ADVANCED INFANTRY OFFICERS COURSE
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THE OPERATIONS OF THE 3d BATTALION, 417th INFANTRY
(76th INFANTRY DIVISION) IN THE CROSSING OF THE
SAUER RIVER AND ATTACKING A FORTIFIED POSITION
ECHTERNACH, LUXEMBOURG, 7 - 16 FEBRUARY 1945
(RHINELAND CAMPAIGN)
(Personal Experience of a Battalion S-1)

Type of operation described:

INFANTRY BATTALION IN RIVER CROSSING
AND ATTACKING FORTIFIED AREA

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INTRODUCTION

This monograph covers the operations of the 3d Battalion, 417th Infantry, 76th U. S. Division in the crossing of the Sauer River and attacking the Siegfried Line at Echternach, Luxembourg, 7 - 16 February 1945 during the Rhineland Campaign.

In order to properly cover this operation, it is necessary to briefly discuss the invasion of western Europe up to this time.

On 6 June 1944 the United States First Army and the Second British Army invaded the Western Wall of Hitler's European fortress, over the beaches of France's Cotentin Peninsula. (1) The beachhead area was soon expanded and on 24 June the city of Cherbourg fell (2) and by 5 July the Allied line extended generally from Caen on the left (north) through St. Lo to Lessay on the right (south) (3)

On 25 July after the Allied Air Force had delivered a knockout bombing in the vicinity of St. Lo, the U. S. First Army broke out of the Cherbourg Peninsula, turning on the Second British Army and advanced to the southeast. (See Map A)

On 1 August the Allied Forces were officially re-grouped and the Twelfth U. S. and the Twenty-First British Army Groups became operational. The U. S. Twelfth Army Group consisted of the U. S. First and Third Armies. The U. S. Third Army became operational officially on the same day in the vicinity of Avranches. (4)

Upon becoming operational the U. S. Third Army, under the command of General George S. Patton, Jr., was already breaking through the German defenses all along the right (south) zone of operations and with lightning armored thrusts sped across France. The U. S. First Army on the left (north) and the British Twenty-First Army Group began moving and turning, forming a large fan-like movement to the east and north. Paris fell to troops of the U. S. First Army on 25 August. (5)

The victorious Allied Armies continued to advance, and during the period 26 August to 30 September, northern France, Luxembourg, Belgium and southern Holland were in Allied hands, along with the important ports of Le Havre and Antwerp. (6)

Earlier on 15 August the U. S. Seventh Army under the command of Lieutenant General Alexander M. Patch landed on the southern beaches of France, between Cannes and Toulon (7) and with swift aggressive action had made contact with the U. S. Third Army at Sombernon, France, on 11 September. (See Map A) (8)

In late September the Allied drive lost its impetus. The German prepared positions, the over-extended supply lines

(4) A-4, p. 16; A-7, p. 29; (5) A-5, p. 73; A-6, pp. 22-23; (6) A-7, p. 52; (7) A-7, p. 54; (8) A-7, p. 52.
and the need for supply build-up before continuing operations, made it necessary that large-scale operations be temporarily halted, thus the U. S. Third Army was set down. From late September to early November the Allied line extended from the Schelde estuary east to Nijmegan, southeast to Aachen, south to Siegfried Line, Moselle River, Vosges Mountains to the Swiss border. (See Map A) (9)

Early in November the detailed plans were made for the resumption of the offensive. The supply situation was greatly improved and troop strengths were improving daily. The general plan was to close to the Rhine River, seize bridgeheads and prepare for further invasion of Germany. (10)

The halt of the Allied offensive in September and October had greatly benefited the German Armies on the Western front. This period of Allied inactivity enabled the German divisions to recover from their summer manglings and allowed Hitler and his staff time to plan and prepare for counter-thrust measures, which they were in hopes would regain the initiative and improve the morale of the army and the German people with a brilliant victory. (11)

The resumed Allied offensive began north of the Ardennes with attacks of the U. S. First and Ninth Armies on 16 November and reached the Roer River on 3 December. To the south of Ardennes the U. S. Third Army attacked on 8 November and by 22 November reached the Saar River and the Siegfried Line in the vicinity of Saarlautern. (12)

Early on the morning of 16 December, the German Army launched its counter-attack in the quiet sector of the Ar-

dennes, with Army Group "B", consisting of three armies, on
a 50-mile front extending from Monschau south through the
Ardennes forest to Echternach. The objective of the German
Army was the port of Antwerp and a wedge between the Allied
Armies. The attack struck the U. S. V and VIII Corps
fronts splitting the U. S. First Army. By 26 December af­
ter shifting the greater portion of the U. S. Third Army
north to attack the southern shoulder of the German pene­
tration and the British Twenty-First Army Group attacking
from the north, the penetration was contained along the
line: Monschau southwest to Malmedy; southwest to Roche­
fort, Beauraing; southeast to Libramont to Echternach. (13)
With violent attacks, under the most extreme winter condi­
tions of snow and ice, contact was regained between the
U. S. First and Third Armies on 16 January 1945 at Houffal­
ize, Belgium. (See Map B) (14)

With the junction of the U. S. First and Third Armies,
the offensive continued and on 24 January, St. Vith was re­
captured and by the end of January the German counter-attack
had been reduced and the Allied line restored. (See Map B)
(15)

THE GENERAL SITUATION

Having given the German Army a sound beating in the Ar­
dennes, the opportunity to deliver a knockout blow to the
enemy was within sight. Immediately SHAЕF directed the

Twenty-First Army Group on the left (north) to execute the main effort and to close to the Rhine River north of Dusseldorf. The Twelfth Army Group in the center would protect the right flank of the Twenty-First Army Group attack. Elsewhere the Twelfth Army Group would carry out probing attacks to breach the Siegfried line and if successful, be prepared to advance northeast on the axis: Prum - Euskirchen. The Sixth Army Group on the right (south) would remain generally on defense, improve positions -- particularly the reduction of the Colmar Pocket. (16)

The immediate plans of the Twelfth Army Group were to defend in the zone south of the Moselle River, continue probing attacks to the east along the axis: St. Vith - Bonn, breach the Siegfried Line, contain as many of the enemy troops as possible and be prepared to close to the Rhine River north of the Moselle River. The Ninth Air Force in support was to continue the attack to paralyze enemy communications west of the Rhine and to isolate the battlefield. (17)

