DEPARTMENT OF THE ARMY
HEADQUARTERS 1ST ENGINEER BATTALION
APO San Francisco 96345

AVDB-CE-3 1 October 1966

SUBJECT: Combat Operations After Action Report

THRU: Commanding General
1st Infantry Division
ATTN: AVDB-T
APO 96345

TO: Commander
US Military Assistance Command, Vietnam
ATTN: J321
APO 96307

1. Name of Operation: El Paso II/III.

2. Date of Operation: 030730 Jun 66 - 031500 Sep 66.

3. General: The command headquarters for the engineer portion of Operation El Paso II/III was Headquarters, 1st Engineer Battalion, acting in accordance with 1st Engineer FRAG ORDERS 4-66, dated 14 June 1966, 5-66 dated 23 June 1966, 6-66 dated 7 July 1966 and 1st Engineer Battalion OPORD dated 14 June 1966. The 1st Engineer Bn (-) provided combat support to the 1st Infantry Division (-) in its mission of search and destroy in the vicinities of An Loc/Quan Loi/Loc Ninh/Minh Thanh areas. Primarily engineer support was required for the improvement of the airstrips at Minh Thanh, An Loc, and Quan Loi, which was accomplished by D Co with attachments from HQs and A Companies. The battalion also performed general engineering tasks such as construction of field fortifications and LZs, road clearing operations, and AVLB preparation and installation, as well as demolitions.

a. Reporting Officer: LTC J. M. KIERNAN JR.
Commanding Officer
1st Engineer Battalion

b. Task Organization:

| | | |
|---|---|---|
| Headquarters 1st Engr Bn | | - LTC SARGENT (3 Jun-14 Jul 66)<br>LTC KIERNAN (15 Jul-3 Sep 66) |
| Task Force (1) | Company A (-) | - Cpt WAYNE M LUCAS |
| Task Force (2) | Company D<br>2d Platoon of Co A | - Cpt OLLIE T JACKSON (3 Jun-5 Aug 66)<br>Cpt THOMAS E VALENTE(5 Aug-3 Sep 66) |

4. Intelligence:

a. Intelligence prior to Operation: Current intelligence summaries.

b. Enemy Situation During Operation:

(1) 2d Plt, D Co convoy with 1/4 Cav ambushed on Highway 13.

Engineer casualties - 1 KIA, 9 WIA.

c. Intelligence During Operation:

(1) During the operation the following missions were completed by the S-2 Section.

| | | |
|---|---|---|
| Air Recons | - | 36 |
| Ground Recons | - | 3 (bridges, route 13, and Minh Thanh) |
| Laterite pits | - | 1 (15 Jun 66) |
| AVLB Site | - | 1 (25 Jun 66) |
| Minh Thanh Air Field Survey | - | 1 (14 Jun 66) |

(2) The balance of the S-2 activities during Operation El Paso II/III were mainly in the forms of aerial recons of route 13 and the Minh Thanh area. The ground recons were conducted by a single team with the balance of the section remaining in the Di An Base area. Approximately 15 Jul 66 the recon team in the field returned to Di An. The remainder of the operation the S-2 section support was limited to periodic aerial recons of the operational area.

5. Mission: 1st Engineers provide combat support for the 1st Infantry Division in its mission of search and destroy in the vicinities of An Loc, Quan Loi, Loc Ninh, and Minh Thanh. Specifically the airstrip at Minh Thanh was to be improved to carry C-130 air traffic, and the airstrips at An Loc and Quan Loi were also to be improved. General engineering support such as field fortifications and LZ construction, demolition work, and road clearance were to be performed.

6. Concept of Operation: Co D (-) and Co A (-) provide combat support for 1st Div (-) in search and destroy mission. 1st Engr Bn S2/3 recon-survey team performs survey and staking of Minh Thanh airfield. Co D with one platoon from A Co and heavy equipment from HQs attached accomplishes initial hasty repairs to allow landing of C-130 aircraft carrying construction equipment, and utilizing organic and attached equipment, accomplishes improvement of Minh Than airfield to include reshaping, resurfacing, and widening airfield, clearing approaches, and constructing turnarounds. Upon completion of Minh Thanh airfield improvement Co D (-) moves to An Loc and then to Quan Loi for improvement of the existing airfields at those locations. Company B attaches two demolition teams to 2/26 Inf to perform general demolition support. Co B attaches one squad to HHC, 2d Bde for mine detection and destruction.

7. Execution:

8 Jun - 2d Pltoon, D Co, convoyed north on Highway 13 with 1/4 Cav to assist the Cavalry move up the road. The unit mission was to clear road of mines and destroy all roadblocks that could not be bypassed. Column was ambushed near Bench Mark 69 (XT 766746). Engineer casualties were 1 KIA and 9 WIA.

