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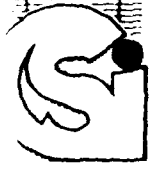
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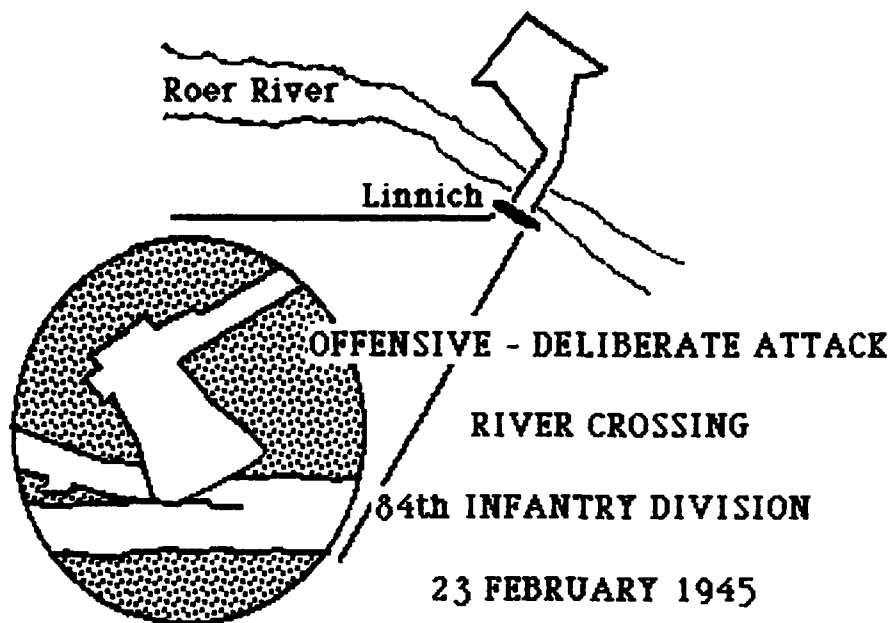
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ROER RIVER CROSSING

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Operation Grenade was the Ninth U.S. Army's crossing of the Roer River in February 1945. This study focuses on the 84th Infantry Division which was the northernmost division in the operation. On 23 February 1945, the 84th Division crossed the Roer River in assault boats on a one battalion front. The 84th quickly advanced inland after the successful crossing. The crossing of the Roer River is a classic example of the methodical and deliberate planning process needed for success in a large and complicated operation. The accomplishments of the 84th Division are largely credited to effective reconnaissance and preparation, mission rehearsal, and swift execution of the operation.

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ABSTRACT

COMMON REFERENCE: Roer River Crossing (February 1945)

TYPE OPERATION: Offensive, Deliberate Attack, River Crossing

OPPOSING FORCES: US/ALLIES:

Ninth U.S. Army
XIII U.S. Corps
84th U.S. Infantry Division

GERMAN:

Fifteenth Army
LXXXI Corps
XII SS CORPS
59th Volksgrenadier Division
183rd Volksgrenadier Division
176th Volksgrenadier Division

SYNOPSIS: The German winter counteroffensive in December 1944 forced the U.S. Ninth Army to temporarily halt operations. Ninth Army units held positions along the ROER River and secured the northern shoulder of the "Battle of the Bulge." When the German Ardennes offensive failed, the Allies intended to return rapidly to a general offensive along the entire front. The Ninth U.S. Army prepared and executed the successful crossing of the ROER River to participate in the Allied advance to crush the German Army. On 23 February 1945, the 84th Division crossed the ROER in assault boats on a one battalion front, alongside the 30th, 29th, and 102d Divisions. The 84th quickly advanced inland after the successful crossing.

The crossing of the ROER River is a classic example of the methodical and deliberate planning process needed for success in a large and complicated operation. The accomplishments of the 84th Division are largely credited to effective reconnaissance and preparation, mission rehearsal, and swift execution once the operation was initiated.

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SECTION I

INTRODUCTION TO THE CROSSING OF THE ROER BY THE 84TH DIVISION

By late September 1944, the Allied advance on Germany temporarily ground to a halt to allow the lines of communications to catch up with combat forces. In mid-December 1944, Hitler launched his last major counter-offensive in the Ardennes region, culminating in the Battle of the Bulge that took place from December 1944-January 1945. As the Allies resumed the offensive in February 1945, all that stood in the way of victory and the unconditional surrender of Germany were battered and weakened German forces and a series of river obstacles, the first of which was the ROER River.

