties had to be met during the quarter. Two (2) engines were replaced on the dust collector, and the shaker box was removed on two separate occasions to replace bearings. These repairs caused the loss of 11 production days. Other minor problems including a broken asphalt pump, ruptured hot oil pipes, and recalibration of the plant caused the loss of an additional 5 days. However, the plant was fully operational for the last 17 days of the reporting period.

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

A. PERSONNEL: None

B. INTELLIGENCE: None

C. OPERATIONS:

1. Culvert Headwall Forms

(a) OBSERVATION: The LOC program has included the construction of many culvert headwalls.

(b) EVALUATION: This need for culvert headwalls put a serious strain on an already limited supply of 3/4" plywood used to construct headwall forms.

(c) SOLUTION: Scrap corrugated metal salvaged from a demolished bunker, when adequately braced satisfied the requirements for headwall form material. It should be noted that the metal required sufficient bracing to prevent bulges in the metal when the cement was being poured. Also, no more than half of this headwall should be poured in one day.

2. Leveling Course for Road Surface

(a) OBSERVATION: Existing base course strength is quite adequate on QL-20 in Blao Pass. It is however, very rough and irregular.

(b) EVALUATION: Provided with adequate strength, only a leveling course of some type is required.

(c) SOLUTION: Asphaltic concrete hot mix was blade-layed over the existing base course. Just enough hot mix was used to fill the irregularities in the road surface. The surface was rolled with a ten-ton steel-wheeled roller, followed by a nine-wheeled pneumatic tired roller. This surface was overlaid with the

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final source of asphaltic concrete. Road strength was good. The major advantage of this method of construction is that it saves the effort involved in scarifying the old surface, adding additional base course, and re-compacting.

3. Ditching Equipment:

(a) OBSERVATION: Extensive ditchwork has been required on QL-20.

(b) EVALUATION: Additional equipment was needed to supplement the graders already being used in ditching operations along QL-20.

(c) SOLUTION: 290M's have been used with great success in ditching operations when graders were unavailable for various reasons. It has been found that a 290M completes ditchwork much faster than a grader and the ditchline needs only "touch up" work by a grader to complete the project.

D. ORGANIZATION: None

E. TRAINING: None

F. LOGISTICS: Logistical Support Coordination.

(a) OBSERVATION: Logistical Support becomes exceedingly difficult when many separate units are supported from a logistical facility which is remote from the the battalion headquarters.

(b) EVALUATION: In order to effectively support units with all classes of supplies, direct coordination between S-4, support command, and transportation personnel is needed to effectively monitor the supply situation.

(c) SOLUTION: An individual from this battalion was stationed in Cam Ranh Bay to head the Battalion rear detachment. Through his efforts, all supplies and required coordination for ROM's and transportation were successfully obtained. His presence along with specialized expeditors in the fields of maintenance, supply, and transportation resulted in the successful completion of many of the 19th Engr Bn's projects.

G. COMMUNICATIONS: None

H. MATERIAL: None

I. OTHER: None

1 Incl
Organizational Chart

Morris L. Gardner
MORRIS L. GARDNER
LTC, CE
Commanding

ORGANIZATIONAL CHART
19TH ENGINEER BATTALION (CNT)

