

CROSSING of the RHINE RIVER

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THIRD US ARMY

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CROSSING OF THE RHINE RIVER BY THIRD US ARMY

On 222200 March 1945, assault boats carrying men of the 11th Infantry Regiment of the 5th Infantry Division and operated by the 204th Engineer Combat Battalion, silently shoved off from the west bank of the Rhine River at Nierstein, Germany, and the first assault crossing of the Rhine in modern history had begun. Before darkness of the following night, a bridge had spanned the river and such a firm bridgehead had been established on the east bank of the river that there was no longer any question of the success of the operation. Within the next five days, three more crossings were successfully executed and all resistance along the Rhine on the Third Army front had collapsed. Thus was successfully concluded the fruits of the most intensive period of Engineer planning that had been engaged in since the D-day operation of Normandy.

Planning for the crossing of the Rhine had started as early as August 1944, when it became apparent that the crossing of the Rhine might take place in the not-too-far distant future. To prepare for the operation, the Army Engineer established a special staff section and by September, preliminary estimates of the equipment and material needed had been calculated and ordered, and a preliminary plan of action drawn up based on the troops then available and the stretch of river lying within the Army zone of advance.

Subsequently, as all the Allied Armies came closer to the Rhine, the plans of the higher headquarters unfolded and conferences were held by both SHAEF and Twelfth Army Group at which the technical and supply problems expected to be encountered in executing the crossing were discussed, and provisions made to get the special troops, materials and means needed for coping with the various problems. From these conferences the number of supporting Engineer troops and the amount of equipment that was expected to be available were also determined.

Based upon this information and that forthcoming from the Army G-3 and Chief of Staff, a plan of action providing for crossings to be made in the vicinity of Mainz with Frankfurt and Darmstadt as the targets was drawn up. Included in the plan was an analysis of all troops and equipment requirements which served as a guide for training specific units to execute specific tasks.

Since the tasks expected to be encountered in the operation were considerably more complex than any engaged in up to that time, it was decided to organize schools to train certain units to perform specific tasks. Accordingly, schools were set up to train the hundreds of outboard motor operators required for the storm boats and powered assault boats expected to be used; the crews to construct floating Bailey bridges, nets, booms and cableways; and for the Naval Unit with its LCVP's and LCM's to perfect the technique of operating on the rivers. Despite many interferences with training because of the requirements for troops for tactical purposes, by mid-December enough personnel had been trained so that a breakdown of tasks could be allocated to specific units.

Continuously from August thereon, a stock of all types of equipment expected to be needed, including that for two fixed permanent type bridges, was being built up at Toul, but the crossings of the Moselle and Saar were so costly in assault and bridging equipment from a combination of flooded rivers and strong enemy resistance that it was necessary to cut deeply into the Rhine stockpile to support these operations, and it required the most strenuous

efforts on the part of the supply forces to finally get sufficient equipment on hand to support the operation.

By mid-December, since the Army was well on its way through the Saar, a crossing seemed imminent, and on 15 December a meeting of the Corps Engineers as well as other members of the Army and Corps staffs was held at Nancy, France, and an Engineer Outline Plan for making a crossing was presented and discussed, and a comprehensive topographical study of the river was given to the Corps.

Shortly after this conference, the December breakthrough occurred, and the Army shifted its direction of advance to the North instead of to the East, but the secondary objective was still crossing the Rhine, and plans and studies were therefore made for executing a crossing in the area between Koblenz and Koln if necessary, though there was never a firm commitment on the probability of this happening. Consequently, though the question of moving all the river-crossing material from Toul to the vicinity of Luxembourg was considered several times, after an evaluation of the problem of loading, hauling and unloading 10,000 tons of materiel, it was decided that the equipment should not be moved. At one time early in March some equipment was actually loaded and moved to VIII Corps, since a plan for their making a crossing in the vicinity of Neuwied was being considered. As events subsequently proved however, the stretch from Bingen to Worms was still the primary target area and as XII Corps struck down across the Moselle towards Worms, the final preparations for the crossing were begun.

One of the greatest fleets of trucks ever assembled for an operation was sent to the dumps at Toul, Esch and Arlon where they were loaded on carefully arranged priorities with assault boats, storm boats, outboard motors, life preservers and bridging equipment. However, even then the task of getting the equipment to the river was far from solved, for the enemy held the direct routes through the Saar to the Rhine until 20 March, so that the first convoys had to pass on a great circle route along the north bank of the Moselle to get to the advanced dump at Alzey. While the subsequent routes were shorter, they nevertheless required a 300-mile round-trip from the rear depots to the forward depot at Alzey through a hitherto forbidden area over roads that had to be cleared and streams bridged as they came. The hauling was further complicated by the delays occasioned by the heavy combat traffic moving over these roads at the same time. To assist in expediting the movement of the stream crossing equipment, liaison planes were employed to traverse the highways and to report the location of stranded or wandering convoys so that patrols in vehicles could be sent out to guide them in.

Despite these difficulties, by the time troops were ready to make the crossing, sufficient equipment was on hand to adequately back the operation, particularly inasmuch as though both XII and XX Corps were scheduled initially to make the crossing, only XII Corps was finally committed to the task.

The crossing by XII Corps was one of superior merit and it could well serve as a model for future crossings. The plan called for a crossing in the vicinity of Nierstein at a site selected many months before. Here a good network of roads intersected from the north, east, south and west, and a bridge with a floating center section and several ferry sites were located on the

river at this place.

The terrain was good from the XII Corps standpoint since hills and a town masked approaches on the west side of the river, while a long, flat, open plain extended from the east bank several miles from the river, as can be seen from the pictures illustrating the crossing. The stage of the river was normal - about mean water and a current of about 3-4'/sec was running, and the weather was mild and clear which greatly aided air support.

