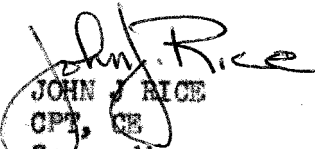


DEPARTMENT OF THE ARMY  
COMPANY A, 70TH ENGINEER BATTALION (COMBAT)(ARMY)  
APO SAN FRANCISCO 96297

1 May 1969

SUBJECT: Narrative of Unit Activities, ORLL, from 1 February 1969 to 30 April 1969

Commanding Officer  
70th Engr Bn (Cbt)(A)  
APO 96297

  
JOHN J. RICE  
CPT, CE  
Commanding

## A. OPERATIONAL SUPPORT

### 1. Mine Sweep

A daily reconnaissance (visual) mine sweep is made from BQ 534106 to BQ 539110 on the access road leading from the company area to QL21. To date no mines have been found nor have there been any mining incidents.

### 2. Bridge Repair of 21-27

On 24 February 1969, bridges 21-27 was damaged by enemy action. The center pier was destroyed and both spans were dropped. A 48" culvert was placed between the dropped spans, wooden headwalls were constructed out of 8"x12" and 3"x12" lumber, and the culvert was backfilled using blast rock and dirt. The company worked all through the day and most of the night until 0300 hours so that the highway would be open to traffic the next morning.

### 3. Base Camp Security

Company A continued the placing of concertina around the perimeter to include three rows of triple concertina and a double apron fence on the west side of the base camp. This work was completed by the first platoon in February. During the same period, a three-man outpost (8'x12') was built by the second platoon on a small hill to the east of the compound. Three rows of triple concertina were placed around it and tied in with the main perimeter.

### 4. Reconnaissance Patrols

Periodic seven-man patrols have been conducted to provide information on the surrounding area and to locate and report any signs of enemy activity. In addition, two all-day search and destroy operations were conducted with MACV in the area to the north of Khanh Duong. Several night ambushes were also conducted jointly with MACV although there were negative results.

### 5. A Co., 70th Engr-610th Consolidated Outpost

This six-man outpost was built by the first platoon in April to establish a mutual defense between Company A and the 610th Engineer Company base camp. It was positioned above the quarry site midway between Company A and the 610th. One row of triple concertina encircles the outpost with a second row in the process of completion. The outpost bunker (10'x10') is constructed out of bailey bridge panels and sandbags to provide overhead mortar protection.

## B. CONSTRUCTION SUPPORT

### 1. Maintenance of QL21

a. A Company's A.O.R. extends west from bridge 21-24 to bridge 21-31. Within this area the company has been primarily concerned with: (1) Potholing the highway (2) Construction of bypasses at the critical bridges (3) Preparing abutments for the construction of permanent bridges (4) Assisting the 610th Engineer Company in asphalt operations along our A.O.R.

1st Platoon has worked on bridge 21-29 cleaning out the river bed and diverting the river channel. Demolitions were used to destroy the large rocks where the culverts were to be placed. The area also had to be graded off and base course had to be hauled in from the 131st Engineer Company (L)(B). Three 66' sections of 72" culvert have been assembled and the forms for pouring concrete aprons and footers have been completed.

The 2nd Platoon has built bypasses at bridge 21-27 and bridge 21-28.4. The bypass at bridge 21-27 contains two 36" culverts with wooden headwalls. It was constructed to replace the original expedient bypass which was built on top of the blown spans. When this bypass was completed the 2nd platoon cleaned out the bridge site using explosives and an air compressor. A crane with clam shell was brought in to clear out the debris left from the dropped spans. Plans are presently being drawn up for the construction of a new bridge at QL21-27 utilizing the original abutments. At bridge 21-28.4, the 2nd platoon built a bypass using two 48" culverts and wooden headwalls. Blast rock and dirt was hauled in and a dozer was used to bring the bypass to grade.

3rd Platoon took over the job of clearing out the debris at bridge 21-28.4 using a crane with clam shell. Forms for the end dams were then constructed on top of the existing abutments and the end dams were poured. Materials are now being drawn for completion of the new bridge. In addition, the third platoon has also done some work at bridge 21-30 excavating for bedrock and preparing to build the forms for a new abutment.

Potholing has been going on steadily for the past three months along QL21 with the 3rd Platoon doing the majority of the work. This was originally being done with RC-3 and crushed rock however with the 610th Engineer Co producing asphalt in large quantities, use of this material has been incorporated into our pothole work. 610th asphalt operation began in April and for most of the month Company A has been supplying men to help rake the asphalt and act as road guards. A Company dump trucks also haul asphalt to the paving sight.

