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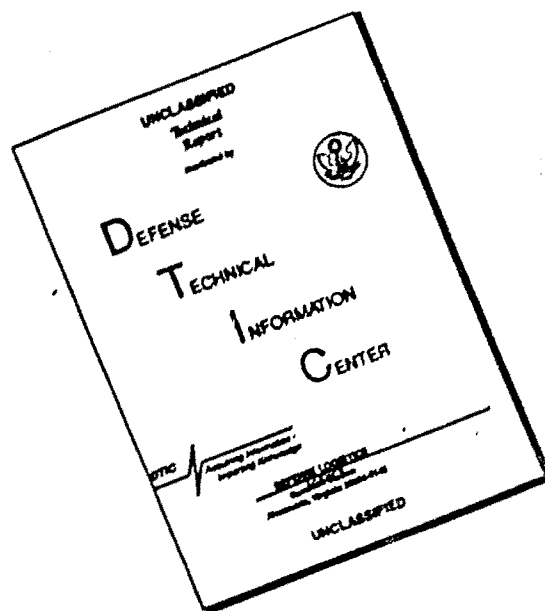
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WASHINGTON, D.C. 20310

IN REPLY REFER TO
AGAM-P (M) (24 Jul 68) FOR OT RD 682196 6 August 1968
SUBJECT: Operational Report - Lessons Learned, Headquarters, 20th
Engineer Battalion (Cbt), Period Ending 30 April 1968

STATEMENT #2 UNCLASSIFIED

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2. Information contained in this report is provided to insure appropriate benefits in the future from lessons learned during current operations and may be adapted for use in developing training material.

BY ORDER OF THE SECRETARY OF THE ARMY:

Kenneth G. Wickham

KENNETH G. WICKHAM
Major General, USA
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DEPARTMENT OF THE ARMY
HEADQUARTERS, 20TH ENGINEER BATTALION (CBT)
APO 96318

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EOCA-OP

30 April 1968

SUBJECT: Operational Report-Lessons Learned (RGS CSFOR-65), of Quarterly
Period 1 February 1968 thru 30 April 1968

Commanding Officer
937th Engineer Group (Cbt)
APO 96318

Commanding General
18th Engineer Brigade
APO 96377

Commanding General
US Army Vietnam
ATTN: AVHGC (DST)
APO 96375

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US Army, Pacific
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Section I, Operations: Significant Activities

1. At the beginning of the report period the Battalion Headquarters, Headquarters Company, Company B (Rear detachment), 1st Platoon, Company C, and the 584th Engineer Company (IE) were located at the 4th Infantry Division Base Camp, Camp Enari. Company A (-), Company D (-), the 3rd Platoon and Support Platoon of the 584th Engineer Company (IE), and one platoon of the 70th Engineer Company (DT), were located at Woolly Bully Quarry (ARO57315). Company B minus its rear detachment was located at Tieu Atar (VZ622022). Company C was located at Ban Blech (BQ005595). The 35th Land Clearing Platoon and the 3rd Platoon, Company A, were located on the road between 6C and Oasis.

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a. The 1st Platoon of Company D, was engaged in the operation of the Battalion Prefab Yard, and Batch Plant, issuing prefab buildings and mixed concrete for self-help. Company A (-), Company D (-), and the 584th Engineer Company were engaged in upgrading and paving operations of QL-19W. Company A was paving from Woolly Bully Quarry west to Edap Enang while Company D was paving from Woolly Bully Quarry east. The 584th was paving from CP-31 (AR773368) west. Companies A and D were sharing the paving equipment available to the Battalion while the 584th was using its own organic equipment. Company A also had the mission to pour tank turning pads on QL-19W where the parallel tank trail crossed QL-19W. Companies A and D also performed daily minesweeps on QL-19W.

b. Company B was engaged in "Operation Florida" with the mission of constructing a Type II C-7A Airfield and providing assistance to the 5th Special Forces Group in constructing a Special Forces (CIDG) Camp at Tieu Atar. Company C was engaged in upgrading Ban Blech Airfield to include removal of T-17 membrane, necessary earthwork to upgrade the field to C-130 Type II capability, and laying of M8A1 matting.

c. The 35th Land Clearing Platoon and the 3rd Platoon, Company A, were clearing 100 meters on each side of the road from 6C to Oasis.

d. The quarry operation of the 584th involved drilling, blasting and crushing rock to produce 4" (-) and 3/4" (-) rock to support LOC upgrading provide concrete aggregate, and to furnish rock for other customers.

2. On 8 February 1968, the Land Clearing Platoon (-) and the 1st Platoon, Company A started land clearing operations along LTL-7B with the priority mission to clear from the intersection with QL-14 to the pass in the vicinity of BRO12025. The mission of the 1st Platoon, Company A was to provide additional security, conduct minesweeps and assist the land clearing operations with chain saws and demolitions in inaccessible areas. The 3rd Platoon, Company A, returned to Woolly Bully Quarry to continue Company A's mission on QL-19W.