The plan for the crossing was that a single division would make the crossing and that all Engineer work was to be executed by Corps Engineers or Army Engineers, depending generally upon previously planned tasks outlined in the Army Plan.

The staging of the operation by the Corps was directed by the 1135th Engineer Combat Group, and in accordance with the Corps Engineer's plan - approximately 100 storm boats and motors, 300 assault boats and motors, life belts and other pertinent items were assembled by the Corps in addition to the T/E equipment of approximately 500 boats and 100 motors. To back the operation with troops, one heavy ponton battalion (minus one company) was initially attached to the Corps for use in rafting operations, the remainder of the battalion and one other battalion were subsequently attached. Two especially trained Engineer combat battalions having approximately 400 outboard motor operators, three treadway bridge companies, two light ponton companies plus a light equipment platoon and seven battalions were attached as well. Still another unit, one-half of Naval Unit No. 2, consisting of 12 LCVP's and their crews were attached and pioneered the use of Naval craft in assault river crossing operations.

The historic crossing action started at 222200 March with the 11th Infantry Regiment supported by 204th Engineer Combat Battalion making a secret crossing in paddled assault boats. Wave after wave was crossed, with over 200 assault boats shuttling continuously throughout the night and by dawn a substantial part of all the Infantry in the 5th Infantry Division had crossed. By 0300 the LCVP's of the Naval unit had arrived and by 0730 twelve LCVP's were in the water and ferrying personnel, light vehicles and supplies, and evacuating wounded at such a rate that assault boats were no longer needed.



Photo No. 1
INFANTRYMEN BOARD LVP AT NIERSTEIN



Photo No. 2
LVP LOADED WITH INFANTRY CROSSES RHINE NEAR NIERSTEIN



Photo No. 3
FIVE LCVP'S IN ACTION NEAR NIERSTEIN



Photo No. 4
JEEPS DEBARK ON EAST BANK OF RHINE AT NIERSTEIN. (Note type of beach -
no work was required to permit vehicles to use it).

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Photo No. 5

AMBULANCE DEBARKS FROM LCVP ON EAST BANK OF RHINE AT NIERSTEIN
(Note beach).



Photo No. 6

INFANTRYMEN BOARD LCVP AT NIERSTEIN ON WEST SIDE OF THE RIVER. (Note
ferry landing from which boats operate).

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During the night, work had begun by the 150th Engineer Combat Battalion in the shelter harbor extending from the river at Oppenheim on the assembly of parts of a treadway bridge, and though the artillery fire searched the harbor and continued to harass the crossing forces during the day, no substantial damage was done. The Luftwaffe also ventured out in strength to strafe and bomb, but the air cover and AA prevented it from doing any more than incidental damage.

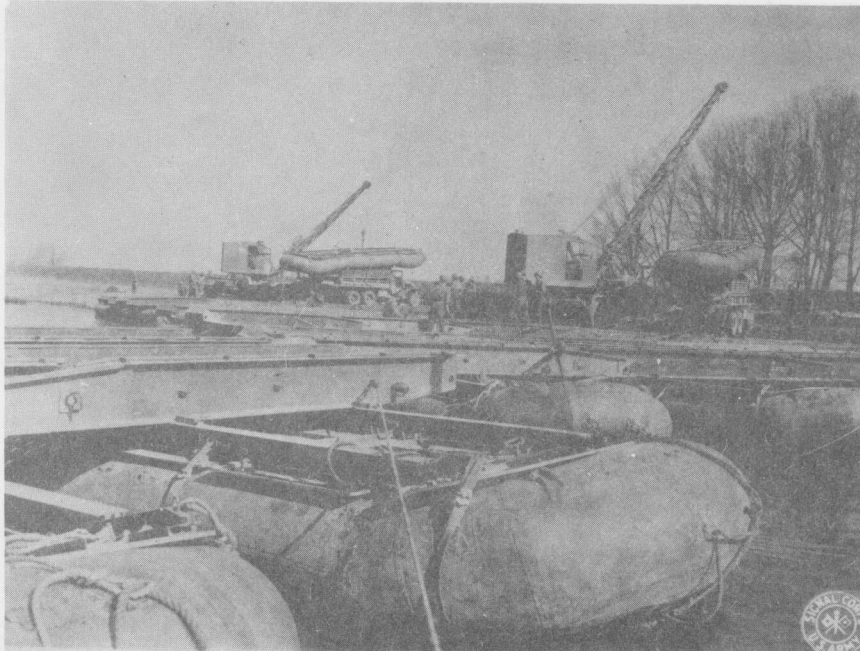


Photo No. 7

SECTIONS OF TREADWAY BRIDGE BEING ASSEMBLED IN SHELTER HARBOR AT OPPENHEIM.

The work on this treadway bridge is worthy of special note inasmuch as the practice previously developed by XII Corps of inflating the floats in a rear area and carrying them forward on 2½-ton trucks demonstrated fully its value here, since the unloading and assembly of the huge amount of material required was carried on with a minimum of confusion, as shown in Photo No. 7. At daybreak the sections were assembled into rafts and work started on constructing a bridge at an old ferry site just downstream of the entrance of the shelter harbor. Work continued during the day and by 1800 the Class 40 M-2 treadway bridge shown in Photo No. 10 was taking traffic.