10 Jun - 1st Platoon D Co moved to An Loc to reinforce 2d Platoon.

10 Jun - 28 Jun - 1st and 2d Platoons, D Co, constructed bunkers for 3d Bde TOC, communications center, and FCC at Loc Ninh. The units also conducted a reconnaissance and classification of a bridge vicinity of Loc Ninh and constructed an LZ to extract wounded near the same location.

14 Jun - S-2 Section performs recon and survey of Minh Thanh airstrip.

14 Jun - 3d Platoon, D Co, moved to Minh Thanh to begin repair and improvement of airstrip.

15 Jun - 24 Jul - A Co (-) provides combat support for 1st Bde, and 1st Div Fwd. Constructed bunkers and maintained Div Forward area. Constructed field fortification of bunkers, concertina, and fields of fire at 1st Bde forward area. Installed 200 ft of 36" culvert. Cleared area for artillery mask clearance, 20 trees ranging from 2 to 5 feet in diameter.

15 Jun - S-2 recon team recons laterite pit near Minh Thanh.

16 Jun - A Co sent 1 Plt to Minh Thanh to be attached to D Co for improvement of Minh Thanh airstrip.

16 Jun - The following equipment was airfifted to 3rd platoon, D Co;

| | | | |
|---|---|---|---|
| 5 ton dump trucks (D Co) | 6 | front loader (1st S&T) | 1 |
| 13-wheel roller (D Co) | 1 | 13-wheel roller (173d) | 1 |
| 2½ ton truck (D Co) | 2 | front loader (173d) | 1 |
| ¼ ton truck (D Co) | 1 | dozers (173d) | 2 |
| 5 ton dump trucks (C Co) | 3 | | |
| graders (HQ Co) | 3 | | |

17 Jun - 1st Engineer Battalion Forward elements displace to join 1st Div Forward at Minh Thanh.

14 Jun - 14 Jul - Company D with 1 platoon, A Co attached, improved the Minh Thanh airfield to include a runway 5900 feet long and 80 feet wide and a parking apron 150 feet x 400 feet. Construction was started on a 150 ft x 400 ft supply and logistics area, but this area was not completed. Turn-arounds were constructed at each end of the runway. A laterite pit was opened and operated one mile from the job site to support the operation. Demo teams from A & D Co's blast trees and stumps to expand airstrip, parking aprons, and 2 approach zones (500' x 300' ea).

19 - 28 Jun - B Company attaches two demolition teams to 2/16 Inf to perform general demolition support of Infantry Operations.

25 Jun - S-2 Section recons AVLB site for movement of 1st Div convoys.

26 Jun - A Co platoon prepared abutment and installed AVLB for 1st Div convoys.

26-27 Jun - A Co platoon constructed LZ for extraction of 17,000 tons of captured rice. The rice was stored in different sites containing from 100-500 tons in each site. Trees around the site were blown away to expose them to air observers. Some rice extracted, but most of rice merely scattered on the ground.

6 Jul - D Co demo team detonated a dud 500 lb bomb.

9-10 Jul - A Co & D Co elements prepare AVLB bridge site, install the AVLB, and after convoy passage, withdraw AVLB.

11 Jul - 3d Plt, D Co, convoyed from Minh Thanh to An Loc accompanied by elements of the 1/4 Cav. Equipment convoyed included one front loader, three 5-ton dump trucks, and one 1/4 ton truck.

12-15 Jul - 3d Plt, D Co resurfaced the An Loc airfield with laterite. 75% of the airfield was resurfaced. The strip is 1850 feet long and 120 feet wide. The platoon operated a laterite pit at the airfield to support the operation.

12 Jul - 24 Aug - One squad from B Company attached to HHC, 2d Bde to be utilized for mine detection and destruction.

14 Jul - 1st Engineer Battalion Forward returned to Di An Base Camp.

14 Jul - 1 Plt A Co departed Minh Thanh and returned to Phuoc Vinh Base Camp.

16 Jul - 3d Platoon, D Co moved to Quan Loi plantation to begin improving runway to 3500 feet.

17 Jul - 3 Sep - 3d Plt, D Co improved the airfield at Quan Loi. The runway was extended to 3500 feet long and 60 feet wide to take C-130 air traffic. A 400 ft by 382 ft parking apron was constructed at the southern end of the airfield. The platoon received additional equipment support from a 5th ARVN Div Engineer Company which provided three 2/½ ton dump trucks, one D-7 dozer, and one front loader. An Loc Public Works provided two 2 ½ ton dump trucks, and the French Plantation owner provided TD-9 dozer and one 13-wheel roller. The platoon operated a laterite pit four miles from the airfield. The average daily haul was fifty loads.

3 Aug - 1st Plt, D Co convoyed from Lai Khe to Quan Loi with five 5-ton dump trucks, one grader, and one front loader. The 1st Platoon relieved the 3d platoon of the Quan Loi airfield construction project for six days.