3. On 17 February 1968, the 1st Platoon, Company C was airlifted from Ban Blech to Ban Don (ZV023223) with the mission to clear approximately 100 acres to improve the lateral clearance of Ban Don Airstrip and provide an area for an enlarged parking apron for five C-130 aircraft.

4. Company C (-) completed Ban Blech Airstrip on 19 February 1968. The project was started on 21 December 1967. The work accomplished by Company C included removal of T-17 membrane from the 3,200 ft airstrip and upgrading the airstrip by hauling, placing and compacting 41,098 cubic yards of fill and placing M8A1 matting. The fill was used to raise the airstrip and parking apron to final grade and to widen the shoulders of the strip. Prior to laying the matting the strip and parking apron was treated with penepime, covered with a layer

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of burlap and treated with RC-3. The M8A1 matting was laid at an average of 20,300 square feet per day. The total M8A1 laid amounted to 276,260 square feet.

5. Company C (-) relocated from Ban Blech to Phu Nhon (AQ873988) on 20 February 1968. The mission of the unit was to upgrade 25 kilometers of QL-14S.

6. On 26 February, the 1st Platoon, Company A, was relieved of its land clearing responsibility along LTL-7B following completion of that clearing mission and relocated to Camp Enari. The Land Clearing Platoon (-) relocated to Phu Nhon (AQ873988) with the mission of clearing QL-14 to Ban Me Thuot. One section was assigned to the 70th Engineer Battalion to work on QL-21. Since Company C was already located at Phu Nhon the 2nd Platoon, Company C, was assigned the mission of assisting the Land Clearing Platoon in land clearing operations with chain saws and demolitions, by providing security, and conducting minesweeps as required along QL-14.

7. The 1st Platoon, Company C, completed the mission at Ban Don and was airlifted to Phu Nhon on 27 February 1968.

8. Company A received the specific mission to upgrade the pass on QL-19W (ZAO71308) to include improving the drainage and widening the roadway, on 27 February 1968. The road through the pass was approximately 1.5 kilometers long with steep slopes, no drainage and rocky terrain. The road had to be widened, the drainage improved, and the base course prepared for paving.

9. On 3 March 1968, Company A and the 584th Engineer Company (IE) were relieved of paving responsibilities on QL-19W. It was decided that by massing the earth moving, compaction and surfacing equipment under one command the upgrading of QL-19W could progress at a faster rate. Company D received the mission of paving QL-19W with a double surface treatment, preparing the base course not yet prepared, improving drainage where required, and constructing a parallel tank trail. The 584th Engineer Company (IE) received the mission of providing equipment to support the mission on QL-19W and continued responsibility for quarry operations. Company A assumed the responsibility of operating the Battalion Prefab Yard and the Batch Plant with the 1st Platoon located then at Camp Enari, and the mission to install tank turning pads where the tank trail crossed QL-19W. Company D's 1st Platoon moved to Woolly Bully Quarry from Camp Enari on 2 March 1968 so Company D could put a full effort on the project.

10. On 9 March 1968, the land clearing effort on QL-14S was terminated prior to reaching Ban Blech and the 35th Land Clearing Platoon (-) and the 2nd Platoon, Company C, started the relocation to An Khe. The units closed in at An Khe on 11 March 1968. The mission of the Land Clearing element was to clear 300 meters (line of sight) on each side of QL-19E from Mang Giang Pass to An Khe Pass and to burn and level the windrows which had been cut and piled. On 13 March 1968,

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the Land Clearing element moved from An Khe to Checkpoint 27 (BR262972) to reduce lost time traveling to the jobsite. The mission was subsequently modified to require clearing 250 meters (line of site) from Mang Giang Pass to Checkpoint 24.

11. On 16 March 1968, work had progressed at Tieu Atar sufficiently that Company B could relocate the 3rd Platoon from Tieu Atar to Camp Enari. The platoon was airlifted by two sorties of CH-47's (Chinooks). The 3rd Platoon received the mission of upgrading the Tank Trail from the intersection of QL-14N and Camp Enari Access Road to the intersection of QL-14N and the Plei'u Bypass.

12. On 24 March 1968, Company B airlifted the 2nd Platoon, Mess section, Maintenance section and Communications section from Tieu Atar to Camp Enari using four sorties of CH-47's. The 2nd Platoon assumed the operation of the Battalion Prefab Yard and the Concrete Batch Plant from 1st Platoon, Company A, which moved to Woolly Bully Quarry. This enabled Company A to concentrate its efforts on QL-19W and the tank turning pads. Additionally the 2nd Platoon, Company B, received the mission to upgrade the Dragon Mountain Access Road to a one lane, all weather road with turnouts every 50 meters where possible.