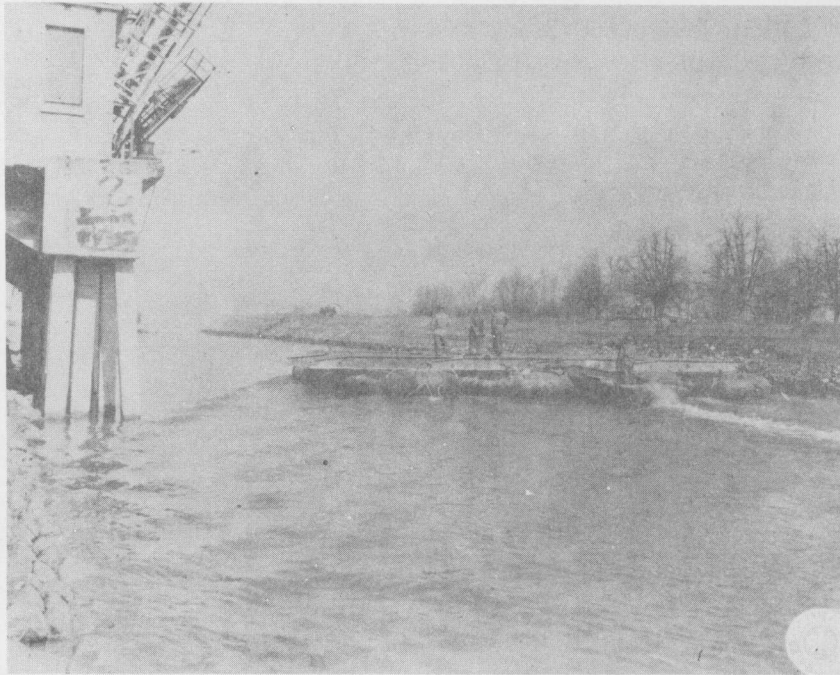


Photo No. 8

M-2 TREADWAY RAFT BEING MOVED OUT OF SHELTER HARBOR AT OPPENHEIM TO BRIDGE SITE.

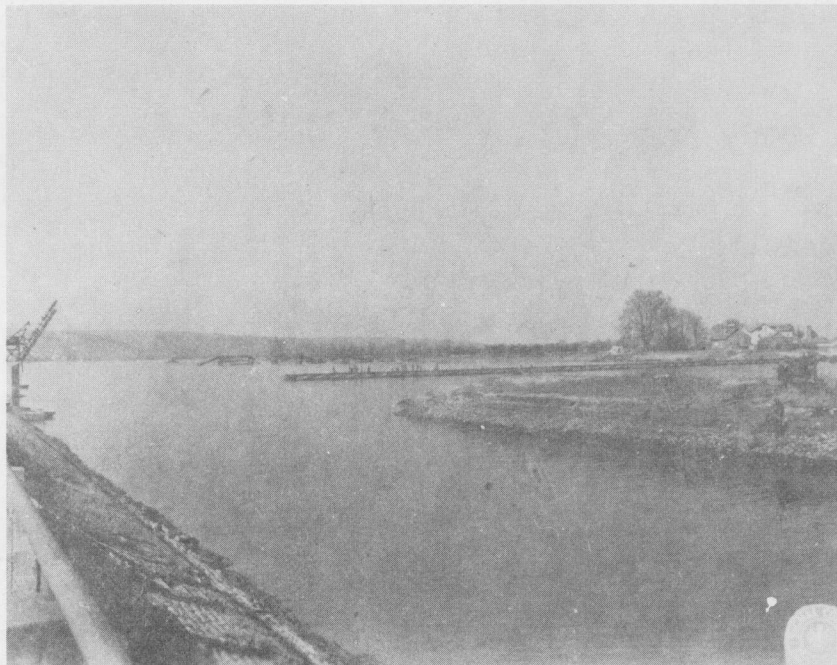


Photo No. 9

TREADWAY BRIDGE AT OPPENHEIM UNDER CONSTRUCTION - VIEW FROM SHELTER HARBOR WHERE PARTS OF BRIDGE WERE ASSEMBLED.

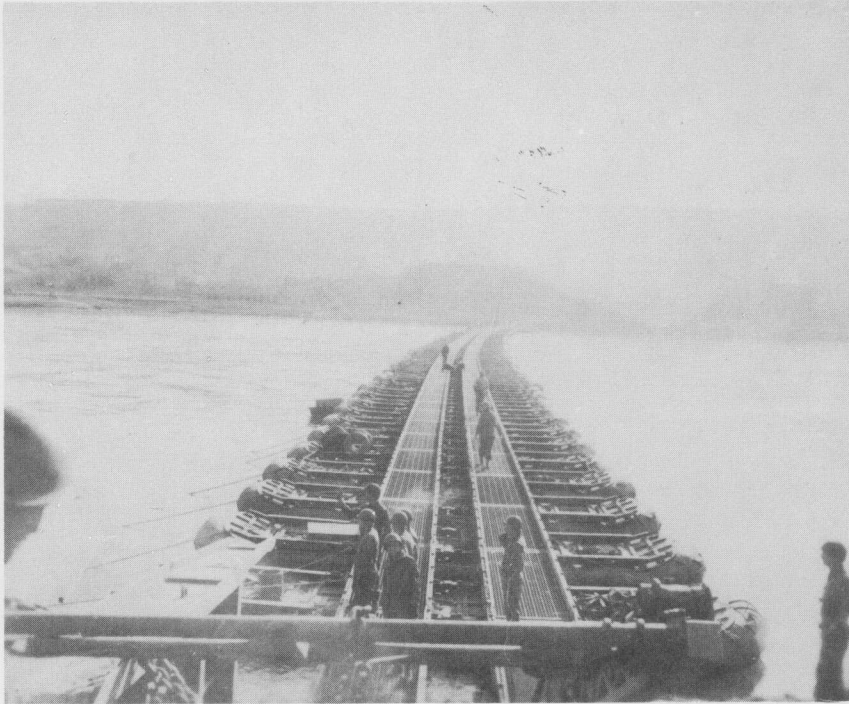


Photo No. 10

M-2 TREADWAY BRIDGE AT OPPENHEIM - FIRST BRIDGE ACROSS THE RHINE IN THIRD US ARMY'S AREA.

