

Operation DUKE

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THE 937th Engineer Group, Combat, and two of its battalion units—the 19th Engineer Battalion, Combat, and the 84th Engineer Battalion, Construction—were in the vicinity of Qui Nhon, approximately 50 road miles south of the Song Lai Giang, Vietnam, in August 1966, when they were assigned to provide combat engineer support for the 1st Cavalry Division (Air-mobile) in clearing the enemy from Phu Cat to the sea and north to Bong Son in the Binh Dinh Province. (See Figure 1.) Following this mission, it was planned to move the bulk of the Air-mobile Division north of the Song Lai Giang to conduct operations in the An Lao Valley and the Bong Son Plain. This move would require an airfield north of the river to handle sustained C-130 traffic. The 937th Group was ordered to select a site and build the required airfield.

THE SITUATION

From Qui Nhon, highway Route 1 was open to Allied traffic for about 15 miles to the north but, beyond

that, it was controlled by the Viet Cong and the North Vietnamese Army. The road was in poor condition with numerous cuts, washouts, fords, blown bridges, and a few bridges of low classification still intact. With an adequate security force and dry weather the route could be negotiated with light vehicles.

At Bong Son, the Song Lai meandered over a wide, flat valley. The river bed consisted of sand, mud lenses, and fine gravel, which in the dry season and at low tide was largely exposed. At high tide it was inundated with from 18 inches to 4 feet of water. The main stream of the river varied from approximately 150 feet wide at low tide to about 1,600 feet at high tide, with the main channel about 8 feet deep. The Route 1 highway bridge crossing the river was a multiple-span, single Eiffel truss, 1,600 feet long. Several of the spans had been damaged and the maximum capacity was 12 tons. A few hundred meters to the east an undamaged railroad bridge spanned the river. Both bridges led directly into the town of Bong Son on the north bank of the river.

Near the village of De Duc, about 4 miles north of Bong Son, a regiment of the 22nd Division, Army of Vietnam (ARVN), was camped in a semifortified position. This cantonment was served by a laterite landing strip 1,700 feet long. The 8th Engineer Battalion of the 1st Cavalry Division (Air-mobile) had constructed this strip during a sweep of the An Lao Valley and had named it "English" after a soldier killed in that operation. Another airstrip, some 1,500 feet long, served a Special Forces camp just west of Bong Son. Reconnaissance showed that English offered the best possibilities for expansion. Extensive