6-24 Aug - One officer of B Company joined 2d Bde Forward acting in capacity of brigade engineer to provide technical advice and assistance in engineering matters.

9-11 Aug - 1st and 3d Plt, D Co constructed headwalls for the AVLB site at the Cam Le bridge site (XT 723973).

15 Aug - 1st Plt, D Company returned to Lai Khe by air. 3d Plt continued Quan Loi airfield construction.

3 Sep - 3d Plt, D Co returned to Lai Khe. Quan Loi airfield project assumed by Company A. Company D trucks and equipment at Quan Loi were attached to Company A.

8. Supporting Forces: 1/4 Cav provided convoy security for D Company road movements. Otherwise security provided by both 1st and 3d Brigade Forces.

9. Results:

a. Personnel: 1st Engr Bn sustained 1 KIA and 12 WIA during Operation El Paso II/III.

b. Awards: Personnel of the 1st Engr Bn received three Vietnamese Crosses of Gallantry, three Bronze Stars w/"V", and 4 Bronze Stars.

c. Equipment: There were no equipment losses during the operation.

d. Enemy Losses: Total unknown. VC body count from action on 8 Jun in which 1/4 Cav and D Co participated was 103.

e. Construction:

(1) 6 permanent bunkers constructed.

(2) 90 semi permanent bunkers constructed.

(3) 3 LZs constructed.

(4) Headwalls constructed for one AVLB site.

(5) AVLB abutments prepared & AVLB launched and retrieved three times.

(6) Laterite Pit Operation:

(a) Minh Thanh - 31 days
(b) An Loc - 3 days
(c) Quan Loi - 49 days

(7) Airfield construction and improvement

(a) Minh Thanh runway - 5900' x 80'
(b) Minh Thanh runway turn-arounds - 2 ea
(c) Minh Thanh parking apron - 400' x 150'
(d) Minh Thanh supply and logistics area - 400'x150' - not completed
(e) An Loc airfield - 75% of runway resurfaced runway 1850' x 120'
(f) Quan Loi airfield - improvement of runway - existing runway is expanded to 3500' by 60'
(g) Quan Loi parking apron - 400' x 382'.

(8) Engineer Reconnaissance

(a) Air Recons - 36
(b) Ground Recons - 3
(c) Laterite pits - 1
(d) AVLB sites - 4
(e) Minh Thanh air field survey - 1

10. Administration:

a. Personnel:

(1) Company D
(2) Company A
(3) 1st Engr Bn HQs (-)
(4) One officer, one squad, two demo teams of Company B

b. Supply:

(1) S-4 representative at Minh Thanh from 17 Jun to 6 Jul.

(2) 1st Engineer Battalion units supplied through normal supply channels.

(3) There were no particular difficulties.

c. Maintenance: Company maintenance personnel maintained and repaired vehicles and equipment in the field. At times a portion of the battalion maintenance section was in the field to advise on maintenance problems and assist in obtaining repair parts. Maintenance of non-standard engineer equipment on loan from other sources presented a continuing heavy burden on the battalion maintenance section.

d. Transportation: Organic transportation was used except for most resupply which was by air.

e. Communications: TOE FM radios were the principle means of communication.

f. Medical: Medics organic to the Companies were used in the field.

11. Special Equipment and techniques: None

12. Commander's Analysis:

Once again the 1st Engineer Battalion was called upon to perform many of the missions that can be required of a divisional combat engineer battalion in combat. These included airfield improvement and expansion, road clearing, bunker construction, LZ construction, jungle clearing, AVLB site preparation and installation, demolition work as well as various other engineer missions.

AVDB-CE-3 1 Oct 66

SUBJECT: Combat Operations After Action Report

Once again the 1st Engineer Battalion has proven that it can handle these varied tasks in an outstanding manner.

FOR THE COMMANDER:

Rodger M Bivens

RODGER M BIVENS
Cpt, CE
Adjutant

DISTRIBUTION:
Special

CO, G D

DEPARTMENT OF THE ARMY
HEADQUARTERS 1ST ENGINEER BATTALION
APO San Francisco 96345

AVDB-CE-3 22 November 1966

SUBJECT: Combat Operation After Action Report

THRU: Commanding General
1st Infantry Division
ATTN: AVDB-T
APO 96345

TO: Commander
US Military Assistance Command, Vietnam
ATTN: J321
APO 96307

1. NAME OF OPERATION: Operation TULSA

2. DATES OF OPERATION: 090700 Oct to 151700 Oct 1966

3. GENERAL: The command headquarters for the engineer portion of Operation Tulsa was Headquarters, 1st Engr Bn acting in accordance with 1st Engr Bn OPORD 6-66 dated 051800 Oct 66. The battalion provided combat support to the 1st Infantry Division during the clearing and securing of Route 13 from Lai Khe to An Loc and accomplished road repairs necessary to keep the road passable for wheel and track convoys up to class 55. One engineer task force worked from An Loc south to Chon Thanh, another from Lai Khe to XT 784497, and another from XT 784497 to Chon Thanh. One company supported 3/7 Rangers (ARVN) and 36th Rangers (ARVN) with mine clearing teams in the vicinity of Chon Thanh.