Also during the night, the heavy ponton company of the 88th Engineer Heavy Ponton Battalion was unloaded and the construction of Class 40 rafts for ferrying was started. The first raft was in operation by 0700 and by 0930 four rafts were ferrying over tanks, TD's and supply vehicles. About 65 tanks and TD's were ferried during the day in addition to hundreds of other vehicles. In addition five-ponton Infantry support rafts were constructed and further supplemented the ferry capacity, and about ten DD tanks wallowed across the river. A platoon of DUKW's subsequently joined the crossing forces and made 220 trips carrying ammunition, rations and gasoline.

During the day a heavy ponton bridge (shown in photo No. 17) was started by 87th Engineer Heavy Ponton Battalion and by 240130 March, a 1280-ft Class 24 bridge was ready for traffic, and by 0700 of the same day, it had been reinforced to carry Class 40 loads. While under construction, a 150mm shell hit directly in the center of the bridge, but fortunately failed to explode, and aside from piercing the deck and a ponton and delaying the construction, it caused no important damage.

Through this bridgehead of the 5th Division, the 4th Armored raced off so swiftly to the east that the Main River was reached in one day. To speed the traffic at still a faster rate, still another treadway bridge was ordered to be put in and work was started on 24 March and the bridge shown in Photo No. 19 was opened at noon on 25 March.

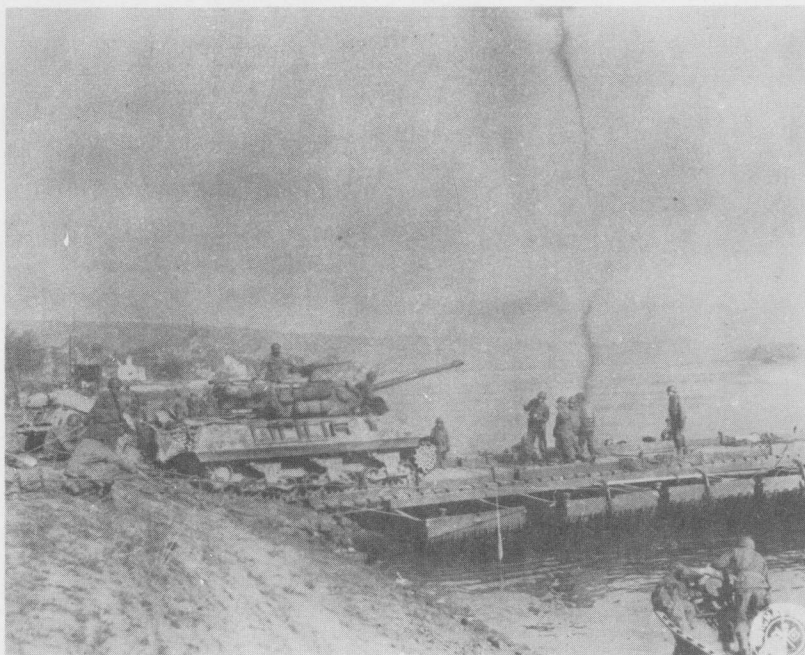


Photo No. 11
TD BOARDS HEAVY PONTON RAFT AT NIERSTEIN



Photo No. 12
TANKS BEING FERRIED ON HEAVY PONTON RAFT AT NIERSTEIN.

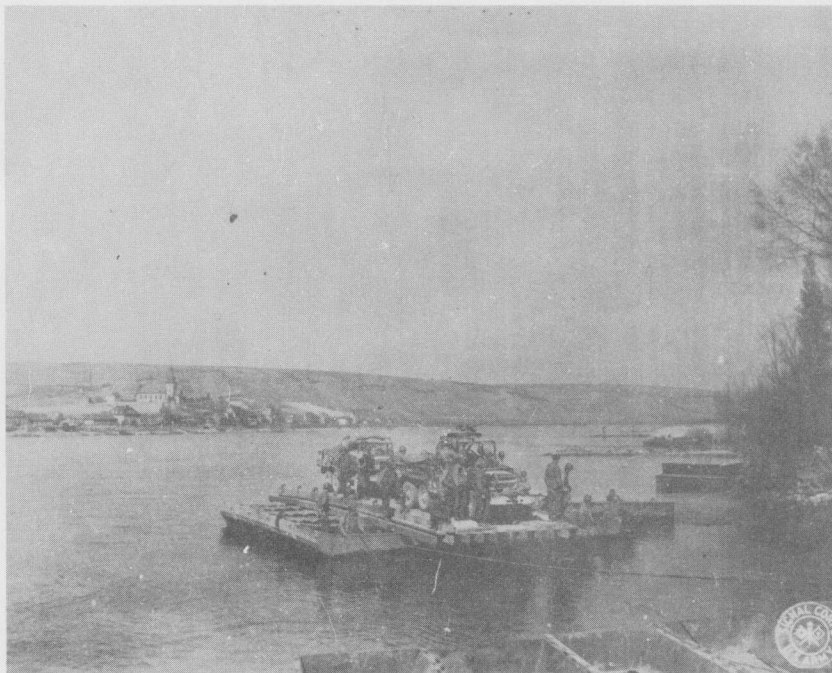


Photo No. 13
SUPPLY VEHICLES FERRIED ON HEAVY PONTON RAFTS AT NIERSTEIN.