Operation Grenade was the Ninth U.S. Army's crossing of the ROER River. The crossing was planned for 10 February, but was delayed until 23 February 1945. Operation Grenade was a large scale river crossing operation in which the Ninth U.S. Army and the VII Corps of the First U.S. Army crossed six divisions over the ROER River. The 84th Infantry Division, as a part of XIII Corps of the Ninth Army, was the northernmost division in the operation. This battle analysis investigates the 84th Division's methodical and deliberate planning and conduct of the ROER River crossing on 23 February 1945 between AACHEN and MOENCHEN-GLADBACH at the town of LINNICH, Germany.

The 84th Infantry division consisted of three infantry regiments, four artillery battalions, a combat engineer battalion, and other organic combat support and combat service support units. The major German forces opposing the 84th Infantry Division were initially elements of the LXXXI Corps (363d Volksgrenadier and the 59th Infantry Divisions) and later elements of the XII SS Corps (183d Volksgrenadier, 176th Volksgrenadier Divisions and elements of the 338th Infantry Divisions).

Key Sources

The major sources used in this analysis were:

Primary:

1. 84th Infantry Division After Action Report, Nov 1944-Jun 1945.
2. XIII Corps After Action Report, Nov-Dec 1944 and Feb-May 1945.
3. XIII Corps Artillery After Action Report, Nov 1944 to April 1945.
4. 59th Infantry Division, (German) (2 Dec 1944 - 28 Feb 1945).
5. LXXXI Corps (German) (25 Jun - 21 Mar 1945).
6. Fifteenth Army: Abwehrkaempfe an Roer und Rhein, (22 Nov 1944 - 9 Mar 1945).

Secondary:

1. The 84th Infantry Division in the Battle of Germany.
2. Conquer: The Story of the Ninth Army, 1941-1945.

3. The German Wehrmacht in the Last Days of the War.
4. The Last Offensive, United States Army in World War II.
5. Eisenhower's Lieutenants: The Campaign of France and Germany 1944-1945.

Evaluation Of Sources

Most after action reports were written by unit representatives at the conclusion of the battle for historical purposes. As is often true with after action reports, they tend to glorify the actions of U.S. forces since they are written by the units themselves. These reports, however, provide excellent detail concerning the planning and conduct of the river crossing and are the most authoritative account of actions available to the researcher. Unit accounts also tended to be inaccurate as to enemy dispositions and intentions, since they are written immediately after the end of the battle. Actual enemy intentions were usually not available. Postwar accounts by the commanders of the 59th Volksgrenadier Division, LXXXI Corps and German Fifteenth Army were used to fill this void. Research efforts for this analysis were adversely affected by the absence of the original 84th Infantry Division's Operation Order for the ROER River crossing operation and the researchers' inability to locate and interview actual participants. In addition, postwar accounts were not available for the 183d Volksgrenadier Division of the XII SS Corps. For example, it was impossible to determine actual unit locations and movement schedules for elements of the 84th Division on the west side of the

ROER. Also, research could not explain why the infantry was unable to call in fire missions to the artillery in direct support during two attacks.

Of the secondary sources used in this analysis, The 84th Infantry Division in the Battle of Germany provides an excellent account of the events in this action. Its major fault is that it was written by the division's historian and also tends to glorify the actions of the 84th Infantry Division. Much of the information is little more than a restatement of the unit after action reports with more photos and illustrations. The Last Offensive and Eisenhower's Lieutenants provide an overview on the conduct of the entire European campaign. They are valuable sources for information on the strategy of higher headquarters and provide insights on the decision process and rationale of the major Allied leaders. The German Wehrmacht in the Last Days of the War, which summarizes high level journals and reports, provides a view of the campaign in Europe from the perspective of the Commander in Chief Western Front and the German Supreme Command.

Both the major primary and secondary sources were written in a favorable point of reference to the 84th Division. However, all supporting documents tend to confirm that the ROER River crossing conducted by the 84th Infantry Division is an example of a methodically planned, well rehearsed, and properly executed deliberate river crossing and exploitation.