In order to implement these plans, Twelfth Army Group headquarters directed: The First Army to attack immediately with the main effort on the right, breach the Siegfried Line and prepare to continue in zone to Euskirchen and Bonn. The Third Army on the right attack immediately with main effort on the left, in conjunction with First Army, penetrate the Siegfried Line, protect the right flank of the attack along the line: Prum - Hillesheim, maintain an aggressive defense south of Dussburg, to contain the enemy and to prepare to

(16) A-7, p. 75; A-8, p. 115; (17) A-8, p. 115.
continue the attack to the Rhine River by flanking the
Siegfried Line from the north to advance to the Kyll River.
The Ninth Army, under operational control of the Twenty-First
Army Group, continue advance to Roer River between Linnich
and Roermond, remain on defense elsewhere. (See Map C) (18)

The zone of advance confronting the Third Army was the
Eifel bounded on the east by the Rhine River, on the north
by the Ruhr, on the south by the Moselle, and on the west by
the Ardennes forests. The Eifel is an extremely hilly and
forested area cut up by numerous small streams and a most
difficult area to operate through. The roads throughout
the area were in an almost impossible state of repair, hav­
ing been literally beaten to pieces by the Germans in their
counter-attack and subsequent withdrawal. The winter snows
and rains had transformed the streams into raging torrents.
The cultivated fields and open forests were rapidly becoming
impassable quagmires. Adding to this natural obstacle was
the heavily fortified Siegfried Line with its reinforced
concrete pillboxes, bunkers, fire trenches and interlock­
ing gun positions. (19)

Within the Third Army, figures showed a somewhat brighter
picture. For the first time in months the army's line units
were up to strength and the supply situation was greatly im­
proved. (20)

On 3 February the operational directive of Headquarters
U. S. Third Army, issued to its corps, generally stated that
the enemy was delaying and defending "such a manner as to make

(18) A-8, pp. 115-121; (19) Personal Knowledge; (20) A-9,
maximum use of the very favorable defensive terrain, the severe winter weather and the fortifications of the Siegfried Line. The First Army was shifting its main effort to the north and the Seventh Army was defending in its sector. (21)

To carry out the army mission of attacking on its left to seize Prum and to attack northeast from Echternach, seize Bitburg and prepare to continue to the Rhine River, the corps of the army were directed generally as follows:

"...The U. S. VIII Corps continue attack on left, maintain contact with U. S. First Army on left and to continue to the east and southeast, seize Prum, prepare to continue to northeast, east or southeast.

"...The III Corps continue aggressive defense to contain the enemy, prepare to attack northeast and east to Kyll River, maintain contact with VIII Corps on left and XII Corps on right.

"...The XX Corps continue aggressive defense to contain the enemy and to maintain contact with XII Corps on left.

"...The XII Corps, consisting of the 80th, 5th, 76th U. S. Infantry and the U. S. 4th Armored Divisions plus supporting troops, attack on the night of 6-7 February, secure bridgehead over the Sauer River, continue attack to Bitburg, the corps objective, and prepare to continue to the east or northeast..." (See Map D) (22)

The 5th and 80th Infantry and the 4th Armored Divisions of the XII Corps were all veteran divisions with brilliant aggressive and dependable records. The 76th Infantry Divis-

(21) A-4, p. 255; (22) A-4, p. 255.
ion, six weeks out of the United States, was a new division in the corps, having come into the line on 19 January in the VIII Corps area in the vicinity of Champlon, Belgium. This division, while in training, was ordered to provide replacement officers and men on several occasions to other divisions already in combat. Thus, upon entering the corps, a large percentage of the officers and men were former anti-aircraft and coast artillery personnel transferred to the infantry. The division did not have any large-scale maneuver training, having progressed no farther than battalion proficiency tests and limited regimental combat team problems. However, there was a high degree of individual training and discipline. (23) Therefore, the entire division knew that it was on trial before the eyes of the mighty Third Army. (24)

On 23 January an adjustment of units and boundaries of the army sent the 76th Division south to the XII Corps to relieve the U. S. 87th Infantry Division which, with the U. S. 4th Infantry Division, was to go to the VIII Corps. (25) This relief was made on the night of 24 January and by the next day the division was holding a line along the Sauer River extending from Berdorf on the left to Wasser Billig on the right. (26)

The order of regiments from left to right being 417th, 304th, and 385th. On the left of the division was the 4th Infantry Division and on the right, the Second Cavalry, Mechanized, Group.

(23) (Personal Knowledge); (24) A-10, p. 60; (25) Personal Knowledge; (26) A-10, p. 58.
On 26 January, the 4th Division was relieved by the 80th Division and by side-slipping with the 5th Division, the Corps Order of Battle, from left to right, was 80th, 5th, 76th Infantry Divisions, Second Cavalry, Mechanized, Group with the 4th Armored Division in reserve in vicinity of Dudelange. (27)

THE BATTALION SITUATION

The disposition of the 417th Infantry Regiment on the left of the division sector was a line from Berdorf on the left to Echternach on the right. The 3d Battalion was on the left in the vicinity of Berdorf, 1st Battalion on the right at Echternach and the 2d Battalion in Regimental reserve at Consdorf. The regimental command post located in Hemstal. (28)

The period of 26 January - 4 February saw extensive patrolling carried out by the battalion. On 3 February the snow began to disappear rapidly and the roads and fields became very soft. The streams began to rise. With the lifting of the usual overcast, the troops holding the high ground overlooking the Sauer River, came under direct observation and were restricted to night movement only. Harassing machine gun and direct artillery fire enforced these restrictions. (29)

Field Order Number 14, Headquarters, XII U. S. Corps, dated 3 February, directed that the corps would attack at 0100 hours 7 February. The mission was to seize bridgeheads (27) A-4, p. 235; (28) (29) Personal Knowledge.
over the Our and Sauer Rivers, breach the Siegfried Line and prepare to advance on Bitburg. (See Maps D and E)

The 80th Division on the left was to attack and seize the high ground in the vicinity of Biesdorf. The 5th Division with Regimental Combat Team 417 of the 76th Division attached to give density to the attacking elements, would attack and seize the high ground in the vicinity of Ernzen and Ferschweiler and prepare to continue to corps objective.

The remainder of the 76th Division and the Second Cavalry, Mechanized, Group, reinforced, was to protect the right flank of the corps along the Sauer and Moselle Rivers and to support the crossings of the corps by fire. The 4th Armored Division remained in corps reserve near Dudelange.