Photo No. 14
PRISONERS ARE CARRIED ON HEAVY PONTON RAFT AT NIERSTEIN.

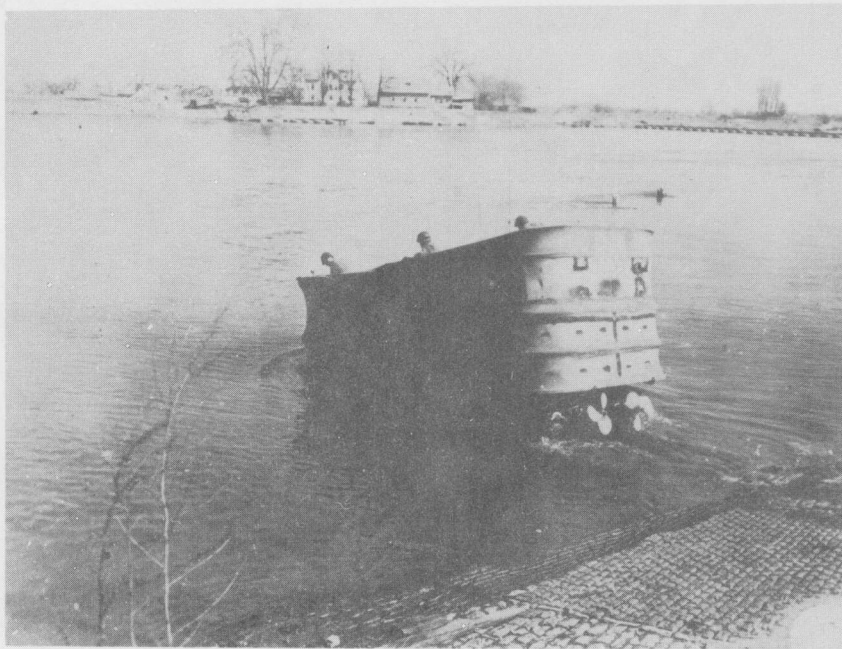


Photo No. 15

DD TANK ENTERS RHINE RIVER AT NIERSTEIN - (One that has already crossed is seen climbing on far shore. Bridge in background was uncompleted at this time).

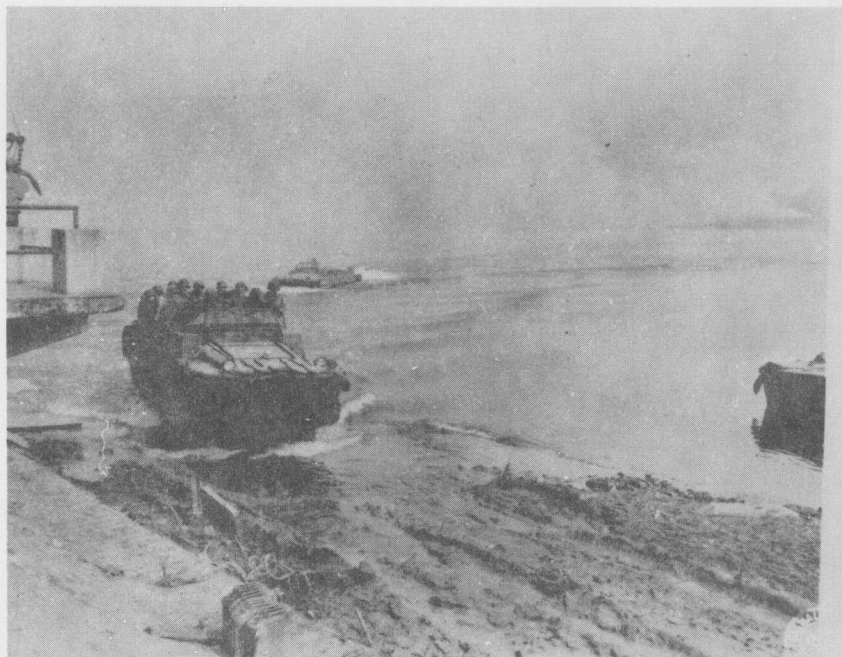


Photo No. 16

DUKW'S EMERGING FROM RHINE RIVER AT NIERSTEIN.



Photo No. 17
HEAVY PONTON BRIDGE UNDER CONSTRUCTION AT NIERSTEIN.



Photo No. 18
TRAFFIC ROLLS OVER HEAVY PONTON BRIDGE AT NIERSTEIN.