a. Reporting Officer: LTC J.M. KIERNAN JR.
Commanding Officer
1st Engineer Battalion

b. Task Organization:

HQs, 1st Engr Bn - LTC KIERNAN
2d plt, E Co - LT D'Orsi
5 38'4" dry spans

(1) Company A - WAYNE L. LUCAS, Cpt, CE

1 D Co TD24 dozer
2 HQ Co Cat 12 graders
1 D Co and 1 S & T scoop loader
7 D Co and 1 HQ Co 5 ton dump trucks
1 D Co 5 ton tractor with lowboy
1 French 13-wheel roller

Above equipment was under A Co control at Quan Loi prior to Operation Tulsa.

1 tank dozer
1 AVLB with launcher

(2) Company C minus 1st plt - LARRY A. BLAIR, Cpt, CE

1 HQ Co grader
2 HQ Co 5 ton tractor
1 HQ Co lowboy
2 HQ Co tank dozers
1 HQ Co rooter with tractor
1 jeep mounted mine detector

(3) D Company - THOMAS E. VALENTE JR., Cpt, CE

1 HQ Co grader

(4) 3/9 Inf (ARVN) and 36th Rangers (ARVN)

4 three man mine detector teams from B Co

4. INTELLIGENCE:

a. Intelligence Prior to Operation:

(1) Location and type activity (obstacles)

| Location | Type Activity |
|---|---|
| XT 785397 | culverts collapsed at ends |
| XT 787465 | large crater in road |
| XT 784497 | large crater in road |
| XT 786508 | 38'4" dry span, south end blown |

| Location | Type Activity |
|---|---|
| XT 787511 | two long soft spots in road |
| XT 788520 | large crater in road |
| XT 790528 | soft spot in road |
| XT 765720 | water across road |
| XT 765729 | 38' dry span approaches need repair |
| XT 766741 | water over road |
| XT 767750 | water over road, insufficient number of culverts to handle drainage |

(2) Enemy Capabilities

(a) Main Force - Six main force battalions thought to be in position to attack or set ambushes along Route 13 in Binh Long and Binh Duong Provinces 4 to 8 hours after startof move. An additional six main force battalions are thought to be in position to reinforce 8 to 48 hours later.

(b) Local force - There are seven confirmed local force companies operating in Binh Duong Province with a strength of approximately 580. Binh Long Province has three local force companies with an approximate strength of 110. These companies are capable of limited attacks and harassing actions along Route 13.

(c) From 1 October through 7 October 1966 1st Infantry Division G-2 reported sixteen separate sightings of enemy personnel in the Binh Duong and Binh Long provinces along Route 13.

(3) 2-2 Recon Section performed five aerial recons of Route 13 before the resupply convoys were conducted. Route 13 was found to be in poor condition, especially the section between Lai Khe and Chon Thanh.

(4) The following construction material was airlifted to Quan Loi and stocked for the operation.

(a) 8 x 8 lumber - 1575 BF

(b) 3 x 12 lumber - 564 BF

(c) 60d nails - 200 lbs

(d) sand bags - 8000 ea

(e) concertina - 2 bundles

(f) culvert

| | |
|---|---|
| 12" | 80' |
| 24" | 120' |
| 36" | 120' |

(g) PSP 8 bundles

(5) The following construction material was moved by convoy to Lai Khe and stocked for the operation.

(a) Lumber

| | |
|---|---|
| 4 x 12 | 4000 BF |
| 8 x 8 | 3100 BF |
| 8 x 12 | 1000 BF |
| 3 x 12 | 15000 BF |
| 6 x 8 | 1500 BF |

(b) 28" driftpins 150 ea

(c) 10" spikes 100 lb

(d) 8" spikes 400 lbs

(e) 60d nails 400 lbs

(f) 16d nails 100 lbs

(g) sandbags 12000 ea

(h) concertina 70 rolls

(i) culvert

| | |
|---|---|
| 12" | 120 ft |
| 18" | 40 ft |
| 24" | 160 ft |
| 48" | 160 ft |

(j) PSP 28 bundles

b. Intelligence during Operation:

(1) Two laterite pits were operated from 9 Oct - 15 Oct 66.

(a) Delta Co pit operated at Lai Khe.

(b) Alpha Co pit operated at Quan Loi.