The 1135th Combat Engineer Group would support the 80th Division and the 1103d Combat Engineer Group would support the 5th Division assault. (30)

Headquarters, 5th Infantry Division, in order to accomplish its mission, directed that the assault be made with three regiments abreast. The 10th Infantry Regiment to make assault crossing northwest of Weilerbach and Rollendorf. The 11th Infantry Regiment making two assault crossings, one south of Weilerbach one-half mile and another one mile northwest of Echternach. The 417th Combat Team on the right would cross at the town of Echternach. The 2d Infantry Regiment would remain in reserve in vicinity of Altlinster. (31) It was further directed that the crossings would be made without any preparatory fires. Leading elements would cross in

assault boats. Once the crossings were launched, the supporting engineers would begin construction of foot bridges for the remainder of the supporting infantry battalions to cross on. The 160th Combat Engineer Battalion was to support Combat Team 417, 133d Combat Engineer Battalion to support 10th Infantry Regiment, 7th Engineer Battalion (organic 5th Division) to support the 11th Infantry and the 232d Engineer Battalion to be prepared to follow the attack and erect a Class 40 bridge. (See Map E) (32)

During the night of 4-5 February, elements of the 10th Infantry Regiment relieved the 2d and 3d Battalions of 417th Infantry in Berdorf and Consdorf. The 2d Battalion moved to Bech and the 3d Battalion closed into Brouch by daylight 5 February. Thus, Combat Team 417 with 1st Battalion at Echternach, was lined up in a column of battalions for the forthcoming attack. (See Map F) (33)

The specific mission assigned to Combat Team 417 by the commanding general, 5th Division, was to attack at 0100 hours 7 February north across the Sauer River, seize the high bluffs in zones which were overlooking the crossing site, clear those pillboxes to the north and northeast in zone and assist the 5th Division in seizing the high ground in the vicinity of Ferschweiler and Ernzen. The final objective of 5th Division was the high ground in vicinity of Welschbillig and Eisenach. (See Map E) (34)

The zone of operations assigned to Combat Team 417 was one ideally suited to the defender. By now the snow was

rapidly melting and intermittent rains had begun. The Sauer River, which was normally approximately 100 feet wide, began to rise and by the time of the crossing had risen approximately 10 feet to a width of 180 feet, and was moving at a rate of 8-12 miles per hour. (35) The approaches to the river offered little cover to the assaulting troops, except the ghost town of Echternach. Overlooking the river from the north bank were very steep bluffs rising abruptly to anywhere from 400 to 600 feet, leveling off on top into open woods and cultivated fields. (36) Dispersed throughout this area along the bluffs, gorges, roads and fields were the pillboxes of the Siegfried Line which had a density of approximately one pillbox per 40 square yards and a depth of 4000 yards.

Connecting these mutually supporting reinforced concrete pillboxes, locally called the "rats' nest", was an efficient system of fire and communication trenches, with anti-personnel mines being placed in the canalized avenues of approach. (37)

Occupying these positions were the German 212th Volks­grenadier Division, 23d Penal Battalion and elements of the 44th Fortress Machine Gun Battalion. All of these units participated in the Ardennes counter-offensive. These units were badly mauled and depleted but capable of conducting a strong defense behind the swollen river under the protection of the pillboxes. (38)

In order for the reader to have a clear understanding

(35) A-11, p. 316; (36) A-11, p. 318; (37) Personal Knowledge; (38) A-10, p. 72.
of the organization for this operation, it is well to show at this time units composing the combat team and those supporting the operation as follows:

417th INFANTRY REGIMENT

ATTACHED:
- 901st Field Artillery Battalion, 105 Howitzer Company C, 301st Combat Engineer Battalion
- Company C, 301st Medical Battalion

SUPPORTING:
- 160th Combat Engineer Battalion
- Company A, 81st Chemical Battalion (Smoke Generator)
- Battery C, 558th Field Artillery Battalion (155mm SP)
- Battery C, 778th AAA Battalion
- 808th Tank Destroyer Battalion

The Combat Team would further have the supporting fires of the 76th Division Artillery.

The attack order issued on 5 February by the commanding officer of Combat Team 417 directed that assault crossings would be made beginning at 0100 hours 7 February. The 1st Battalion leading would cross approximately 500 yards north-west of Echternach. The initial crossings would be made in 40 engineer assault boats to be brought into the town the night of 5-6 February by the engineers. Once across the river the 1st Battalion would attack and seize the high ground overlooking the crossing site and sweeping east would clear the entire hill crest. The engineers would erect a foot bridge near the boat crossing site as soon as the 1st Bat-
talion crossed. The 2d Battalion would then cross, turn right and sweep along the face of the escarpment in the direction of Echternachbruck and Minden, reducing all pillboxes in its zone. The 3d Battalion would follow the 2d Battalion, pass between the 1st and 2d Battalions on order and attack over the face of the escarpment and seize the high ground approximately 1000 yards southeast of Irrel. The attack would be launched without artillery preparation; however, at 0130 hours 7 February the entire corps artillery would open up on pre-arranged targets. (39)

THE BATTALION PLAN OF ATTACK

Having closed into Brouch by daylight 5 February and with the attack to begin at 0100 hours 7 February, the battalion had little time for detailed planning. In the afternoon of 5 February, the battalion commander, S-2, S-3 and company commanders made a very limited reconnaissance in the area of the 1st Battalion, but due to the overcast, returned with little information except what was shown on the operations map.

During the remainder of 5-6 February, additional maps and aerial photographs were issued on basis of one per officer in the battalion. Communications were checked, pole charges prepared by the battalion A&P platoon, extra ammunition drawn, flame throwers were obtained through the regimental gas officer and by the afternoon of 6 February, the battalion had available everything necessary for assaulting (39) A-18.