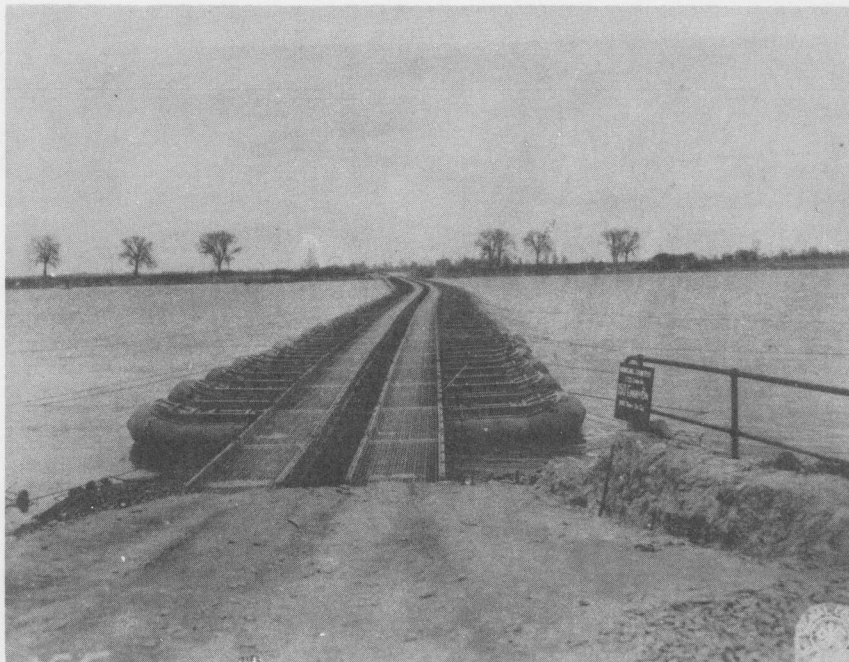


Photo No. 19
TREADWAY BRIDGE AT OPPENHEIM.

By 27 March, five divisions had passed over these three bridges as well as supplies and necessary supporting troops. The rate at which traffic crossed can be determined from the fact that the entire 6th Armored Division crossed in 16 3/4 hours. During the period from 24 March to 31 March, 60,000 vehicles crossed over these bridges at Oppenheim.

Aside from the actual problem of building the bridges, the protection of them posed several problems which required special equipment and training, but this had been anticipated and fortunately the enemy was unable to halt the construction of, or damage the bridges. The following security measures were employed.

a. Air protection - For the initial days of the operation, air cover was constantly maintained over the bridges - during the day 30 planes were constantly in the air high over the bridges while about four battalions of AAA, including multiple barreled .50 Cal., 40mm and 90mm guns were so effectively employed that even though a few enemy planes did sneak through the air cover, the AA was so terrific that they were either shot down or driven off before any substantial damage could be inflicted.

To supplement the AA, a smoke screen 2 1/2 miles long and 3/4 of a mile wide cast such an effective pall over the entire area that any air visibility of the bridge was effectively disrupted.

b. Waterborne assault - Since Intelligence sources had reported the possibility of "Gamma" swimmers attacking the bridges, an anti-personnel net of the British Admiralty netting type was installed and the first night aided in the capture of two of the swimmers. These swimmers reported that three others had been in the party, but those never put in an appearance.

As a further deterrent to swimmers, upstream of the bridges an LCVP constantly patrolled and during the night dropped depth charges overboard consisting of 25-lbs of explosives with a one-minute time delay. These were dropped at the rate of about one every five minutes, and though not lethal over a wide range, were nevertheless a deterrent to swimmers.

In addition to the anti-personnel boom, two anti-mine mine booms consisting of logs fastened together by wire cable were also placed. To prevent the failure of the entire boom in the event of breakage, all the booms were provided with anchors every 50 to 100 feet in addition to the shore connections.

A still further protection was provided by the installation of an anti-barge boom which consisted of four 1-inch steel wire cables, supported on bouys made of 55-gal drums. This boom was designed to stop a barge or at least to slow it down so that the artillery used in support of the boom could be brought to bear upon whatever did come down the river and sink it.

In addition to the passive measures of protection, the booms described above - Radar coupled with a battalion of 75mm TD's were also used. Experiments had been carried on by AAA on use of Radar for the detection of floating objects while on the Moselle River, and it had been determined that this could be successfully employed to warn of the approach of objects as small as assault boats, and since there was always the possibility of small, explosive-filled power boats or one-man submarines being used against the bridge, some means of providing a warning especially at night was needed, if the guns at the site were to be employed against them. However, with the exception of two small launches that drifted downstream, the guns had a quiet time. The bridge guards themselves constantly surveyed the stream for suspicious looking objects and fired on anything that appeared to possibly be a mine.

To further supplement the warning system for the guns, searchlights were mounted along the bank and lighted the booms and stretch of the stream upstream of the booms continuously at night. Since CDL's were available, these were employed for the dual-purpose of lighting the stream and as protective artillery in addition to the TD's. After about nine days, when the tactical situation had changed and crossings had been made upstream of the crossing site, the TD's were removed; but the CDL's were still used and are expected to be used indefinitely even after the fixed bridges have been installed.

Subsequent to the original tactical crossings, plans had been made to replace the floating treadway bridges by floating Bailey bridges and by 29 March, six days after the initial bridging had begun, and despite the vast supply needs of other Corps to be discussed further on, sufficient material was on hand to permit a floating Bailey bridge to be started, and this was opened for traffic by 31 March.



Photo No. 20
FLOATING BAILEY BRIDGE AT OFFENHEIM.

Simultaneously, equipment and material were being assembled by the 1301st Engineer General Service Regiment for the construction of a fixed bridge, and by 31 March, survey work was able to be started on the project - an eleven-hundred-foot pile bridge named "The President Roosevelt Memorial Bridge," which was opened and dedicated on 15 April 1945. This bridge is particularly noteworthy inasmuch as practically every piece of material put into it was obtained locally. Piling up to 80 feet in length was hauled out of nearby forests and steel I-beams, 50 to 90 feet long, were found in steel mills at Hanau. By so fortunately obtaining these materials close by, a vast amount of transportation that would have been required had the material been hauled from Toul, was released to the Army for other haulage purposes. The work on the bridge was expedited by special equipment previously secured specifically for this job: steam pile-drivers, 1 $\frac{1}{2}$ -yard shovels and NL ponton rafts. Work proceeded 24 hours a day and though floodlights were used at night; except for a rare air raid, no other enemy action was encountered.



Photo No. 21

"PRESIDENT ROOSEVELT MEMORIAL BRIDGE" ACROSS THE RHINE.