(2) A Co operated a rock stock pile at An Loc for repair of road surfaces on Route 13.

(3) During the period from 8 Oct thru 16 Oct 66 the S-2 recon section conducted 8 ground recons and 11 aerial recons as well as numerous ground escort missions.

(4) One pressure detonated mine, five grenades, and two command mines were discovered and destroyed by demolitions.

(5) One 1st Engr Bn jeep with the driver, a medic, and one officer was ambushed at XT 793442 on 12 Oct 66. VC opened up with automatic weapons, M79s, and small arms. Fire was returned with unknown results. One Engr WHA, four infantry WHA. This was the only Engr casualty during the operation.

(6) Heavy rains during the first four days of the operation caused much additional engineer effort to be placed on Route 13.

5. MISSION: 1st Engr Bn provides combat support to elements of the 1st Inf Div and the 5th ARVN Div engaged in securing Route 13, repairs Rte 13 between Lai Khe and An Loc to pass division and civilian traffic, and assists in passage of convoys.

6. CONCEPT OF OPERATION: A Co supports 1st Bde and 5th ARVN units between An Loc and Chon Thanh. D Co and C Co support 3d Bde and 5th ARVN elements from Lai Khe to XT 784497 and from XT 784497 to Chon Thanh respectively. Company B supports 3/9 Rangers (ARVN) and 36th Rangers (ARVN) with nine 3 man mine clearing teams in the vicinity of Chon Thanh.

7. EXECUTION:

6 Oct: Advance party of one officer from S-3 and one officer and one NCO from C Co depart Di An for Lai Khe by slick to arrange for quartering site.

7 Oct: 1st Engr Bn forward, with representatives from all sections, Co C,(-), and 2d plt, E Co moves from Di An to Lai Khe by 3rd Bde convoy. Construction materials (listed above in 4 a (5) were also moved to Lai Khe by convoy in preparation for the upcoming operation). 1st Div forward moved part of its elements to Lai Khe by convoy.

8 Oct: 1st Div forward completed movement by convoy from Di An to Lai Khe. Battalion forward consisting of a tactical Bn Headquarters, Co C (-), D Co, and 2d plt, E Co became operational at Lai Khe. A Co (-) moved from Phuoc Vinh to Quan Loi by C-130 aircraft. The H-13 helicopter under OPCON 1st Engineers received a round through its generator while on recon but returned safely to Lai Khe.

9 Oct: A Company started sweeping south from Quan Loi for mines. C-123 aircraft airlifted construction material into Quan Loi for use by A Co in the operation (see 4. a. (4) above).

C Company - Three mine detector teams from 3d plt departed Lai Khe at 0700 attached to Co C, 2/28 Inf and swept Route 13 north to Ap Ben Dong So. At 0900 three mine detector teams from the 2d plt were airlifted along with Co A and Co B, 2/28 Inf to Bau Bang and swept south to Ab Ben Dong So. Two D-7E dozers were used to clear 20 acres of rubber vicinity XT786405 to XT787408. The two rooters worked north from Lai Khe on the east and west sides of Route 13 for 7 kms. One command non-metallic mine was blown in place at XT792426 after the rooter had uncovered its wires. The 2d plt repaired the bridge at XT784396, and filled in a mine crater at XT792426 in addition to performing general road repairs from Lai Khe to Bau Bang with 25 loads of laterite. The 3d plt prepared defensive positions and improved the LZ for C Co, 2/28 Inf at XT792416. RON for the night was at XT788462 with C Co being responsible for 300 meters of defensive perimeter.

D Company - D Co departed Lai Khe at 1500 hours and moved to RON position at XT786463; 2/28 Inf was in command of the RON position. Four 3 man mine detector teams and an NCOIC from B Co were airlifted from Di An to Chon Thanh to support 5th ARVN elements for the duration of the operation. Two teams swept Rte 13 daily to 6 km north of Chon Thanh in support of the 3/9 Rangers. The other two teams swept Rte 13 daily to 6 km south of Chon Thanh in support of the 36th Rangers (ARVN). During the operation one pressure detonated mine and one grenade were discovered and destroyed. 2d plt, E Co prepared a 38'4" M4T6 dry span at Lai Khe for air lift by Chinook. This consisted of two external loads (H frame & balk) and one internal load (short balk, tools and personnel).

10 Oct: A Company (-) cleared Rte 13 from XT767760 south to XT766670. One home-made booby trapped grenade and two booby trapped US fragmentation grenades were found and destroyed.