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fortified areas. (40)

The battalion was up to full strength, status of individual clothing was excellent and after receiving three hot meals daily for the past two days, in addition to having Christmas packages from home delivered on 5 February, the morale of the battalion was extremely high. (41)

The battalion operation order issued at 2000 hours 6 February directed the battalion to move by marching at 2300 through Bech to a road junction approximately one and one-half miles north of Bech where the battalion would go into an assembly area in the woods. In the assembly area the extra ammunition, flame throwers and demolition charges would be issued. The battalion motors would remain in the assembly area under control of battalion motor officer. Order of march: Company I leading followed by Company K, Battalion Headquarters and Headquarters Company, Company L and Company M, one section heavy machine guns from Company M attached to each I and K Companies. The battalion would remain in assembly area until the 2d Battalion had moved to the crossing site at which time the battalion would close into Echternach and prepare to cross on the foot bridge. Due to the uncertainty of the battalion mission after crossing the river, little planning could be made except the organization of assault teams and the preparation to attack on order. (See Map F) (42)

(40) (41) Personal Knowledge; (42) Personal Knowledge; A-17.
At 2300 the battalion crossed the initial point in Brouch and marched toward Bech. Moving through Bech it was found that the 2d Battalion had already departed, so the battalion continued on to the assembly area reaching there at 0100 7 February. The 2d Battalion was closing into Echternach and the 1st Battalion was moving out in the assault crossing. The regimental command post had moved to Lauterborn and was open. The extra ammunition, flame throwers and demolition equipment were quickly issued and the battalion was ready to move out. (43)

At 0130 the artillery preparations began as planned. Nothing was heard of the progress of the 1st and 2d Battalions. The artillery fire was terrific and gratifying and by 0600 the corps had fired 29,000 rounds of high explosives into the enemy positions. Having heard nothing from either regiment or the 1st and 2d Battalions, the battalion commander directed the S-1 to depart immediately with a SCR 300 radio and operator, contact the 1st and 2d Battalions and report the progress of the crossings. The S-1 departed at 0200 accompanied by the S-2 and a radio operator. Enroute to the town the sky was ablaze with artillery flashes and a slow rain began to fall. Upon reaching the town, the S-2 of the 2d Battalion was quickly contacted. He stated that part of the 1st Battalion was across the river and the 2d Battalion was waiting for the bridge to be completed.

(43) Personal Knowledge.
This information was quickly sent to the battalion commander and the S-1 moved on through the town and up the river to the crossing site. Along the road and railroad running parallel to the river near the crossing site, the 2d Battalion was found lying in the ditches waiting for the bridge. The crossing site was now undergoing a terrific plastering with enemy artillery, mortar and machine gun fire. Moving to the 1st Battalion observation post the party was informed that Companies A, B and part of C were across and that there were only four boats left from the original 40. Moving back into town to the 160th Combat Engineer Battalion command post, the party was informed that it was impossible to erect a bridge before daylight as they had been unable to secure an anchor cable across the swollen, raging current.

This information was sent to the 3d Battalion Commander and the S-1 and S-2 continued to the 2d Battalion command post and waited for further developments. At about 0600 seeing that a bridge was not going to be erected and that no further assault boats were immediately available, the 2d Battalion was ordered back into the town to wait until darkness. (44)

Across the river the assaulting elements of the 1st Battalion had quickly re-organized, with approximately 50 men per company in each of A and B Companies, and had moved out about one-third of the way up on the face of the escarpment and reached the crest, clearing all pillboxes in its zone. (45)

(44) (45) Personal Knowledge.
The 3d Battalion S-1 and his party returned to the battalion assembly area at daylight and found that the battalion had moved down the road toward Echternach and was just south of Lauterborn, dispersed along the stream on the right of the road. (See Map F)

Seeing that the battalion would remain here throughout the day, the battalion commander ordered the companies to dig shelters and await further orders. It was apparent that the area would be under enemy observation when the overcast lifted. However, many of the troops did not dig shelters with much enthusiasm. At 0830 the sky cleared and almost immediately one salvo of enemy artillery landed on the road in the center of the battalion area, followed immediately with about 50 rounds in 3-pound salvos. Needless to say, at this time little could be seen in the area except entrenching tools flashing in the sunlight and the dark red clay of the Grand Duchy of Luxembourg flying through the air. The battalion remained in this position throughout the day, undergoing harassing fire. However, only seven casualties were sustained, and they during the initial concentration. (46)

At 2000 hours 7 February the S-1 and a small party of communications and command post personnel returned to Echternach to establish a battalion command post. During the day additional boats were brought into the town and the regimental commander had ordered that further crossing of the 1st Battalion be suspended and the 2d Battalion was to renew the assault crossings at 2030 to reinforce the 1st Battalion in the vicinity of Ernzerhof. The 1st Battalion had

(46) Personal Knowledge.
been cut off for approximately 24-hours and had repulsed a counter-attack of tanks and infantry at 1700. At 2100 the battalion command post was established in a house on the south edge of Echternach near the railroad and the battalion executive officer joined the party. Houses were selected for the battalion to use as shelter when they arrived. (47)

At 2030 the 2d Battalion began crossing in the additional assault boats, including four powered storm boats. Four hours later Company G and one machine gun platoon of Company H were across, but the devastating mortar, artillery and machine gun fire had taken its toll. All boats were lost or destroyed and the battalion had suffered tremendous casualties in the streets and alongside the buildings while waiting to cross.

There was no foot bridge erected. The 160th Engineer Combat Battalion had secured four cables across the river only to have them either ripped out by artillery fire or by careening boats being swept down-stream from the crossing sites of the 11th Infantry up-stream.

Eighteen additional assault boats were brought into the town and at 0400 the crossing attempts were resumed. Six of the boats were knocked out before being launched. Twelve departed to the opposite shore with troops; none returned, so the remainder of the 2d Battalion could only wait until darkness again. (48)

Thus the 3d Battalion was delayed another day in moving into the town. At this time all elements across the (47) (48) Personal Knowledge.
river were placed under the command of the 1st Battalion commander and orders were issued for them to consolidate their position. During the day, re-supply of ammunition, food and blood plasma was effected through the coordination of the regimental S-4 and the liaison planes of the 76th Division artillery. The pilots dived into heavy enemy fire to drop supplies to the isolated troops. (49)

During the day of 8 February, additional boats were brought into town. All available troops searched down-stream from the crossing site and salvaged all usable boats that had drifted down-stream after depositing their troops across the stream. Soon after darkness the 3d Battalion moved into Echternach and was quickly directed into billets to await the completion of the crossings of the 2d Battalion. (50)

At 2100 the 2d Battalion resumed the assault and by 0300 9 February was across, suffering severe casualties in the crossings. The battalion aid station group in one boat took a direct artillery hit and the entire group either was killed or drowned. (51)

The 3d Battalion began preparations to immediately follow the 2d Battalion. Boat teams were counted off according to the individual company assault teams which had been made up previously. Twelve men and their equipment were assigned to each boat plus two engineers to bring the boats back. (52)