At the same time the crossing of XII Corps was under way, plans were readied to support a crossing of the VIII Corps in the great gorge which runs from Bingen to Ober Lahnstein. This particular stretch is the most famous on the entire river, and the steep cliffs through which the river has forced its way are dotted with ancient castles and the region is rich in Germanic lore - a particularly striking place being the famous "Lorelei" - site of the Wagner Rock, where the river is a hundred feet deep. This stretch of the river posed a most difficult crossing problem for several reasons, viz., the approaches to the valley on each side were over steep-winding roads cut into the sides of the gorge, so exposed that any vehicle movement could be easily spotted by the enemy on the far shore, furthermore the stream itself was very swift, running 6 to 8 feet per second, over such a rocky bottom that anchorage would be most difficult.

Because of these conditions, the problem of putting in a bridge caused some concern, but once a ground reconnaissance had been made, the river did not seem so bad as studies had indicated and it was definitely felt that though the task of bridging would be difficult, it was far from being insurmountable and plans were made accordingly.

The same base of supply, the depots in Toul, Esch and Arlon were used for the support of VIII Corps' operation, and the hundreds of boats and motors required had to make the long run over even more torturous terrain - the Hunsruck Mountains - to put the supplies in the Corps depot at Braunshorn. Also, twelve of the twenty-four LCVP's of the Army had been allocated to the Corps for the operation, and since they had been routed to the vicinity of

Alzey in the expectation of crossings being made as originally planned by XII and XX Corps in the stretch from Bingen to Worms, they now had to be routed over the hills to the north. Fortunately, the time factor was adequate to enable them to make this move and they were ready and in position by H-hour due to the excellent work of the Naval Unit staff and that of the Army 1134th Engineer Combat Group.

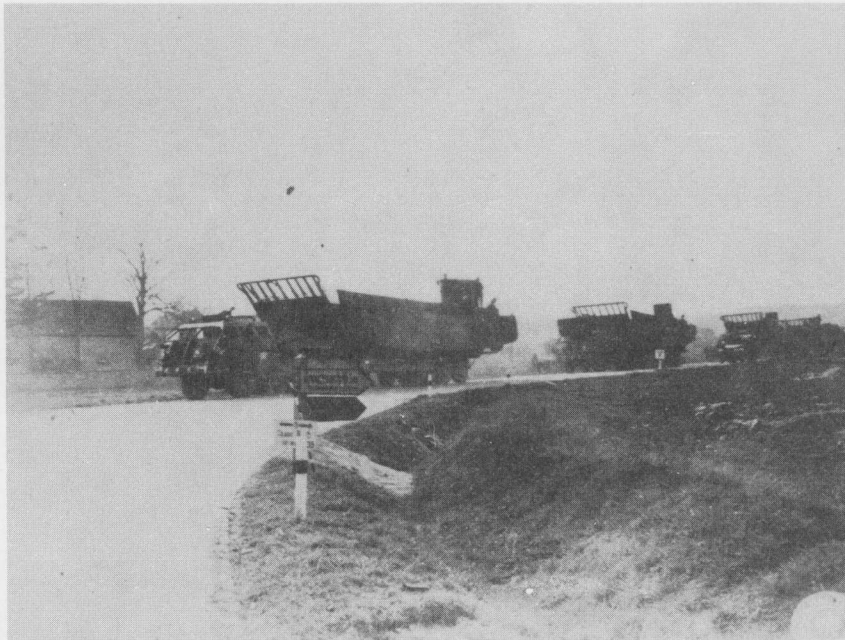


Photo No. 22

LCM'S "ON THE ROAD" TO PARTICIPATE IN ASSAULT CROSSINGS OF THE RHINE.

The crossing plan of VIII Corps called for an assault crossing to be made in paddled assault boats by the 87th Infantry Division, with one crossing in the vicinity of Rhens, and another crossing at Boppard. The crossing at Boppard, however, was to be the main crossing site and the bridge was to be put in here. The initial wave crossed satisfactorily in each place, but strong enemy resistance was encountered at the north crossing from enemy artillery and small arms and this was subsequently abandoned when it became apparent that the Boppard crossing was successful. Though six LCV's had been allocated by the Corps to take part in this operation, none were actually committed until about 12 hours after the assault started, since the advisability of using them at all was being carefully weighed, especially since if they had been knocked out on the way to site, the only approach road might have been blocked by them. Once in the water, however, they performed excellently as ferries and moved over great numbers of men, light vehicles and equipment as well as evacuating the wounded. Once these were in the water, the need for the powered assault boats and storm boats which

had been used up to this time was ended, for the LCVF's had all the troop-ferrying capacity needed. The Naval commander estimated that 5,000 men and 400 vehicles were carried by the Navy alone.

Infantry support rafts and M-2 treadway rafts had been also constructed earlier in the day and these were used to carry over light vehicles and tanks respectively.

An M-2 treadway bridge was started by 0800 on the morning the assault crossing was made, and by 0930 of the following day, it was completed.

As previously mentioned, the technical difficulties produced by the stream made construction difficult inasmuch as two standard power utility boats and two 22-HP outboard motors could scarcely handle the five-ponton M-2 rafts. The LCVF's proved to be invaluable here in supplementing the power boats since their powerful engines were able to breast the swift current.