C Company - The mine detector teams attached to B and C Companies 2/28 Inf swept Rte 13 from Bau Bang to Lai Khe (7 kms). After 1/16 Inf was airlifted to XT785504 and Rte 13 was swept south to Ban Bang, the 2d and 3d platoons repaired the road north of Bau Bang to XT784497. The main effort was expended on a large hole at XT789461, with a total of 11 loads of laterite used for road repair. The two D7E dozers cleared 20 acres of scrub jungle at ambush corner (XT794437). The two rooters worked North from Bau Bang to XT784497, working on the west side of Rte 13. OPCON of rooters was turned over to D Co. C Company's area of responsibility increased at this time to include XT785507 to XT783559. At 1700 C Co moved to RON at XT785504 with the 1/16 Inf where it was responsible for 100 meters of perimeter.

D Company - D Co convoyed north to its work site at XT 786508 accompanied by E Troop, 1/4 Cav. A ditch was cut by hand labor at this location and the blown portion of the existing 38'4" dry span was repaired. Timber treadways were constructed over the southern portion of the bad spot at XT787511. Control of the two rooter dozers was received in the afternoon from C Co, and rooting was accomplished from XT784494 to XT784554. RON for the night was at XT786505.

11 Oct: A Company - 1st Plt operated the rock stockpile at An Loc. 2d Plt acquired OPCON of one rooter dozer at Chon Thanh (the other was deadlined) and worked it north to XT766680 and back to Chon Thanh. 3d Plt made general road repairs on Rte 13 from XT767760 to XT766670.

C Company - Due to heavy rains the night before two hours were spent on recovering vehicles from the RON position. The mine detector teams attached to B and C Companies, 2/28 Inf repeated sweeping operations and continued this daily for the duration of the operation. 3d Plt constructed a 30 ft class 60 timber treadway using trestle bridge design methods at XT789528. 2d Plt continued road maintenance from Bau Bang to XT784497, and constructed a 30 ft timber treadway at north approach to the 38'4" dry span located at XT785508. C Co was given the mission of defending two Arty batteries at XT788462 along with Co A, 1/16 Inf and one plt of 1/4 Cav. 33 EM of the 2/33 Arty were placed under OPCON of C Co for perimeter defense. Co C defended 800 meters of perimeter and conducted a platoon size ambush patrol vicinity XT791463.

D Company - 2d Plt constructed a 38'4" M4T6 dry span, which was convoyed out by bridge trucks the day before, at the northern portion of the bad spot at XT788520. 3d plt repaired and constructed a timber treadway at the southern portion of the bad spot at XT787511. Both rooters were received and rooting accomplished from XT784554 to Chon Thanh. 2d plt, E Co continued to haul lumber to D and C Companies by bridge truck for road repairs.

12 Oct: First convoy of approximately 500 vehicles moved north consisting of US resupply convoys, ARVN rice carrying vehicles, and RVN civilian vehicles. The schedule called for convoys south on the 13th, north on the 14th, and final convoy south on the 15th. 1st Engr Bn elements continued emergency road repairs and assisted in convoy passage by having men and equipment on hand at the bad spots in case of emergencies.

A Company - Six 2 man demolitions teams were attached to the 1/26 Inf. 1st plt secured the laterite pit and attached three mine detector teams to the 1/26 Inf for road sweeping of Rte 13. One dozer secured by 1/26 Inf cleared jungle 50 meters on either side of Rte 13. 2d plt received OPCON of the two rooter dozers from D Co and rooted from XT 766680 north to XT762810, also repairing a fixed span bridge at XT765729. 3d plt hauled laterite to the airfield at Quan Loi extending the airfield approximately 150 feet. A VTR pulling an M48 tank crossed the 38'4" M4T6 dry span causing a partial failure under the overloaded condition. Emergency repairs were affected by flying in necessary material, but later that night another tank attempted to cross at an angle and caused additional damage.

C Company - After a pre-dawn sweep in front of defense positions and the return of the ambush patrol, the company was airlifted to the 2/18 Inf area and proceeded north to work areas when the road became secure. The convoy passed through the sector without hindrance. 2d plt maintained the dry span bridges; 3d plt maintained the timber bridge at XT789528 and prefabricated 20 ft of timber treadway during convoy passage. At 1600 hours, after convoy passage, 2d plt initiated construction of 40 ft of timber treadway, placing the footers and stringers. Project was then turned over to D Co for completion. Equipment RON at 2/18 Inf while the Company was airlifted to its previous RON position to defend the Artillery. 3d plt conducted a night ambush patrol vicinity XT788457. That night C Company was placed on 75% alert due to suspected VC regiment 4 kms west of RON location; however, no contact was made.

D Company - 2d plt completed the timber treadway initiated by C Co at XT787511. The road from Lai Khe to XT787511 was constantly patrolled during convoy passage, and minor repair work (drainage and pick and shovel work) continued throughout the day by squad size units. 3d plt returned to Lai Khe for the night so that they would be in position to move north from Lai Khe and work the southern portion of the company area of responsibility.