13. On 26 March 1968, the 1st Platoon, Company A was assigned the mission of constructing a FAC Aircraft Taxiway between the existing parking apron and the FAC Aircraft Revetments previously constructed at Oasis Airfield (ZA121285). The scope of the project included drainage improvements, base course upgrading, poneprime application and laying M8A1 matting on the taxiway and within the revetments.

14. On 30 March 1968, the 3rd Platoon, Company B, received the mission to repair the 7th Sqdn, 17th Air Cavalry's helicopter revetments. The scope of the project included widening the revetments, changing the height of various revetments, and leveling the revetment areas. The priority of this project and the priority of QL-19W caused the work on the tank trail to almost come to a standstill.

15. Company C (-) was alerted on 1 April 1968 to cease operations on upgrading QL-14S and prepare for convoy move to Plei Djereng. The work accomplished included ditching and reshaping 25 kilometers and capping 20 kilometers of roadway with laterite. Company C (-) relocated from Phu Nhon to Camp Enari on 2 April 1968, loaded necessary supplies and materials 3 April, and convoyed to Plei Djereng (YA876456). The scope of Company C's project was to repair the airstrip subgrade at Plei Djereng (MX19 Matting), repair FAC Aircraft Revetments and construct hardstands with M8A1 matting. The mission also included work on the Artillery Fire Base to include construction of four Direct Fire Pads, redecking four 175mm gun pads and installing spade rests, upgrading of interior roads and drainage, construction of ammo storage bunkers and assistance in self-help construction of camp facilities.

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16. On 1 April 1968, the 1st Squad, 1st Platoon, Company A closed in to Camp Enari from Woolly Bully Quarry, picked up needed equipment and supplies and conveyed from Camp Enari to Phu Tuc (BR300596) on 2 April 1968. The mission of the squad was to repair the T-17 membrane on the runway and parking apron, remove ruts in the turnarounds and taxiways and improve the drainage ditches adjacent to the runway.

17. Tieu Atar Airstrip was completed on 3 April 1968. The work accomplished during this reporting period included cutting 14,270 cubic yards of overburden, cutting 10,930 cubic yards of earth from the runway and parking apron, and hauling, placing and compacting 8,781 cubic yards of fill on the runway. Seven billets (20' x 70'), one dispensary, the camp TOC, the supply room and two bunkers were completed in the CIDG Camp. 2,766 meters of triple concertina fence was erected around the camp. Approximately 100 acres were cleared around the airstrip and camp. The work done by Company B in the Camp was increased from the original scope because of a delay in obtaining MRS tractors and scrapers after the original equipment had been taken off the project.

18. The 1st Platoon, Company B, started airlifting for the move to Ban Don (ZV023223) on 2 April 1968 with four CH-47 (Chinook) missions. Six CH-54 (Flying Crane) and four CH-47 missions were accomplished on 3 April 1968. Higher priority missions and deadlined aircraft delayed the airlift until 8 April 1968 when four CH-54 missions were flown. The platoon completed the airlift on 9 April 1968 with five CH-54 missions, one Chinook mission and a shuttle of nine personnel and personal equipment with a UH-1D. A total of 15 CH-54 missions and nine CH-47 missions moved two Airborne MRS Rubber Tire Tractors, two Airborne Scrapers, two Airborne Graders, two D6E Dozers, four 2½-ton Trucks and miscellaneous equipment, supplies and personnel.

19. The mission of 1st Platoon, Company B, was to construct a 750' x 150' parking apron with two taxiways, construct a 150' x 150' turnaround and to improve the runway as required for a Type II C-130 Airstrip at Ban Don.

20. The 1st Squad, 1st Platoon, Company A, returned to Woolly Bully Quarry on 12 April 1968. Repair of Phu Tuc Airstrip was completed on 8 April 1968; however, the squad's return was delayed due to lack of security between Cheo Reo and Camp Enari.

21. The 1st Platoon, Company A, completed the FAC Aircraft taxiway and revetment hardstands at Oasis on 9 April 1968. During the project, the Platoon laid approximately 18,000 square feet of M8A1 after the peneprime application.

22. On 15 April 1968, the 3rd Platoon, Company A, began installing culverts, backfilling culverts installed and constructing headwalls on the tank trail parallel to QL-19W from CP-33 west. The tank trail was needed to keep tracked vehicles

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off the newly surfaced road. The trail had been partially constructed previously, and Company D had been improving the trail as the work on QL-19W progressed to keep damage to the surface treatment to a minimum. 8

23. On 27 April 1968, the 2nd Platoon, Company D, departed Woolly Bully Quarry and convoyed to Kontum (AR788898). The platoon had the mission of setting up Base Camp in preparation for Company D moving to Kontum to pave QL-14N from Kontum to Dak To.