SECTION 2

THE STRATEGIC SETTING

The Strategic Background

The Normandy invasion began the final campaign against the Germans in the West.¹ The Allied effort in Normandy was the culmination of a strategy developed nearly three years earlier at the Arcadia Conference and approved by the "Big Three Powers" at Teheran in 1943. The strategic objective was based upon a consensus policy of unconditional surrender. The Allied plan was to burst into Germany on a broad front before winter, and to strike at the industrial heart of the war economy in the Ruhr and Rhineland. Bad luck, foul weather, logistical problems, and differences of opinions within the Allied High Command worked against achievement of the Allied goal.

After much debate, the Germans adopted a plan to defend France and Western Europe using a static defense of the French seacoast to deny beachheads to the Allied invasion forces. The strategy was adopted because Allied air superiority prevented the freedom of maneuver required to conduct a mobile defense. The plan depended on strong beach defenses and the quick commitment of properly located armored reserves. The plan did not succeed in preventing the Allies from landing, but a staunch German defense held the Allies in check for fifty days after their landing. On 26 July, 1944, Lieutenant General Omar Bradley's First Army broke out of the lodgement area at

St. Lo in Operation Cobra, beginning the mobile campaign in France. Four Allied armies raced eastward against weakened resistance until overextended supply lines brought the drive to a halt. By the last week of August, the Allies sat poised on the banks of the Seine, eleven days ahead of schedule, but without adequate fuel and supplies to press the attack. The German defense to the Seine had cost them half a million men and 2000 tanks.

In the face of prohibitive logistical shortages, the Allies initiated Operation Market-Garden, a combined airborne assault and ground link-up operation designed to secure a series of river crossings along a narrow front all the way to the RHEIN. If successful, the daring plan would have put the Allies across the RHEIN, turned the flank of the West Wall, and opened a door to the RUHR. Fierce fighting during Market-Garden further depleted Allied supplies and the ultimate failure of the operation demonstrated that the Allies were not strong enough to end the war in 1944.

During September, the German Army rallied along the line of the German frontier and succeeded in forming a continuous front near the RHEIN which the Allies pressured but failed to break for the remainder of the year. Adolf Hitler consolidated Germany's last reserves of men and material. Eighteen new infantry divisions were ordered west across the RHEIN while panzer and panzer-grenadier divisions in the West were reequipped. Hitler's objective was to undertake an offensive which would wrest the initiative from the Allies and buy time for the Reich to develop new weapons and split the Allied coalition. Hitler extolled

this position in a meeting with prominent military leaders.

"The time hasn't come for a political decision...Such moments come when you are having successes...But the time will come when the tension between the Allies will become so great that the break will occur...The only thing to do is to wait for the right moment, no matter how hard it is."²

On the morning of December 16, the German Army mounted its last great offensive in the war in an effort to make Hitler's prediction a reality. When the attack came, Lieutenant General William Simpson's Ninth Army, north of the Ardennes, was preparing to move in support of Montgomery's 21st Army Group. Ninth Army had occupied a narrow sector between the 21st Army Group and the First Army to the south. It had fought a series of minor actions north of AACHEN to its current position on the ROER River line. Ninth Army responded to the German attack by doubling its frontage and assuming a purely defensive position. By doing so, it freed the U.S. V and VII Corps to repel the enemy offensive. By mid-January, after the Battle of the Bulge had ended, Lieutenant General Simpson's force returned to its former frontage near AACHEN and prepared for offensive operations towards the RHEIN.

The progress of the Allied campaign on the Western Front after the defeat of the German Ardennes Offensive was influenced by two strategic decisions, one Allied and the other German. The first was Eisenhower's conclusion that one more campaign conducted on a broad front would be the death knell for Germany.³ Meanwhile, Hitler

had decided upon a policy of forward defense west of the RHEIN. Eisenhower pitted seventy-two combat ready Allied divisions against a seventy-six division German force which had been pared to one-third to one-half strength.

General Eisenhower's plan for the upcoming battle of the Rhineland reaffirmed the commitment to a strategy of advancing on a broad front against the German heartland. His coordinated movement was to be conducted by successive blows against the German line. The first major offensive would be Operation Veritable, launched by Montgomery's 21st Army Group from NIJMEGEN to smash through heavy German defenses in the REICHSWALD. After accomplishing this mission, Canadian First Army was to drive to the RHEIN, turn south and link up with Ninth Army, driving northeast from AACHEN.