By this time Company C of 301st Combat Engineers, part of the combat team, had been committed to the support of the crossings. The 160th Combat Engineers, having suffered such terrific losses in men and material, were withdrawn. The

(49) Personal Knowledge; (50) (51) (52) A-17; Personal Knowledge.
boat dump was established approximately 500 yards southeast up the winding street south of the crossing site. A critical item at this time was paddles for the boats, as previous crossings had consumed practically all that were available and attempts at salvaging additional ones met with little success. (53)

At 0330 hours 9 February Companies I and K moved to the boat dump, secured their boats and moved out to the crossing site, under the guidance of the battalion executive officer and the engineer boat parties. (See Map G) Due to the weight of the rain-soaked assault boats and individual equipment and the shell-torn route to the river, progress was slow and upon reaching the water edge, all men were breathing very heavily. When the boat launchings began, the enemy artillery and mortar fire came in, inflicting many casualties but by quick action the men quickly loaded and shoved off. (54) Many boats had only one or two paddles with the result they were carried far down-stream before reaching the opposite bank. Several boats were swamped due to overloads and men and equipment were dumped into the raging current to be swept away.

Both company commanders made it across safely and quickly re-organized and moved out with the personnel available. En-route up the draw to the left of the crossing site, the leading platoon of Company I lost direction and encountered a mine field approximately 300 yards from the river. The 1st and 2d Battalions had previously successfully avoided the mine field which was reported prior to the beginning of the

(53) Personal Knowledge; A-17; (54) A-17.
attack. However, it was not confirmed and had not been definitely located or marked. The platoon leader and three members of the platoon were wounded. The platoon was successfully withdrawn from the mine field and the two companies proceeded on up the draw and joined the 1st Battalion in the woods southwest of Ernzerhof. (55) By this time it was daylight and further crossing of the battalion was suspended. (56)

At this time due to the extreme state of confusion and dis-organization of the elements of the three battalions across the river, the 1st Battalion commander was directed to assume command of all units, as the 2d Battalion Commander was wounded and the 3d Battalion commander was still in Echternach. The commanding officer of the 1st Battalion was notified that he would proceed with the regimental mission and that the regimental executive officer would join him. Supposedly the regimental commander would remain in Lauterborn and direct the vast operation from the comparative safety of the regimental command post. (57)

Throughout the day the elements of the 1st and 2d Battalions cleared and consolidated the bridgehead. By darkness the line held extended from the ravine approximately 1200 yards south of Ernzen, south to the pillbox approximately 350 yards northwest of Ernzerhof and south over the face of the bluff to the eastern edges of Echternacherbruck. Companies I and K, temporarily under command of the 1st Battalion commander, were directed to dig in along the draw west of Ernzerhof and constitute a reserve for the elements. (55) A-19; (56) Personal Knowledge; (57) A-17.
of the three battalions. (58)

Sometime during the afternoon the regimental commander contacted the 3d Battalion commander by telephone and informed him that due to the fact that Companies I and K were across the river, the proper place for the battalion commander was with them and any further delay in joining them would be very unpleasing. (59)

At approximately 2200 the battalion command post group moved down to the crossing site and crossed without incident. The battalion executive and S-1 were instructed to remain and supervise the crossing of Company I and the remainder of Company M. As soon as the command post group had crossed, attempts were made to contact them on the SCR 300. After repeated calls of "Trigger Blue Six, this is Trigger Blue Five, over", the rasping whisper of the battalion commander could be heard: "This is me." The command post group departed up the bluff and joined Companies I and K in the woods in the vicinity of the 1st Battalion command post. (60)

After assembling all available boats at the crossing site, sufficient boats were available to cross Company L so it would be necessary to cross Company M in a second wave. Company L was formed into boat teams and moved out to the boat dump at 0200 hours 10 February. Boats were quickly shouldered by the 12-man teams and the column moved out, guided by the battalion executive officer. The company reached the crossing site without receiving any fire. The boats were quickly launched and loaded. The company departed in one wave. Immediately enemy flares went up and machine guns on

(58) A-19; (59) Personal Knowledge; (60) A-17.
the bluffs north of Echternacherbruck and others from approximately 800 yards northwest of the crossing site began firing. Nothing could be heard from Company L except men screaming and boats capsizing into the raging torrent. Just as suddenly as the fire began, it stopped and Company L seemed to have disappeared into the darkness. (61)

Waiting for the boats to return for Company M was futile. Just before daylight one engineer returned with a boat and stated he did not know what became of Company L. No additional boats were available for Company M to cross. The battalion executive officer departed for regimental command post at Lauterborn for further instructions. There he awoke the regimental commander and informed him of the situation. The regimental commander ordered further crossings suspended and all efforts to be concentrated toward supplying the elements of the three battalions across the river. Therefore, he directed the battalion executive to take charge and with all available personnel attempt to get rations, ammunition, water and medical supplies across the river and wounded men back across.

At this time the assistant division commander of the 5th Division came into the regimental command post. The battalion executive officer stated that if daylight supply operations were to be successful, then some smoke generators would be of great assistance at the crossing site. The assistant division commander, 5th Division, stated that there was a section of chemical smoke generators already assigned the mission and should be there already. (62)

(61) Personal Knowledge; (62) A-17.
After leaving the regimental command post and enroute back to Echternach, the battalion executive officer saw the smoke generators placed along the road about a mile south of Echternach and giving a perfect screen to the regimental command post and near-by road junction. Upon contacting the officer in charge, many and various reasons were given as to why they could not get nearer the river and do some good. (63)

The battalion executive officer returned to the town and informed the battalion S-1 and S-4 of the supply mission. The S-4 was already building up a supply dump in a barn near the river and the S-1 had supervised the removal of all dead from the vicinity of the crossing site; the recovery of all arms and equipment as well as the salvaging of two additional usable assault boats. Thus there were three boats available to carry out the supply mission. (64)

At this time communications personnel from the regimental wire section came to the crossing site and with the aid of a rifle grenade with W-110 wire attached, secured a line across the river which was quickly recovered on the opposite shore by communications personnel of the 1st Battalion, and the first telephone communications with the battalions were established. The three boats were moved to the crossing site, loaded and dispatched, reaching the opposite bank without incident and thus the supply mission was underway. (65)

Soon carrying parties could be seen descending the bluff

(63) A-17; (64) Personal Knowledge; (65) A-17.
to receive the supplies and deliver them to troops engaged in assaulting the enemy fortifications. Very soon there was a beehive of activity around the crossing site, all supply echelons of the regiment having joined in the supply mission. The Germans did not let this go unobserved and soon mortar and artillery fire were dropping in, dispersing the supply details until operations practically ceased. Division artillery observation planes were soon up to direct counter-battery fire and the enemy artillery fire ceased and the supply operations were resumed.