24. Company A assumed the responsibility of road repair of QL-19W on 27 April 1968. The road repair was essentially patching the double surface treatment along the road where tracked vehicles had damaged the paving. Additionally, Company A assumed the responsibility of sweeping QL-19W from Woolly Bully Quarry east to CP-33 daily, and the mission to install all additional culverts needed on QL-19W and the parallel tank trail to Checkpoint 31.

25. Company C (-) completed the project at Plei Djereng on 28 April 1968. Work accomplished included installation of 10 culverts, upgrading three kilometers of roadway with 8-12" of compacted fill, rehabilitating six ASP bunkers, redecking four 175mm gun pads, placing fill for four Direct Fire hardstands and a maintenance hardstand. All FAC aircraft revetments were repaired, the hardstands covered with M8A1 matting, and approximately 3,000 square feet of MX19 matting was removed from the airstrip, the subgrade improved and the MX19 replaced utilizing 10 MX19 repair panels. The Company began preparations to move from Plei Djereng to Woolly Bully Quarry on 30 April 1968.

26. On 28 April 1968, Company D completed the double surface treatment of QL-19W, a distance of 33 kilometers, of which Company D surfaced 21 kilometers. In addition three bridges on QL-19W were upgraded either by the addition of stringers or by redecking. Seven culverts were installed by Company D.

27. On 30 April 1968, Company C (-) convoyed from Plei Djereng to Woolly Bully Quarry. At the same time the 584th Engineer Company (IE) (-) convoyed from Camp Enari to Woolly Bully Quarry. Upon arrival of Company C, Company D convoyed from Woolly Bully Quarry to Camp Enari for an overnight stop prior to moving to Kontum. By shifting job responsibilities Company D was released to assume the high priority job of paving QL-14N prior to the monsoons so the MSR would remain open during the upcoming monsoons. The three-unit move on the same day was necessary to insure that sufficient personnel were at Woolly Bully Quarry to man the perimeter, since all security at the quarry is provided by the battalion units. The move was accomplished with minimum confusion even though 5-ton tractors/25-ton trailers had to be off-loaded and loaded the same day to accomplish the moves.

28. At the end of the report period the units of this battalion were performing

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their missions at the following locations:

- a. Battalion Headquarters was located at Camp Enari.
- b. Headquarters Company was located at Camp Enari and the Equipment Platoon was supporting Companies C and D.
- c. Company A was located at Woolly Bully Quarry with the missions of installing culverts on the tank trail, road maintenance of QL-19W, installation of tank turning pads on QL-19W, and mine sweeping QL-19W daily.
- d. Company B, less the 1st Platoon, was at Camp Enari working on Dragon Mountain Access Road, the tank trail from the intersection of Camp Enari Access Road and QA-14N to the intersection of Pleiku Bypass and QL-14N, repair of 7/17th Air Cav helicopter revetments, and running the Battalion's Prefab Yard and Concrete Batch Plant.
- e. 1st Platoon, Company B, was located at Ban Don upgrading the airstrip to a Type II C-130 Airfield.
- f. Company C (-) was at Woolly Bully Quarry preparing for the upcoming mission of constructing an Artillery Fire Base at Oasis.
- g. The 2nd Platoon, Company C, and the 35th Land Clearing Platoon (-) were located at CP-24 on QL-19E clearing 250 meters along each side of QL-19E. One squad of the Land Clearing Platoon was still attached to the 70th Engineer Battalion (Cbt) and located on QL-21 near Ban Mo Thuot.
- h. Company D (-) was located at Camp Enari for an overnight stop prior to moving to Kontum to begin paving QL-14N from Kontum to a point 21 kilometers north.
- i. The 2nd Platoon, Company D, was located at Kontum preparing the base camp for the main body.
- j. The 584th Engineer Company (LE) was at Woolly Bully Quarry operating the quarry to provide 1/4" (-) for base course fill and 3/4" (-) for paving operations in Kontum, and preparing to start upgrading base course and drainage on QL-19W from Edap Enang to Duc Co and the parallel tank trail. Also the unit was providing equipment support to Company D.
- k. The platoon of the 70th Engineer Company (DT) was detached 30 April 1968.

29. Inclosure I is an organizational chart of the battalion during the report period.

30. During the reporting period the battalion was engaged in 7.5 battalion days

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of training, 1.5 battalion days of troop movements, and 81 battalion days of operations.

31. The major difficulties encountered in the unit troop movements were as follows:

a. A shortage of 12 ea 5-ton tractors in the battalion forced the battalion to utilize all available 5-ton tractors for company-size moves and resulted in other projects being slowed until the tractors returned to move equipment to jobsites. The shortages of this equipment also prevented units from taking necessary construction supplies on the initial move. These supplies had to be shuttled at later dates, causing delays in projects and still taxing the battalion's resources.

b. A lack of CH-54's for airlifting the Airmobile equipment from Tieu Atar and an aborted higher priority mission on 3 April 1968 resulted in prolonging the move five days. As a consequence the work effort at Ban Don was delayed five days.