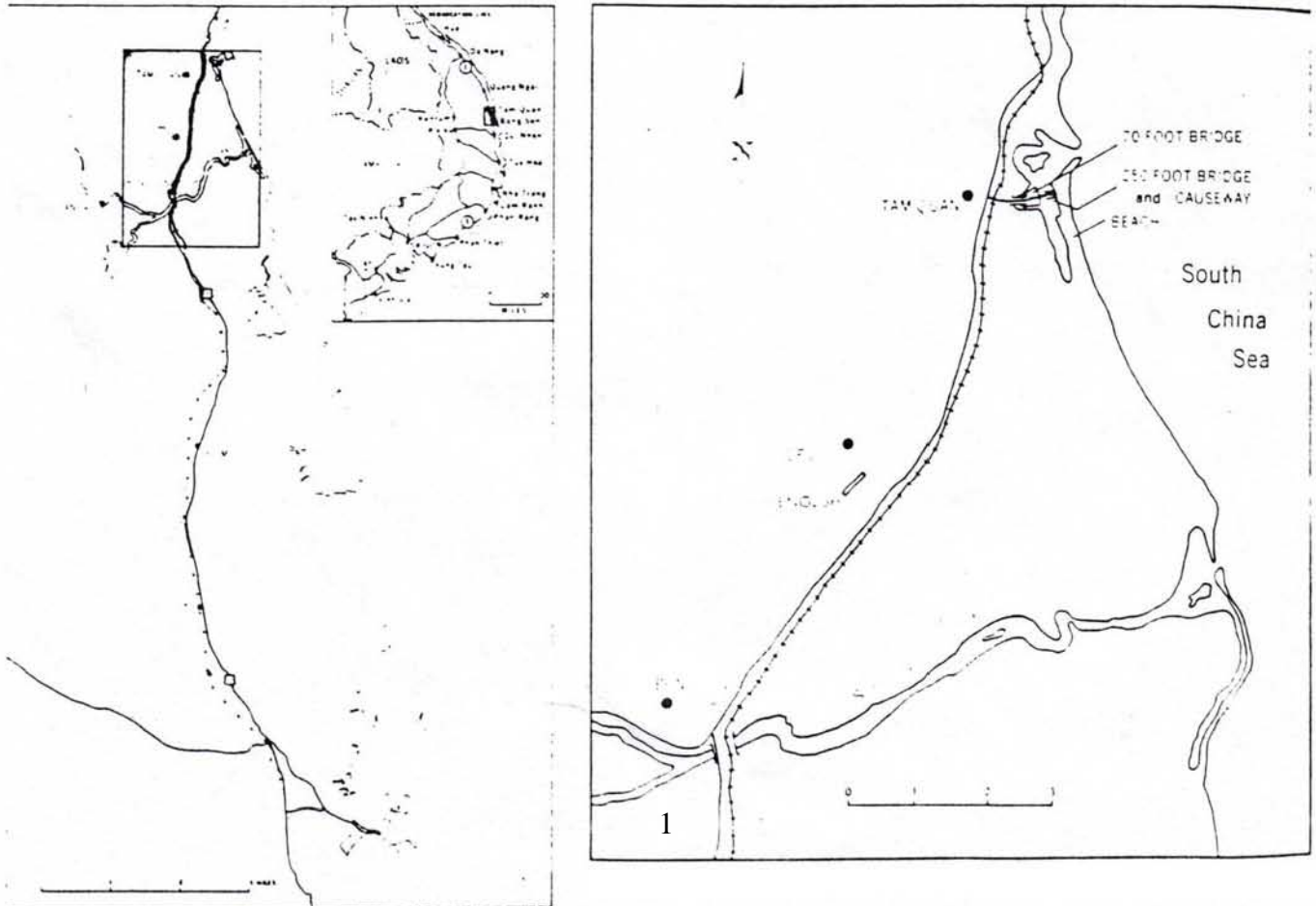


Figure 1. Area of Engineer Activities, Operation DUKE, Vietnam

earthmoving would be required, and it was obvious that heavy earthmoving and construction equipment would be needed.

The problem was how to get the construction equipment to the site. It appeared possible to get it up Route 1 to the river, but crossing was another matter. A detailed reconnaissance showed no suitable egress points on the far shore, and to construct them would require going through heavy copra groves or houses in the town. The wide shallow water and sand to be crossed made float bridging on the river impracticable, and the main channel was too deep to ford. Because of the river obstacle, combined with the problems of overland movement, this approach was abandoned in favor of a movement up the coast by sea.

In the previous Cavalry Division operations above the river, logistical support had been brought in by sea to a point on the beach some 8 miles north of De Duc. In that action a causeway and a bridge had been built across a tidal inlet to reach the beach dunes and the sea. The dunes had been partly flattened and covered with laterite to form a stabilized handling area. When the operation ended, the bridge had been pulled out and the site abandoned. The Viet Cong and North Vietnamese Army quickly re-established themselves in the area.

Aerial reconnaissance of the region showed traces of the laterite cap and part of the causeway remaining. Weather and tidal action had badly eroded both. Inland, about a mile from the beach on the route to the village of Tam Quan and Route 1, a 60-foot bridge appeared to be intact. It was decided to use this same site to bring in the engineer equipment.

PREPARATIONS

The 937th Group named the operation DUKE.

The 19th Engineer Battalion was assigned to land two companies on the beach, construct a bridge across the tidal inlet, repair the causeway, and clear the road from the beach to Tam Quan and then south to De Duc for the passage of a construction company and its heavy equipment.¹

The 84th Engineer Battalion, Construction,² was ordered to provide the construction company and extend the landing strip at English to 4,000 feet.