13 Oct: A Company - A Co removed the dry span damaged the night before and constructed a French drain in its place. Rock for the construction was obtained from the Public Works Department in An Loc and was used to construct the Frence drain with rock surfacing that permitted wheel and track vehicles to pass over the stream. From beginning to end this project took only two hours. A Co continued clearing jungle to 50 meters on both sides of Rte 13. The laterite pit at Quan Loi was operated and laterite hauled to the Quan Loi airfield which was extended another 150 feet.

C Company - After a pre-dawn sweep of positions and the return of the ambush patrol, 3 sorties of 2 helicopters each airlifted the 2d and 3d platoons to 2/18 Inf. 3d plt installed prefabricated treadway at XT789529 and improved approaches to the treadway prior to the convoy reaching that location. A large hole at XT793538 was filled with laterite and decked with timber. Remainder of the day was spent at critical spots in the road to assist in convoy passage. C Co again defended the Artillery being responsible for an 800 meter front, with HQ plt conducting a night ambush patrol.

D Company - All squads and vehicles were dispersed at the bad spots in the road from Lai Khe to XT787511 so that continuous maintenance could be performed on the bad spots and any vehicles in the convoy that became stuck could be pulled out by company equipment or vehicles. A timber and PSP treadway was placed over a bad spot at XT790455. Otherwise, maintenance of bad spots in the road consisted of drainage by hand work, filling with laterite, and shaping with shovel work or grader work.

At 0800 a 1st Engr Bn HQs jeep with the driver, one officer, and a medic was ambushed at XT793442 by VC small arms, automatic, and M79 fire. Similar fire was returned by both the engineers and the infantry squad that was in the area. Contact was broken after 15 minutes of intense firing.
Casualties: 1 Engr WIA, 4 Inf WIA VC Casualties unk.

14 Oct: A Company - 1st Plt continued jungle clearing with two dozers on both sides of Rte 13. An area approximately 400m X 50m was cleared between XT765720 and XT761730. The laterite pit was secured and operated at Quan Loi, hauling 50 loads of laterite to the airfield at Quan Loi.

C and D Companies - C and D Co continued mission of road repair maintenance and assistance in convoy passage. In addition C Co used four dozers to clear 20 acres of jungle on the west side of Rte 13 from XT790531 to XT793537.

15 Oct: A report that the VC blew a 30' bridge on Rte 13 just north of Phu Cuong at XT802167 reached 1st Engr Bn forward at 0640 hrs. At 0700 command reconnaissance was made and a preformed 38'4" dry span was prepared for CH-47 airlift. An AVLB was made available from the 34th Armor Bn at Lai Khe as a backup capability and was dispatched from Lai Khe under 1st Engr escort at 0800 hrs. CH-47 lifts commenced at 0845 hours with 1st plt, D Co, and a few E Co personnel being lifted to the site to do the construction work and the 3d plt, D Co and E Co personnel loading the bridge parts at Lai Khe. Orginally two CH-47s were to be made available but only one arrived. It made two lifts placing the H frame into position and bringing in needed deck balk. It looked as if the bridge would be completed by 1000 hours in time for the south bound convoy passage at 1040 hours when the 3d CH-47 lift was aborted due to aircraft mechanical failure. By 1020 hrs the AVLB arrived after passing through several spots of sniper fire. By this time the 75% completed dry span was in place, and it would require considerable time and effort to be removed. The AVLB, if placed horizontally on top of the dry span would have impossible approaches (about two feet above the road surface). A quick decision to place deck balk on the center of the dry span and under the AVLB thereby breaking its span proved effective. All vehicles except semi-trailers were passed over this hasty bridge, and by the time the semi-trailers arrived, the necessary short and tapered balk had been flown in by HUID slicks and in 15 minutes the AVLB was removed and the dry span completed to continue passage of the convoy.

A Company - Using two dozers the 1st Plt continued jungle clearing on both sides of Rte 13 from XT766670 to XT766680, clearing each side 50 meters back from the road for a distance of 250 meters. The 2d and 3d plts secured and operated the laterite pit at Quan Loi and hauled 43 loads to the airfield.

C Company - C Co continued its mission of road repair and assistance in convoy passage in its area of responsibility. Jungle clearing also continued with 20 acres of jungle being cleared on the east side of Rte 13 from XT790531 to XT793537. C Co closed on Lai Khe in the afternoon for maintenance prior to departing for Di An the following day.

D Company - 1st & 3d plts assisted in constructing the dry span just north of Phu Cuong as described earlier. 2d plt assumed responsibility for the entire company sector north of Lai Khe and conducted minor road maintenance, repair, and assisted in convoy passage. Both company dozers were under OPCON of C Co and assisted in jungle clearing operations.

The last scheduled convoy of Operation Tulsa passed between Quan Loi and Lai Khe, and like all the others, without any appreciable delays or incidents.