The battalion S-1, in the midst of supervising the loading of a boat, looked around and saw the assistant division commander of the 5th Division and following him was the chemical section smoke generator that the battalion executive had been unable to move earlier in the day. This section was soon in place approximately 200 yards up the river from the crossing site and successfully screened the crossing site throughout the remainder of the operation. (66)

At approximately 1400 the regimental S-3 contacted the 3d Battalion S-1 by telephone, which was now installed in the building serving as a battalion supply dump, and notified the S-1 to have two boats available immediately for the regimental commander and staff to cross the river. It was later learned that the assistant division commander of the 5th Division, after emplacing the smoke generators, had gone to Lauterborn and told the regimental commander to get over the river with his battalions immediately. Soon the regimental commander and staff arrived and were put across in

(66) A-17; Personal Knowledge.
great haste without incident. They were last seen disap­
ppearing up the bluff in the direction of the 1st Battalion
command post. (67)

The 3d Battalion, less elements of Company M and joined
by Company L, had by this time moved to the vicinity of Ern­
zerhof. The battalion had accomplished nothing up until
this time except re-organization. (68)

The 301st Engineer Battalion moved out at approximately
2000 to erect a foot bridge and by daylight the bridge was
in and supplies were quickly sent across by carrying parties
made up of the three battalions Pioneer and Ammunition Pla­
toons, also the battalion Anti-Tank platoons.

The remainder of the 3d Battalion Headquarters and
Headquarters Company personnel joined the battalion by 1000
on 11 February; each officer and enlisted man carrying either
a case of rations, ammunition or five-gallon can of water
up the steep bluff to the battalion command post now at Ern­
zerhof. (69)

THE ATTACK

The 417th Regimental Combat Team was relieved from
attachment to the 5th Infantry Division during the day of
11 February and immediately orders were issued for expan­
sion of the bridgehead area. The 1st Battalion by now at
approximately one-third strength, was directed to maintain
its position extending north and east from Ernzerhof. The

(67) Personal Knowledge; (68) A-19; (69) Personal Knowledge.
2d Battalion would attack immediately west and southeast from Echternachbruck and sweep along the river clearing all pillboxes in its zone. The 3d Battalion was directed to attack immediately from the vicinity of Ernzerhof to the northeast across the nose of the bluff and down into the flat lands below, keeping to the right of the road running north into Irrel. (70)

Sometime during the morning of 11 February the battalion commander was ordered by regiment to send out a strong combat patrol, reinforced with machine guns, with the objective of seizing the pillbox approximately a thousand yards east of Ernzerhof. However, the battalion commander, who appeared very much concerned over his personal safety, forgot all about the order until 1800 at which time he called in the company commander of Company I and ordered him briefly to send the patrol out immediately. The I Company Commander, realizing that it was already dark and that no reconnaissance or detailed plan could be made, refused to send the patrol out.

At this time regiment called and wanted to know if the patrol had moved out. The battalion commander reported to regiment that it was; and then threatened to relieve the I Company commander if the patrol was not sent out. The I Company commander sent the patrol out at about 1830. However, having had previous service in the regimental S-3 section, he sent his company executive officer to the regimental command post to notify the S-3 of the situation, hoping that his personal contact there would have some bear-

(70) A-18.
ing on any results of the patrol. (71)

The patrol moved out around through the woods to the
south and east of Ernzerhof and prepared to assault the
pillbox. The company executive officer returned with orders
to pull the patrol in. The patrol was withdrawn, having had
two killed and three wounded by machine gun fire from the
pillbox. (See Map G) (72)

During the night the 3d Battalion was relieved by the
3d Battalion of the 385th Infantry Regiment, which was to
continue the attack in 1st Battalion zone until pinched out
by the 11th Infantry on the left and 3d Battalion, 417th
Infantry on the right. (73)

The 2d and 3d Battalions were ordered to continue the
attack to the north and east. Company I moved out to cap-
ture Pillboxes A, B, C, D, E, in that order. Pillbox A
was captured by early afternoon and B, C and D were cleared
by dark. Now the battalion commander moved the operations
command post from the pillow near Ernzerhof to Pillbox A.
(74)

The next morning Company L was ordered to pass through
Company I and attack east in the direction of Hill 259. The
company moved out around 0900 on 13 February, passed through
I Company and across the road and immediately came into a
murderous cross-fire from pillboxes on three sides. The at-
tack stopped; the company did not move as the battalion com-
mmander remained in the command post. Also the L Company
commander became separated from the company and was pinned
down. He did not return to the company command post until

(71) (72) A-19; Personal Knowledge; (73) Personal Knowledge;
(74) A-19.
As soon as darkness came, the S-1 and the battalion assistant medical officer began the supervision of the evacuation of L Company wounded. The entire night was occupied evacuating the wounded by litter back to Ernzerhof where 1-ton vehicles were able to evacuate the wounded to the bridge site.

The battalion commander was ordered to report to the regimental command post at 2000 to explain the failure of his battalion to gain any ground during the day. He returned at approximately 2200 with a personal bodyguard of eight men commandeered from Company K.

The next morning, 14 February, Company I captured Pillbox D. Little else was done; however, the 2d Battalion was having success with coordinated attacks along the river and was holding a line running generally south of Hill 259. At about 1400 the battalion commander called the I Company commander to the command post and ordered him to attack immediately to the northeast astride the road, capture Pillboxes F, G, H, I, and J; and secure a line of departure running northwest and southeast, approximately 500 yards northeast along the road from the S-turn in the road to Irrel.