Arrangements were made for a security contingent from the 22nd ARVN Division at Bong Son and for sea transportation and supporting Naval gunfire.

When the construction company reached De Duc, phase I of the operation would be complete. The 19th Battalion elements were to make their way overland back to Qui Nhon and the ARVN was to secure the beach and bridges until the construction company had completed its work and was ready to be extricated. The extraction would be phase II.

The Navy agreed to provide transportation but because of heavy Naval commitments the type of ship which could be released would not be known until a few hours before it was available. This meant that the move might be made in a 2,100-ton LST, a 1,650-ton LST, or in a larger ship of the LSD type. The gunfire ships would be released at the appropriate time and would rendezvous with the force at the landing site.

The ARVN Division agreed to provide a battalion

security force but stated that the force would move to the landing site only one time and would remain there until the end of phase II. For security reasons, the Vietnamese refused all but aerial reconnaissance of the region until the landing took place.

Working from a flight over the site and from aerial photographs, the 19th Engineers constructed a scale model of the landing area. It appeared that the bridge construction site would be in a sandy area and would be constricted by trees and village huts. The length of the bridge needed was judged to be 220 feet. A Bailey bridge span of this length would require a double double truss to carry the anticipated loads.

In preparation for the project, the 509th and Company A conducted intensive Bailey bridge training. They worked in both daylight and darkness and in heavy sand. Company A organized special clearing teams for mines and booby traps. Loading plans were made for a ship of each of the three sizes which might be used. Truck drivers were trained in backing with trailers so that loading would not be delayed. The 509th obtained the bridging required and detailed loading lists were prepared. The bridging was stacked by loads, and men and vehicles were returned to their pre-DUKE tasks, awaiting orders to move.

During this period, the 84th Engineer Battalion was also heavily engaged in preparation for its construction task and for the sea movement. Construction equipment was put into the best possible state of repair and an advance party was flown to De Duc to make surveys and other preparations so that the construction force could begin work immediately upon arrival. Thus prepared, the 84th also waited.

PHASE I

After several days passed and no ship had become available, another reconnaissance flight was made over the landing area to verify the conditions. Two very significant changes had occurred. In an apparent reaction to the earlier flights, the Viet Cong had blown the 60-foot bridge near Tam Quan, destroying most of the abutments as well. At the causeway, high tides, resulting from storms in the South China Sea, had washed out another section of the road. This greatly increased the requirement for bridging. A 70-foot double single Bailey span would be required for the blown gap and a 250-foot double double truss with an intermediate panel pier would be needed to repair the causeway. Ship space now became critical, and, to accommodate the additional bridging, the loading plans had to be changed. Several panel and transom loads were shifted from dump trucks to 5-ton float-bridge trucks and a number of the combat company dump trucks had to be eliminated from the plan. Since continued washing of the causeway, with still more bridging requirements, could jeopardize the whole operation, the landing area was watched with mounting concern.

At about noon on September 13, the USS *Gunston Hall*, a Landing Ship Dock (LSD), arrived to support the mission. The embarkation officer went ashore to co-ordinate the loading, and Company A and the 509th Company began loading preparations. Four Landing Craft Utility (LCU's) were engaged to shuttle from the Qui Nhon port landing ramps to the *Gunston Hall*. Loading began at 4 p.m. and was completed by 2 a.m. the next morning. Although the embarkation was slowed by rough water washing into the

¹The 19th Battalion task was assigned to Company A and to the 509th Engineer Company (Panel Bridge), which was attached to the 19th.

²The 84th Battalion task was assigned to Company B, Reinforced, of the 84th.

well deck of the LSD and one 5-ton dump truck was dropped by the crane as it was lifted from the well deck to the main deck, the *Gunston Hall* moved out to sea shortly after loading was completed.