32. Assigned Personnel:

a. During the report period, this unit received EM with PMOS's not authorized in the battalion. These malassignments, at the end of the reporting period, total approximately 14% of the total assigned strength of the battalion. These malassigned personnel were interviewed and made aware of the situation. The personnel that were not highly trained in their PMOS were given the opportunity to express their desires for retraining in available positions. The more highly trained personnel were transferred to units where they could be utilized in their PMOS, and the receiving units in turn transferred personnel that could be retrained. Results have been extremely gratifying, with the exception of the lost time spent in retraining.

b. During the reporting period this battalion has had a critical shortage of Captains. At the end of the reporting period there were two Engineer Captains assigned to the battalion, and one of those officers has been TDY since February. The battalion was short six officers at the end of the reporting period.

33. Logistics:

a. Resupply of Units by Air: During the reporting period two of the companies depended almost entirely on air resupply. Company B's resupply was entirely by air at Tieu Atar. Company C was mainly resupplied by air at Ban Blech and Plei Djereng due to the lack of convoys and security for convoys. A total of 51 CH-47 Chinook sorties were flown to Ban Blech. The total weight of supplies airlifted was 351,299 pounds. Company B received 631,315 pounds of supplies and equipment on 96 CH-47 Chinook sorties. The primary problem in aerial resupply was the uncertainty of available aircraft. In many cases perishable items or critically needed supplies were delayed or spoiled.

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b. Supplies and Equipment:

(1) Shortages of equipment have continued to hamper the overall operations of this battalion during the reporting period. The most serious shortages during the period have been D7E dozers and 5 or 10-ton tractors. The lack of authorized 5 or 10-ton tractors has hampered the movement of units and regular shifting of equipment to different jobsites. Since these tractors are utilized greatly in the supply of engineer materials to the units, this shortage has also caused job delays.

(2) Non-receipt of certain supplies has affected some projects during the reporting period. Electrical supplies for the wiring of buildings at Camp Enari remain critically short, and, at the end of the report period, approximately 350 buildings remain to be wired or require correction of deficiencies.

34. Air Mobile Operations:

a. Company B's mission at Tieu Atar to construct a Type II C-7A Airstrip presented many problems as the mission was entirely an Airmobile Operation. When the project was first conceived, it was decided to build a hasty road into Tieu Atar that would permit movement of equipment by land. This idea was dropped due to the extensive effort required to construct the road.

b. The airmobile equipment required was obtained from three different sources: 1st Cav Division (Airmobile), Special Forces, and 299th Engineer Battalion (Cbt). Two MRS Airmobile tractors and scrapers and an Airmobile Water Purification set were obtained from the 1st Cav Div. Four 2½-ton dumps, two 220 Airmobile Westinghouse graders and one D5 dozer were obtained from Special Forces. The 299th Engr Bn (Cbt) furnished four D6E dozers. None of the equipment had PLL nor manuals with it when it was received. In February the 1st Cav Div had to withdraw the equipment furnished, and 18th Engineer Brigade located two additional Airmobile MRS tractors and scrapers and had them flown to Ban Don by C-130's. At Ban Don the tractors and scrapers were broken down for airlift by CH-54's; however, the skids necessary to airlift the MRS tractors had to be borrowed from the 1st Cav Div. No water purification set was obtained. There was a job delay while obtaining the tractors and scrapers. Also, the battalion had to fabricate the skids necessary to airlift the equipment from Tieu Atar after completion of the project.

c. The need to obtain various pieces of equipment from different sources caused delays in the progress of the projects, but further problems were encountered in the maintenance of the equipment. When a piece of equipment was deadlined, there were instances when the part had to be removed and evacuated so it could be identified and located, obtained, and flown back to Tieu Atar. The low density

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of this type equipment in RVN and the various sources from which it had to be obtained caused excessive deadlines in some cases. 12

d. Aerial resupply by Chinook to Tieu Atar was accomplished with only one scheduled sortie not being flown. However, in some cases there were delays of four to five hours. These resupply missions consisted of engineer materials, repair parts, ammunition, explosives, POL and rations.

e. This battalion had no helicopter available for emergency resupply for such as repair parts. Nor could the project be visited as often as desired to insure efficient operations in accordance with the priority of the mission.

f. If the equipment necessary for airfield projects were pooled at a central agency with repair parts and manuals also available, such operations could be more efficiently accomplished. Additionally, when an engineer unit receives this type mission an assigned helicopter can be used almost constantly for emergency trips, personnel shuttles, job inspections, and general support.