### 2. Base Camp Construction

A great deal of new construction has been completed on the base camp in the last three months. Squad size living/fighting bunkers have been completed by all of the platoons to include the placing of a dirt berm around the entire perimeter. Six (6) 20'x40' bunkers and six (6) 20'x30' bunkers were constructed. Four (4) 16'x32' S.E.A huts were built used as an orderly room, day room, supply room, and enlisted men's club. A 8 $\frac{1}{2}$ 'x8 $\frac{1}{2}$ ' Officer/N.C.O. shower and latrine was completed. A permanent mess hall (1280 square feet) was constructed by the 1st Platoon utilizing a concrete floor and S.E.A. design. A maintenance shop (20'x50') was built by the 2nd platoon utilizing the standard Brigade design with concrete floor. The 3rd platoon built a 12'x24' Tactical Operations Center (TOC) and backfilled it with blast rock and dirt. A mortar pit was constructed below the ground for the 81mm mortar crew utilizing steel pickets, roofing tin, and 55 gallon drums.

## C. LESSONS LEARNED

### 1. Expedient Bypass Over Blown Bridge

#### a. Observation:

When a bridge is destroyed by the enemy using demolitions to blow up the center pier and drop both spans, it is sometimes easier to build a bypass over the blown bridge rather than try to construct a hasty bypass. This problem was encountered by the 2nd Platoon at bridge 21-27 where it would have taken at least a week to construct a suitable bypass on either the upstream or downstream side given the steep terrain and limited equipment.

#### b. Evaluation:

Since time was the critical factor in reopening the highway to traffic, it was decided to place one large culvert in the "V" formed by the dropped spans and to use these spans to support the weight of the fill on top of the culvert. To prevent any shifting of the dropped spans during the placing of the fill, it is recommended to place pressure charges on the dropped ends of the spans before attempting to position the culvert in place. This will prevent the possibility of any later settling which could cause the culvert and/or headwall to become crushed by the weight of the fill.

#### c. Conclusion:

The dropped spans served their purpose as a temporary support for the expedient bypass. The placing of pressure charges would have greatly alleviated many of the problems which arose later as a result of the spans shifting under the weight of the fill.

### 2. Clearing Of Aggregate For Use In Concrete

#### a. Observation:

Suitable screening and washing facilities were not available for washing the dirt and grit from aggregate prior to pouring a concrete pad. The disadvantage of using dirty aggregate for concrete work was quickly realized from a strength test point of view.

#### b. Evaluation:

A jeep trailer can be used on a small scale to perform the same function as a screening and washing device given the absence of anything more sophisticated. By filling the trailer with water and rock and then moving the tongue up and down, the aggregate is slowly cleaned while the dirty water is drained out by use of the drain plugs so that the process can be repeated as needed.

#### c. Conclusion:

The jeep trailer is a light-weight portable piece of equipment which can be used for a variety of jobs to reduce man hours, equipment hours and material needed.

### 3. Modification Of Roof For Standard Living/Fighting Bunkers

#### a. Observation:

It was observed during a heavy rain that water had a tendency to form pools on top of the Brigade designed living/fighting bunkers. Eventually the water that collected in these pools found its way through the tar paper on the roof and down through the ceiling.

b. Evaluation:

By cutting the posts in front longer than the ones in the middle and in back, it was found that the roof of the living/fighting bunkers could be built on a slant which would allow the proper run-off of rain water.

c. Conclusion:

With no additional materials needed, the living/fighting bunkers could be made much more rain resistant given this slight modification of the present design.

4. The Placing Of Posts Without The Use Of Anchor Bolts

a. Observation:

Not having any anchor bolts to secure the posts of the maintenance shop to the concrete floor, the platoon leader of the 2nd Platoon was not sure how he could continue with the construction for the building.

b. Evaluation:

After considerable evaluation, the platoon leader was advised that he could use a short piece of lumber of the same dimension as the post to form a base in the concrete floor. This was accomplished by oiling the piece of lumber and placing it down in the wet concrete before the cement had begun to set. By removing the oiled piece of lumber just prior to the complete hardening of the concrete, it created a place for the post to set and thus secured it to the floor.

c. Conclusion:

The concrete base for the posts made a good foundation for the building and at the same time eliminated the need for anchor bolts.