On the same morning the ARVN Task Force moved out of De Duc and reached the landing site at approximately 9 a.m., having met only sporadic resistance en route. During the night the *Gunston Hall* had rendezvoused with a destroyer and a LSMR (Landing Ship Medium Rocket) and all three ships were standing off the beach when the security force arrived. Although the weather at the site was good as preparations for landing were begun, storms farther out in the South China Sea were causing a high surf. This and the beach sand, which was far less stable than had been anticipated, made landing extremely difficult, even for determined and well-equipped engineers. Bulldozers were put ashore first, followed by dump trucks. High waves washed completely over several trucks stalling them just in front of the landing craft and the excess water added to the already very heavy bridge loads. The trucks could not negotiate the deep sand and had to be towed by the bulldozers to the laterite-stabilized area. Several ¼-ton vehicles were totally inundated and the trailers flooded, resulting in the loss of a number of radios, thus reducing communications throughout phase I.

Most of the troops were brought ashore in the afternoon. Although the LCU's could get fairly near shore, the men were heavily pounded by the surf as they fought their way toward the beach. When unloading was completed, the *Gunston Hall* returned to Qui Nhon to pick up the construction company.

The troops ashore moved quickly to join with the ARVN soldiers in a defensive perimeter and to their preplanned tasks. It was found immediately that there was insufficient construction area for the bridge. Sand had drifted into a dune almost 30 feet high, within 60 feet of the causeway exit, and would have to be dozed aside. No sooner had the work begun than it was discovered that the local inhabitants had used this area for burying their dead. Several interments had been made as recently as 30 days before the landings. Since pacification begins with respect for the feelings of the Vietnamese people, an orderly disinterment was sought. American soldiers worked with the ARVN to find the families concerned, and they were then paid to remove their deceased members. The engineers were annoyed by this delay but moved



Tractor Assisting Truck in Sandy Area



Loaded Bridge Trucks in Well Deck of LSD, *Gunston Hall*

ahead with what they could do. Fifteen-man assault boats were used to ferry panels out to the pier site and pier construction was begun. Cables were strung for anti-mine booms and M-4 balk were attached for floats. The layout crews went to the far shore and worked back toward the construction site with cribbing and rollers. Bridge equipage was stacked for quick access. Defensive locations were dug and a barbed-wire perimeter was strung. By the afternoon of September 16, the graves were all removed and dozing to open up the construction area began. As rapidly as the sand was pushed aside, the bridge assembly progressed.

The enemy harassed the ARVN perimeter with sporadic fire and occasional probing but did not move with force. Twice on the second night ashore the American defenses were probed. The engineers were inhibited from firing inasmuch as the ARVN battalion was supposed to be manning a perimeter outside the work area.

On September 16, Company B of the 84th Battalion (the construction company) began its move ashore and the combat troops pushed throughout the night to finish the bridge. The following morning mine-clearing teams advanced across the bridge and began sweeping the route to the second construction site. The 509th Engineers erected the 70-foot bridge there in less than three hours, and by early afternoon, the 5 miles of road to De Duc had been cleared. Eleven mines and eight booby traps had been discovered and blown along the way. The construction troops followed as the road was opened and by midafternoon reached the airfield construction site. By nightfall all troops from the 19th Battalion had moved to the south bank of the Song Lai Giang with their vehicles. The next morning, joined by a security element from the 1st Cavalry Division, they made their way down Route 1 to Qui Nhon. Phase I of DUKE was complete.

PHASE II

Phase II began in early October when the 19th Battalion received orders to move the engineer construction company back from English airfield to the beach landing site, to remove both the 70-foot and 250-foot Bailey bridges, and to replace them, respectively, with a 60-foot Class 12 steel stringer bridge and a 250-foot suspension footbridge.³ The battalion with its equipage was then to be withdrawn by sea.

In the interim from phase I, considerable improvement had been made on Route 1, and Company A of

the 19th had been assigned to construct access and egress to the railroad bridge at Bong Son and to deck the bridge for vehicular traffic.