Section II Commander's Observations, Evaluations, and Recommendations:

1. Personnel: None

2. Operations:

a. ITEM: Mining Incidents During Road Construction:

OBSERVATION: Several recent mining incidents reflect increased enemy mining activity in areas where road work is being accomplished. Sections of the road where fill has been placed but not compacted by the end of the day's operations have been particularly vulnerable to mining since mines can be easily placed in the uncompacted fill during the night with little possibility of visual detection.

EVALUTATION: Uncompacted fill left on a road project overnight is extremely susceptible to enemy mining activity.

RECOMMENDATIONS: When road construction is being accomplished, the construction procedures should be adjusted to reduce the amount of uncompacted fill left on a road overnight. If any such fill is left, it should be thoroughly swept with mine detectors prior to commencing operations. Though the rate of progress may be reduced, the possibility of damaging earthmoving and compaction equipment is reduced accordingly.

b. ITEM: Spade Rests for Heavy Artillery Pieces:

OBSERVATION: The vertical members of heavy artillery spade rests which have been installed in concrete or placed in holes and backfilled either fail

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13 shortly after installation or are extremely time consuming to install. Additionally when the vertical members that are placed in concrete need replacing, the concrete hampers the work.

EVALUATION: An artillery fire base that is in operation for an extended period of time required replacement of the vertical members of the spade rests. This replacement is not effective when holes are dug, members installed and back filled. The replacement requires a major effort when concrete has been used to install the original vertical members.

RECOMMENDATIONS: A pile driver attachment on a 20-ton truck mounted crane or 20-ton rough terrain crane provides a quick, efficient method of installing the vertical members of spade rests. Additionally, if new vertical members have to be installed, the installation can be easily accomplished.

c. ITEM: Land Clearing Operations:

OBSERVATION: When the 35th Land Clearing Platoon was split up and two operations being conducted at one time, it was found that the Land Clearing Platoon Leader had to spend a portion of his time traveling between jobs by air. The results were that the land clearing operations could not proceed as efficiently as desired.

EVALUATION: The Land Clearing Platoon (-) that was attached to this battalion had a platoon from one of the Line Companies working with the Land Clearing element. This platoon was providing security, making minesweeps and clearing with chain saws and explosives where needed. The Platoon Leader of the Line Platoon was present on the job site with his platoon. It was determined that by making the Platoon Leader second in command of the overall land clearing operation, there would always be an officer with the element to supervise the operation. This action enabled the Land Clearing Platoon Leader to better control his platoon on separate operations, to more effectively concentrate on maintenance problems and repair parts, and to devote more time to planning future moves and operations. This action also resulted in closer supervision on the job site, enabled better job planning for each day's work and increased the overall effectiveness of the operation because the Line Platoon Leader was on the jobsite at all times.

d. ITEM: Improved Land Clearing Operations on Hillsides:

OBSERVATION: When Land Clearing operations are conducted in rough and hilly terrain, the effectiveness of the Rome Plow is greatly reduced because the Plows must slowly work back uphill after each downhill trip. An unsafe operation resulted from the limited space and lay of the terrain.

EVALUATION: By cutting a rough road on the side of the hills where

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dozers could traverse the side of the hill and be on reasonably level ground at all times a safer operation resulted. A Rome Flow and dozer worked as a team. The dozer was situated on the road and the Rome Flow was hooked to the winch of the dozer and as the Flow cleared downhill the winch was played out. When the Flow started back uphill the winch assisted the Flow in returning to the start of the hillside clearing. This method, referred to as the Yo-Yo technique, reduced the possibility of damaging a Rome Flow or having a serious accident. Further, the operation proceeded more efficiently than having a Rome Flow working without assistance.

RECOMMENDATION: None

e. ITEM: Road Upgrading with Double Surface Treatment:

OBSERVATION: The method of having three units simultaneously upgrading the base course of a road and laying any type of asphaltic surface proved uneconomical due to the lack of necessary equipment to support the operation. When limited equipment is available strict coordination must be constantly effected to shift types of operations and types of equipment between units.

EVALUATION: The pooling of all earthmoving equipment, compaction equipment and equipment necessary to apply a double bituminous surface treatment under a unified command produced higher rates of production in preparing the base course and applying DBST. The higher rate of production resulted through a decrease in the effect of important equipment which became deadlined. By having the equipment under one command the commander was able to adjust his job according to the deadlined equipment and continue an efficient operation with the equipment available. This adjustment in the method of operation resulted in completion of the road project on QL-19W on schedule.

f. ITEM: Soil Stabilization and Compaction Equipment:

OBSERVATION: A combat engineer battalion with a light equipment company atcl that is assigned extensive road upgrading projects requiring a surface treatment is limited in its capability to efficiently accomplish the mission.