16 Oct: 1st Engr Bn forward elements consisting of staff sections, C Co (-), and 2d plt, E Co departed Lai Khe by convoy and closed on Di An at 1700 hours.

A Company - A Co removed the AVLB from XT767761 and made the area passable to civilian traffic. The laterite pit continued operation, hauling laterite to the airfield at Quan Loi. 1st plt departed Quan Loi for Phuoc Vinh and the remainder of the company closed to Quan Loi and prepared to support Operation Shenandoah West.

C Company - Company D (-) closed on Lai Khe with the 3d plt remaining in the field to support 1/16 Inf in Operation Shehandoah West. The B Co mine detector teams were picked up from Chon Thanh and returned to Di An.

9. Results:

a. Personnel: 1st Engr Bn sustained only one WIA on Op Tulsa.

b. Equipment: There were no equipment losses.

c. Enemy losses: Unknown.

d. Construction:

(1) Roads and Bridges

(a) Improved and repaired 45 kms of road.

(b) Two AVLBs positioned for convoy passage and then retracted at end of operation.

(c) One 38'4" dry span repaired (southern end blown).

(d) One French drain constructed.

(e) Two 38'4" dry spans constructed.

(f) Seven timber treadways for a total length of approximately 200 ft were constructed.

(2) Field fortifications: Individual and command protective emplacements only.

(3) River crossings: None

(4) Airfields: Quan Loi airfield extended approximately 500 ft with laterite.

(5) Reduction of enemy obstacles:

(a) Mine detector teams cleared 40 kms of road daily.

(b) One pressure detonated mine, five grenades, booby traps and two command mines discovered and destroyed.

(c) Numerous craters were repaired.

(6) Denial activities:

(a) 42 kms of road rooted on both sides.

(b) 100 acres of jungles cleared.

(c) Four platoon size ambush patrols conducted.

(7) Engineer Reconnaissance:

(a) The S-2 recon section performed 8 ground recons and 16 aerial recons prior to and during the operation.

(b) Numerous other aerial and ground recons were performed by 1st Engineer Battalion elements daily.

(8) Water Supply:

(a) One water point was operated at Lai Khe issuing 75,000 gallons of water in the five day period.

(b) One roving shower point was operated which serviced C and D Companies in the field and also Bn Fwd at Lai Khe.

10. ADMINISTRATIVE:

a. Personnel: Average strength in field during the operation - 330.

b. Supply: Normal supply channels were used with C and D Companies being resupplied by convoy from Lai Khe and A Co by convoy from Quan Loi. Emergency resupply was affected by air. An S-4 representative was at Bn Fwd at Lai Khe during the entire operation.

c. Maintenance: Company maintenance personnel maintained and repaired vehicles and equipment in the field. They were assisted by a portion of the Bn Maintanance section which was with Bn Fwd at Lai Khe. This included technical advice and assistance, and assistance in obtaining repair parts.

d. Transportation: Organic transportation was used except for some resupply which was by air.

e. Communications: TOE FM radios were the principle means of communications.

f. Medical: The Battalion Aid Station was operational in the field with the aid station set up at Bn Fwd at Lai Khe. The Battalion Surgeon and his medics conducted roving patrols of the work sites daily, usually by air, so as to be close to areas of possible trouble.

11. Special Equipment and Techniques: During the monsoon season craters cannot generally be filled and subjected to convoy traffic. This is also true for the soft spots on the road that develop due to improper drainage and constant convoy traffic. PSP can be used for expedient surfacing material; however, PSP must be tacked down to a solid bearing surface or else it soon becomes warped and bent by convoy traffic and becomes a hindrance to convoy passage. During Operation Tulsa the most successful expedient solution to this problem was found to be the construction of a timber treadway over the filled crater or soft spot. In effect, this is the superstructure of a timber trestle bridge placed directly onto the bad spots on the road. Its method of construction varies with the time available and the degree of repair necessary. However, usually footers are placed parallel to the road, with deck planking placed on top of the footers perpendicular to the road, and with treadway planking placed on top of the decking parallel with the road and with the flow of traffic. This method proved extremely successful during this operation where heavy rains made many spots impassable mud holes, but repairs were able to be affected by construction of these treadways without delaying convoy passage.

12. Commander's Analysis: As a result of rapid and accurate responses to sudden engineer requirements, Rte 13 remained open during the entire convoy operation, allowing urgently needed military and civilian resupply convoys to pass to their destinations. The difficulties encountered, to include heavy rains, VC harassment, and numerous craters, were effectively overcome in record times.

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The ability and willingness of all men to work together in crises such as these and there-by insure the best combat engineer support of the Big Red One is a tribute to the battalion and in keeping with our traditions of "Always First".

FOR THE COMMANDER:

RODGER M. BIVENS
Cpt, CE
Adjutant

DISTRIBUTION:
Special