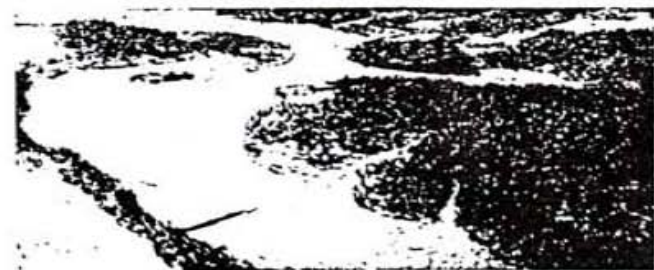
On October 6 the 509th and the 554th Companies moved out from Qui Nhon loaded with some 200 tons of steel and lumber for use on the railroad bridge. In addition to the construction material for their own mission (except the 60-foot steel stringers which were too long to be moved that distance by road). These units reached the river late that afternoon and unloaded the materials for the railroad bridge. The next morning they were able, with their lightened and empty vehicles, to move across the highway bridge to Bong Son and on up Route 1 to De Duc. There they were joined by an ARVN security unit for the move to the beach.

The activities of the Cavalry Division south of the river had forced the Viet Cong and the North Vietnamese Army into action and, as a result, the route to the beach bridges and the area around them were much more hostile than had been the case in phase I. The enemy had been watching the progress of construction at the airfield and knew that as it neared completion the extrication phase was imminent. The enemy were being held back only by the very effective artillery fire from the ARVN camp near De Duc and from the two Naval gunfire ships which had returned concurrently with the engineer troops.

When the engineers reached the site, they prepared defensive positions and did such preparatory work as they could, short of pulling the bridges out. As in phase I, the key to the timing of the mission was the availability of a ship to take the men and equipment off the beach.

Meanwhile, a light (1,650-ton) LST pulled in to the ramp at Qui Nhon on October 8 to take on the steel stringers for the short bridge. This steel had been loaded on a 5-ton tractor with a trailing dolly. It was intended that the rig be backed into the well of the LST, but the slope of the ramp was such that this could not be done. The steel had to be unloaded and winched onto the well deck. This required that the steel be dragged off by bulldozer at the beach. The LST departed Qui Nhon and, on the morning of the 9th, was off the beach site. Several attempts were made to land near the troops but shifting sand had made the water too shallow. Finally, the LST was able to get near the shore several hundred meters south of the bridge site where the steel was dragged off by bulldozer. When it became obvious the LST would not be able to take on the heavy construction

The DUKE task was assigned to the 509th Engineer Company (Panel Bridge) and to the 554th Engineer Company (Float Bridge), less two platoons which were to assist Company A on a railroad bridge.



The Beach, Long Bailey Bridge, and Causeway

The Military Engineer, No. 403



Engineers Working on the Suspension Footbridge

equipment and extricate itself from the beach, a message was radioed to Qui Nhon requesting LCU's be sent up the coast to complete the mission.

On the night of October 9, a 4-man enemy team attacked the perimeter of the engineer camp. In this exchange one attacker was killed and a mortar round destroyed one 2½-ton truck. Papers found indicated that the dead man was a captain in the North Vietnamese Army and also that the enemy intended to attack and destroy the bridges. The perimeter was promptly reinforced, equipment was shifted, and the troops were ordered to get the Bailey bridges out before the enemy could attack them. The engineers worked with grim determination, and by the next evening the bridges had been pulled and disassembled and the towers of the footbridge had been anchored in place. About midnight the enemy struck in force with heavy mortar fire on engineer positions. The battle continued throughout most of the night with Naval gunfire and Air Force Dragon (C-47 Minigun) planes joining in the defense. Casualties were 18 engineers wounded, but the enemy fared much worse. By daylight the troops were back on construction, more eager than ever to complete the job and get off the beach.

Two days later the LCU's, having delivered the construction force of the 84th Battalion to Qui Nhon, returned to the beach for the bridge companies. These smaller vessels and the slow turnaround time involved meant that some of the engineers had to stay on the beach for several more days. It was October 18 when the last troops and their equipment were put ashore in Qui Nhon.

Operation DUKE was over. Another in an unending series of difficult engineer challenges in Vietnam had been met and overcome. With two days rest and retraining, the 509th Company moved north again on another bridging mission.



70-foot Bailey Bridge near Tam Quan

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