EVALUATION: The equipment organic to a combat engineer battalion and a light equipment company is not sufficient to accomplish extensive upgrading and surfacing unless additional equipment is obtained. This unit recently completed a total of 33 kilometers of DBST and this project could not have been completed had not the battalion obtained 10-ton Smooth Wheel Rollers and Asphalt Distributors. These were obtained from every available source possible. The 10-ton rollers were not Army standard, but were acquired from Public Works, RVN, or from salvage yards. Two of the rollers were kept running by Battalion Maintenance. Tow bars were fabricated to pull two other rollers obtained. Asphalt distributors were received, but without the additional distributors the project

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would have been seriously delayed. Water distributors were another critical item. Two salvage 5,000 gal fuel tankers were obtained and modified for the project. However, the pumps organic to the tankers could not be adequately maintained, and this hampered operations. Pumps from erdlators were used for filling the tankers. Prime movers for the modified water distributors were 5-ton tractors, and this too had an impact on the battalion effort as previously discussed. The overall evaluation is simple; road construction missions of combat engineer battalions are limited due to a lack of soil stabilization equipment, compaction equipment, and soil, asphalt or cement mixing equipment.

RECOMMENDATION: That a thorough restudy be conducted of TO&E's of the Combat Engineer Battalion and Light Equipment Engineer Company to determine the amount of soil stabilization equipment, compaction equipment and soil, asphalt and cement mixing equipment to adequately perform various road construction surfacing operations.

3. Training: None.

4. Intelligence:

.. ITEM: "Buy A Mine" Program:

OBSERVATION: This battalion continued its "Buy A Mine" program this reporting period. The program was started in January 1968. During the report period six (6) mines were turned in - two by ARVN soldiers, one by a small boy who ran away prior to being paid, and three were turned in and bought for 1300 VN\$.

EVALUATION: Each village was visited by the battalion S-2 and the CA Team and informed of the program by an interpreter, and hand bills were passed out in the villages. Though few mines were turned in, the mining incidents did decrease. This decrease is probably partially due to the surface treatment applied on QL-19W and partially to the "Buy A Mine" program.

5. Logistics:

ITEM: Class IV Supply Yards for Base Camp:

OBSERVATION: This battalion operates and controls a Class IV supply yard at Camp Enari for self-help base construction. This supply yard has provided almost all construction materials for the buildings and facilities located at Camp Enari with a TO&E S-4 Section.

EVALUATION: A TO&E S-4 Section of a combat engineer battalion cannot adequately perform its mission and also operate a Class IV supply yard. Units draw materials on a regular daily basis and while this type of operation should

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be temporary in nature, this supply yard has been in existence since 1966. The supply yard now has one rough terrain forklift assigned. Regularly 20-ton rough terrain cranes are used to unload incoming supplies and load out other supplies. 16

RECOMMENDATION: That an augmentation be authorized for operation of the Class IV supply yard consisting of the following:

- (1) One E-7 NCOIC.
- (2) Two E-5 Forklift operators.
- (3) Two E-5 Supply Specialists.
- (4) Two E-4 Supply Specialists.
- (5) Four E-3 General duty soldiers.

6. Organization: None.

7. Other: None.

1 Incl
as

Maurice H. Leiser
MAURICE H. LEISER
LTC, CE
Commanding

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5-CC, 937th Engr Grp (Cbt)
1-File
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HCC-CO (30 April 1968) 1st Ind.

SUBJECT: Operational Report - Lessons Learned (RCS CSFOR-CS), of Quarterly Period 1 February 1968 thru 30 April 1968.

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

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

1. The subject report, submitted by the 20th Engineer Battalion (Combat) has been reviewed and is considered to contain an excellent and accurate account of significant organizational activities.

2. I concur with the observations and recommendations of the Battalion Commander.


WILLIAM J. TALBOTT
Colonel, CE
Commanding

12 JUN 1968

AVBC-C (30 Apr 68) 2nd Ind

SUBJECT: Operational Report - Lessons Learned (RCS CSFOR-65), of
Quarterly Period 1 February 1968 thru 30 April 1968.

DA, Headquarters, 18th Engineer Brigade, APO 96377

TC: Commanding General, U.S. Army Vietnam, ATTN: AVHQC-DST, APO 96375

1. This headquarters has reviewed the Operational Report - Lessons Learned for the 20th Engineer Battalion (Combat) for the quarterly period ending 30 April 1968. It is considered to be an excellent account of the Battalion's activities during the reporting period.

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

a. Reference Section II, paragraph 2f. The capability of the Combat Engineer Battalion to perform horizontal construction should soon be augmented through MTOE action by the addition of a towed sheepfoot roller and a towed pneumatic roller. The Light Equipment Company is expected to be augmented by the addition of two towed pneumatic rollers. It is anticipated that this MTOE will be implemented in mid-summer 1968.

b. Reference Section II, paragraph 5. Though the unit is charged with the mission requirement of operating a Class IV Prefab Yard, it has also been given a civilian TDA to augment its capabilities in this area. Further U.S. augmentation is not warranted at this time due to the temporary nature of the mission, the successful use of IN Civilians, and the critical shortage of U.S. Military personnel in other, more critical, positions.