Company I attacked again without reconnaissance or detailed planning, as darkness was rapidly approaching. As soon as the company moved out, the battalion commander sent a written message to the battalion executive at the battalion rear command post, stating that Pillboxes F, G, H, I, and J were clear. However, the battalion S-2, realizing the

(75) (76) (77) Personal Knowledge; (78) A-17.
seriousness of this false information, arrived at the battalion rear command post soon after the message did, and stated that it was false and that Company I had just moved out. The message was not sent. Company I did capture Pillboxes F, G, and H before darkness. In moving around in order to assault Pillboxes I and J from the rear, one platoon ran into anti-personnel Mine Field Number 2, killing two and wounding 12, eight of these being litter cases. The company pulled back to Pillboxes F, G, and H, re-organized and spent the night getting the litter cases out. (See Map G) (79)

During the night, approximately 50 stragglers who had drifted back to Ernzerhof, during the day, were rounded up by the S-1 and were sent out to the companies carrying rations and water that the Anti-Tank and A&P platoons had brought up from Echternach. Also the S-1 was able to get fairly accurate reports from the companies and get the first morning reports in for the battalion since 8 February. (80)

By 0800 the next morning, 15 February, the ammunition and pioneer platoon had cleared a path through the mine field and Companies I and K attacked northeast toward Hill 292. Company I on the left was to guide on the road running north into Irrel until it reached a road junction on Hill 250 then turn northeast to Hill 292. By this time the 2d Battalion was approximately a thousand yards southwest of Minden. (81)

The companies moved out at approximately 0830 and due to a very heavy fog plus additional smoke drifting up the (79) A-19; (80) Personal Knowledge; (81) A-17.

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road from the smoke generators at the bridge sites, the companies were on top of each pillbox under cover of artillery, mortar, smoke and fog before the enemy could detect them. By 1000 Company I in the fog and smoke had by-passed the road junction, losing direction, and confusing the road running into Ernzen with the one going into Irrel and knowing they were to keep to the road on the left, turned up the hill on the left of the road to Irrel approximately 800 yards southwest of Irrel. At this time the I Company commander could see down the hill into Irrel and then realized he was out of his zone. He ordered the company to withdraw back to the road and get into proper position to take their objective.

As the company began to withdraw, the wind came up and the smoke and fog lifted. The enemy began dropping mortar on the company pinning them down in the turn in the road 1000 yards south of Irrel. The company commander began withdrawing the company by infiltration but having no one in rear to stop them until they reached the company command post, the company had withdrawn back to the first pillboxes taken that morning. (See Map G) (82)

By this time Company K had had some success and was about 1000 yards from Hill 292 in its zone. (See Map G) (83)

Company I re-organized by 1300 and moved back up abreast of Company K. In the meantime, the battalion command post moved to Pillbox I and the aid station moved to Pillbox E. The 2d Battalion had uncovered the battalion right rear and was near the town of Minden. The battalion S-3 went to the bridge site and guided up two tank destroyers that had just (82) A-19; (83) Personal Knowledge.
come across the Class 40 bridge.

At 1400 Companies I and K jumped off in a coordinated attack supported by the tank destroyers and by 1700 had secured Hill 292 and were overlooking the Prum River and Irrel. (84)

RELIEF OF THIRD BATTALION

At approximately 1000 the next day, 16 February, the battalion was notified that it would be relieved that night by the 1st Battalion of the 385th Infantry. Also that the battalion would move back to Boulder, near Brouch from where it started the attack. The S-1 departed immediately with the battalion S-4 to arrange billets and prepare for hot meals for the battalion. (85)

By 2000 that evening the relief began and by daylight 17 February was complete. (86)

ANALYSIS AND CRITICISM

This operation combined three of the most difficult specialized operations: namely, a night attack, an assault river crossing and an attack of fortified positions. Any one of these type operations would have been difficult for seasoned troops and staffs. The committing of a green unit to this operation was to contemplate many mistakes. However, the necessity was a command decision and it is felt that it was proper in that it made possible heavy attacks all along the

(84) (85) (86) Personal Knowledge.
entire corps front resulting in the rapid breaching of the Siegfried Line.

It is my opinion that this mission assigned to the combat team was not too large and certainly not too great for the 3d Battalion. It could have been easily accomplished by the 3d Battalion if it had prepared coordinated attacks and brought the entire weight of the battalion to bear upon the enemy instead of the piece-meal commitment of the already depleted companies.

The engineers did a superior job throughout this operation. However, in the planning for the operation, insufficient boats were assigned to the crossing; and those that were received were not fully equipped with paddles. This resulted in the three battalions having to cross the river in numerous small assaults.

The placing of the boat dump in the southern part of the town provided cover and concealment for the dump. However, it caused a hand-carry of approximately 500 yards through the rubble of the town and out along the railroad to the crossing site. It is believed that this was too far for the troops to carry boats, especially after already carrying extra ammunition and demolition equipment.

The initial assignment of 12 riflemen, two engineers and the extra equipment to each assault boat was an absolute maximum. Due to losses prior to launching the boats, it resulted in additional riflemen being assigned to the boats and due to the speed of the swollen stream and the lack of sufficient paddles to control the boats, many were swamped in mid-stream.
The engineer plan of having two engineers in each boat to return the empty boats is an excellent plan. However, these men must be carefully selected in order that they can be relied upon to return the boats. Several boats in this operation were abandoned by the engineer boat teams once they reached the opposite river bank. In all cases they were slow in returning and in many cases were left to drift down-stream.

The initial waves of troops, upon reaching the opposite bank of the river, merely dropped the boat paddles and were not careful to leave them in the boats for the following waves and resulted in the rapid expenditure of the already critically inadequate supply of boat paddles.

Reconnaissance prior to this operation was incomplete. Neither the battalion commander, his staff nor any of the company commanders had observed the crossing site until each of them crossed it during the hours of darkness.

Map supply was inadequate for operations of this type. There should be a distribution of maps and aerial photos down to and including the squad. Throughout this operation, squads became separated in the attack and lost in the maze of pillboxes.

The decision to keep the battalion out of the town during the period 7-8 February was a wise one. The town was shelled constantly whereas in the assembly area the battalion occupied, only harassing artillery fire was received and casualties were light. However, these casualties were unnecessary and would not have occurred if the troops had pre-
pared individual shelters when ordered.

The improper selection of sites for the smoke generators resulted in the enemy having excellent observation of the crossing site. It is felt that this was a failure on the part of the regimental commander to see that these were properly emplaced; and the necessity of the assistant division commander of the 5th Division having to go down and move them does not reflect greatly upon the regimental commander and staff.

The slowness of the regimental commander and 3d Battalion commander in crossing the river does not indicate aggressive leadership. It resulted in the burden of extra command being placed upon the 1st Battalion commander.

The problems of supply and evacuation assumed an importance equal to the attack problem although they were not contemplated. It was found that the battalion anti-tank and ammunition and pioneer platoons could supply the battalion by hand-carry. The battalion executive officer did a superior job in carrying out the supply and evacuation missions.