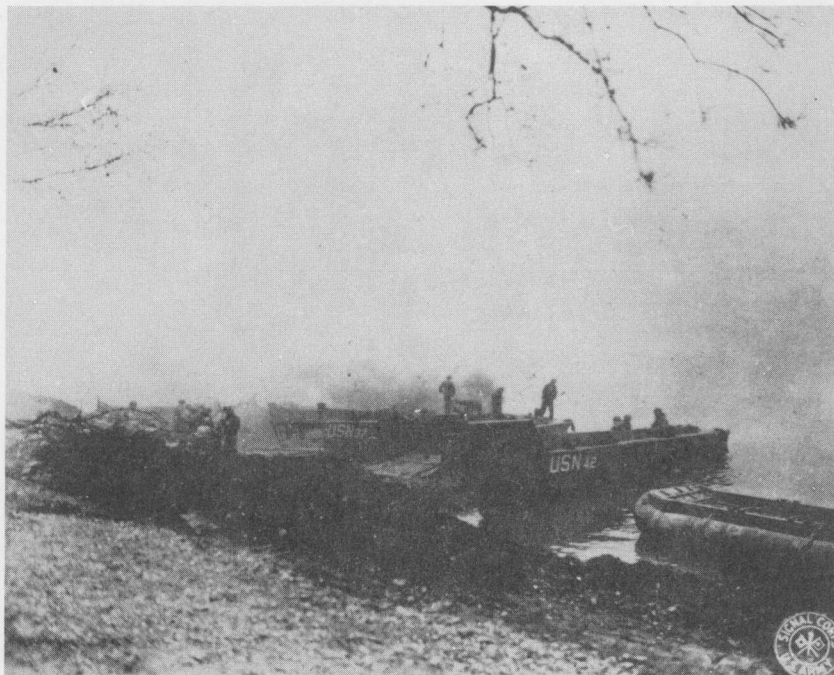


Photo No. 23

EQUIPMENT BEING LOADED UNDER SMOKE SCREEN ON LCVF'S DURING ASSAULT CROSSING OF RHINE RIVER AT BOPFARD.

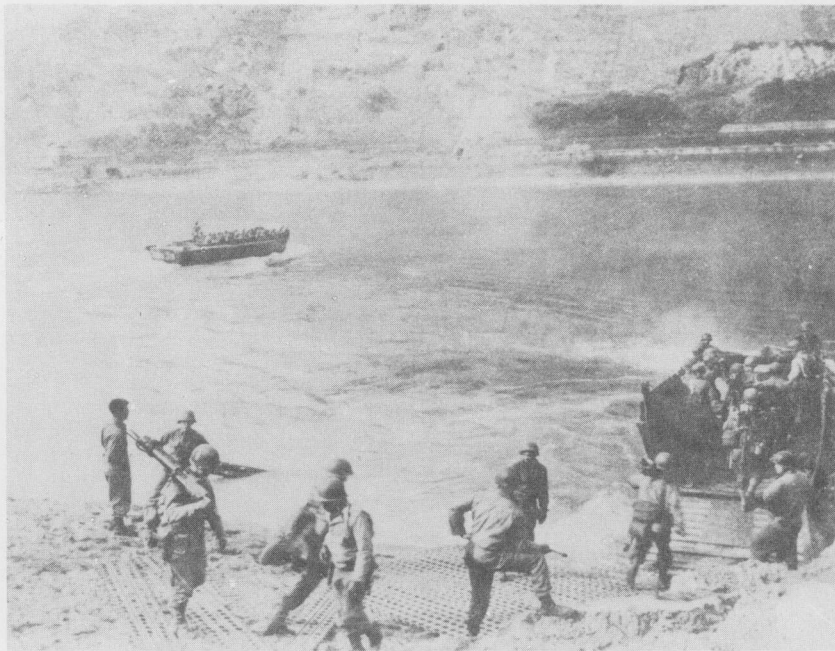


Photo No. 24
INFANTRY ASSAULT TROOPS BOARD AN LCVP AT BOPPARD ON THE RHINE.

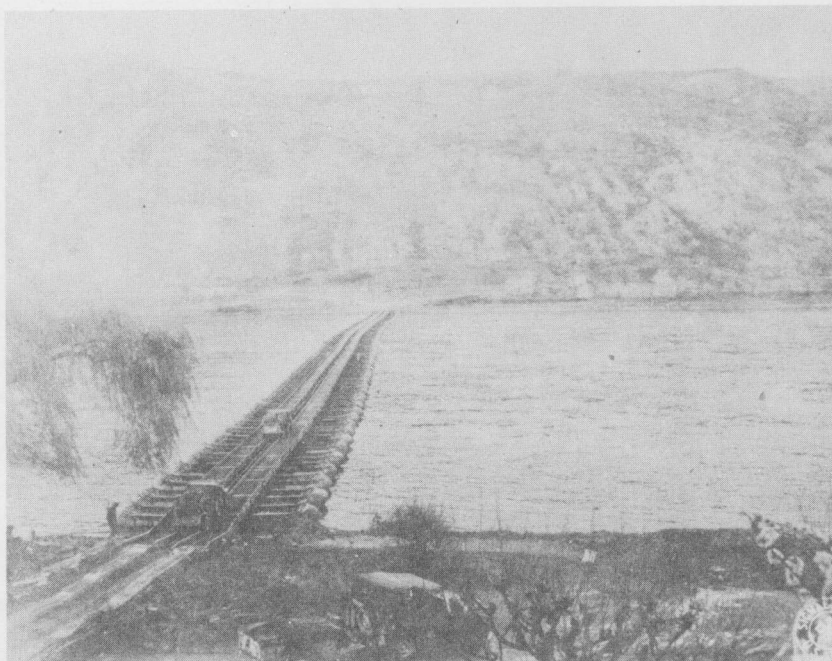


Photo No. 25
TREADWAY BRIDGE AT BOPPARD IN THE RHINE GORGE.