DOUGLAS K. BLUE
Colonel, CE
Deputy Commander

19
AVHGC-DST (30 Apr 68) 3d Ind CPT Arnold/dls/LBN 4485
SUBJECT: Operational Report-Lessons Learned (RGS GSFOR-65), of Quarterly
Period 1 February 1968 thru 30 April 1968

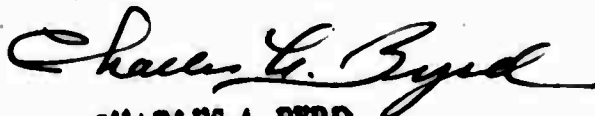
HEADQUARTERS, US ARMY VIETNAM, APO San Francisco 96375 16 JUN 1968

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

1. This headquarters has reviewed the Operational Report-Lessons Learned for the quarterly period ending 30 April 1968 from Headquarters, 20th Engineer Battalion (Combat).

2. Concur with report as submitted.

FOR THE COMMANDER:



CHARLES A. BYRD
Major, AGC
Assistant Adjutant General

Cy furn:
HQ 18th Engr Bde
HQ 20th Engr Bn (C)

20

GPOP-DT (30 Apr 68) 4th Ind
SUBJECT: Operational Report of HQ, 20th Engr Bn (Cbt) for Period
Ending 30 April 1968, RCS CSFOR-65 (R1)

HQ, US Army, Pacific, APO San Francisco 96358 26 JUN 1968

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

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

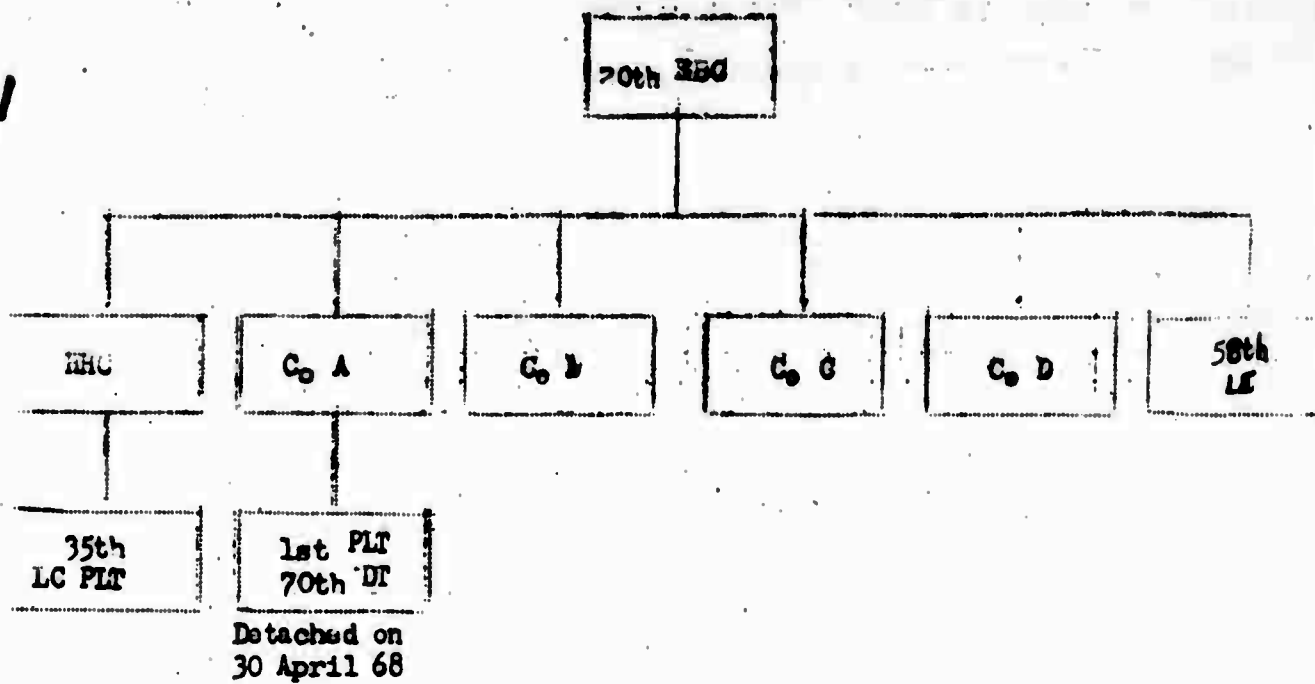
FOR THE COMMANDER IN CHIEF:



K. F. OSBOURN
MAJ. AGC
Asst AG

TEXT NOT REPRODUCIBLE

ORGANIZATION CHART - 20th SIG BN (CST)



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Inclosure 1