The failure of the battalion to keep up its administrative paper work such as morning reports was justifiable in this operation. There were more important problems and accurate reports were impossible. As soon as the situation improved, the battalion S-1 and sergeant major went out to the companies and collected information in order to submit morning reports that were accurate.

The mere presence of the division artillery liaison planes in the air over the area provided an excellent counter-
battery weapon. The enemy was very reluctant to fire when the planes were in the air.

When the battalion began its assault on the pillboxes everything seemed to go wrong. The lack of aggressiveness of the battalion commander and his reluctance to get out and see what was going on as well as set an example for the companies is inexcusable. Due to previous actions, the entire battalion lacked confidence in his leadership and it came to a climax once the battalion began the assault. His failure to allow time for reconnaissance by the company commanders, and his attempt to command from within a pillbox resulted in the attacks going off unprepared, piece-meal and during the hours of darkness. His actions in false notification to the regimental commander of pillboxes taken, whether they were or not, was a serious offense.

The regimental commander should have relieved the 3d Battalion commander on 13 February when the evidence showed the battalion commander had failed to push the attack. It is believed that the objective would have been taken sooner and with less casualties if some one else had been in his place, who would have executed coordinated aggressive attacks. The battalion commander was relieved after the operation. The battalion executive officer was placed in command and the battalion performed in an excellent manner throughout the remainder of the war.

The tank destroyers proved to be of excellent assistance during the attacks of 16 February. They were able to keep the pillboxes buttoned up until assaulting troops could move
It is my opinion that the enemy defended the fortifications with all the methodical planning and tenacity which was characteristic of the German army. However, they were not so deeply impressed with Hitler's orders to defend to the last man and were ready to surrender when the final assault was launched on each pillbox. It is believed that they could have held up the attacking forces much longer if they had been willing to deliver an all-out defense.

In concluding the analysis, the extreme efforts and leadership displayed by small units and individuals cannot go without praise. It is felt that this reflects the high degree of individual training and discipline that existed in the unit.

The willingness of the units to sustain the assault and turn mistakes into ultimate successes is most commendable. The battalion suffered the loss of approximately 50% of its riflemen and 14 officers from its line companies were either killed or wounded.

In closing this operation, its effect upon subsequent operations must be shown. In conjunction with the 80th and 5th Divisions, the Siegfried Line was breached, allowing the 76th Division to turn south and sweep through the Siegfried Line from the rear and link-up with the 10th Armored Division of the XX Corps at Trier, thus clearing the fortifications from the rear with lessened casualties, which justifies somewhat the frontal assaults at Echternach. The 5th and 80th Divisions continued to the north, captured Bitburg on
28 February, and on 5 March the famous 4th Armored Division launched its historic sweep to the Rhine River.

Of the action it is felt that the following statement of Colonel Albert C. Lieber, Jr., Corps Commander, is most descriptive. "The action of the 417th Infantry of the 76th Division was remarkable. The green division had joined the Corps in January and had gotten its ball cartridge maneuvers in holding the defensive front along the Lower Sauer-Moselle. It was necessary to use a regiment of this Division in the 7 February attack in order to obtain the desired density along the attack front so the 417th Infantry was attached to the 5th Division for the crossing. We estimated that the best way to clear the line in front of the 76th Division was to penetrate and take it in reverse, sweeping from west to east. Then came the attack and the "green" 417th found a way through a draw up the precipitous canyon walls and penetrated over 1000 yards farther than any of the battalions of the experienced 5th and 80th Divisions. Months later, when I was C/S XXIII Corps, we were still finding their bodies ranged around the pillboxes they captured, and frequently with the officer or NCO leader nearest the embrasure. The whole procedure merited the highest praise." (87)

By General Orders Number 19, War Department, dated 10 February 1947, the 417th Regimental Combat Team was cited for outstanding performance of duty in action at Echternach, Luxembourg and under the provisions of Section IV War Department Circular Number 333 was awarded the Distinguished Unit Badge. (87) A-11, p. 320.
LESSONS

Some of the lessons emphasized by this operation are:

1. Green troops with a high degree of individual training and discipline can be expected to rise to great heights in initial combat purely through their desire to establish themselves as equal to their companion veteran units.

2. Successful assault river crossings can be executed only through careful planning and with the closest supervision at all command levels.

3. In preparing for sustained assaults across rivers the procurement of assault boats beyond expected needs is a necessity.

4. Sufficient assault boats are useless unless there are at least four paddles available per boat.

5. Boat dumps for river crossings must be established with equal consideration for protection for boats and with regard for distance from the crossing sites, in order to protect the boats from enemy fire and to prevent an excessive hand-carry of the boats.

6. In assault crossings of rivers, 10 riflemen and two engineers are the maximum load that should be assigned to the engineer assault boat.

7. Engineer boat teams must be carefully selected to insure the use of personnel who can be depended upon to undergo personal risks in order to return boats for the second and subsequent waves of assault troops.
8. Boat leaders in assault river crossings must see that paddles are placed in the boat upon reaching the opposite bank to insure their being available for subsequent waves.

9. Reconnaissance of the river crossing site must be made by all leaders down to and including platoon leaders if minimum confusion and little delay are to be expected.

10. Map distribution must be down to and including squad leaders for assault of fortified positions.

11. Close coordination must be exercised in the movement of troops to a river crossing site to prevent congestion and confusion.

12. Smoke generator units play a role of vital importance in river crossings and the careful selection of positions is of paramount importance.

13. Battalion and regimental commanders in river crossing operations must get across the river as soon as possible to effect speedy re-organization and accomplishment of assigned missions.

14. Supply and evacuation must assume consideration equal to the tactical plans in river crossings.

15. The mere presence of air observation posts provides an effective counter-battery weapon.

16. In the assault of fortified areas, battalion staff and battalion headquarters company units must be prepared to follow the attack closely and many times perform duties which are not routine in order to insure proper supply and evacuation.
17. Large, coordinated attacks are vital to the success of operations against fortified areas.

18. Regimental commanders should maintain close observation of battalion commanders and act quickly to remove any officer who shows the smallest amount of reluctance to push an attack.

19. A unit performs no better than its commander.

20. Direct fire weapons are of vital importance in assaulting built-up areas.

21. A weak enemy in a built-up area must not be underestimated for as long as he is willing to remain and fire his weapons, he can inflict heavy casualties.