Simpson's offensive, Operation Grenade, was intended to be launched almost simultaneously with that of the British 21st Army Group. Ninth Army's operational directive required it to assault over the ROER River to the RHEIN, and link up with British and Canadian forces. The prize for successful execution would be envelopment of substantial German forces in a pocket before they could escape across the RHEIN.

The third phase of the Allied offensive, called Operation Lumberjack, was to commence after Veritable and Grenade had united at the RHEIN. At this stage, Bradley's 12th Army Group was to attack directly eastward through the EIFEL Region and along the MOSELLE River Valley. Operation Lumberjack was expected to secure the west bank of

the RHEIN from COLOGNE to KOBLENZ.

The last element of Eisenhower's plan was Operation Undertone, conducted by the 6th Army Group to support Bradley's right flank south of the MOSELLE River. Ultimately, the Allied crossings would create a huge double envelopment at the RUHR to be followed by a massive final thrust to join up with the Russian Army.

Operation Grenade was a key initial operation in Eisenhower's overall strategy to defeat the German Army in the West. Ninth Army was familiar with the ground it was to attack over since some of its elements had occupied positions on the ROER prior to Ninth Army's operations against the German Ardennes offensive. Simpson's forces were to cross the ROER on a twenty-five kilometer front. His XIX Corps on the right and XIII Corps on the left divided the front equally between them. XIX Corps planned to cross the ROER with the 30th Infantry Division on the right, the 29th Infantry Division on the left, with the 2d Armored and 83d Infantry Division in reserve. XIII Corps, under Major General Alvan C. Gillem, Jr., consisted of three divisions and would cross with the 102d Infantry Division on the right, the 84th Infantry Division on the left, and the 5th Armored Division in reserve. Ninth Army also commanded XVI Corps on the northern flank. This corps had been detached from the 2d British Corps to allow them to concentrate for Operation Veritable. XVI Corps, consisting of three divisions, would clear its sector and take necessary action to protect XIII Corps' northern flank. XXIX Tactical Air Command, with 300 fighter bombers, provided Ninth Army with air

support for interdiction of German approaches to the battlefield from the north, south, and east.

The major obstacle to the Allied offensive was not the river, but the seven dams which regulated the flow of the ROER and its tributaries. These dams became known collectively as the ROER River dams, with particular reference to the two largest, the ERFT and the SCHAMMENAUEL. German control of these dams posed a serious problem because their destruction would cause flooding throughout the ROER River Valley. The Germans had two courses of action available. They could destroy the dams causing a flashflood throughout the valley or they could destroy each dam's outlet valve, gradually flooding the area. The Germans chose the latter strategy, releasing a steady stream of water into the ROER Valley. Simpson's plans for Operation Grenade were temporarily postponed as the river rose to depths of 10 to 11 feet and broad flooded areas, some over one thousand yards across, were created where the ROER overflowed its banks.

XIII Corps now recommended postponement of the original 10 February 1945 start date for the operation. Delay was now required to allow engineer study of the ROER's shore lines and rate of flow. Influencing XIII Corps' recommendations for postponement were:

The excessively wide flood plain.

The reduction in the number of crossing sites due to the high water.

Unfavorable access and egress roads supporting potential bridging sites.

The presence of a broad mud flat over the planned bridgehead area and its relationship to the high ground east of LINNICH.

The potential existed for slow or nonexistent movement in the bridgehead area while under the direct observation and fire from the far side of the river. Especially critical were the proposed crossing sites immediately upstream from LINNICH on the left side of the Corps area.

The 84th Division, as part of the XIII Corps, had assumed responsibility for the sector between LINNICH and HIMMERICH, fronting the ROER River, on 7 February. Elements of its lead regiment had moved forward from assembly areas in anticipation of crossing the ROER at 0330 hours on 10 February. When the rising river forced postponement, the division intensified its training program, sending battalions through various river crossing maneuvers on the WUERM River. Final training was conducted on 19-20 February on the MEUSE River under simulated conditions resembling those expected on the ROER.

In the meantime, corps commanders continued to monitor river depth. Army engineers first estimated that the attack could be rescheduled for 17-18 February. However, the Army commander concluded that dangerous river conditions during that period would outweigh the element of surprise gained from such a move. He estimated that an attack on 24 or 25 February, would not be hindered by a receded river, but by that time the element of surprise would be lost.⁵ He decided to jump off on 23 February, one day before the ROER's expected return to normal.⁶ A revised Field Order Number 6 was issued.

In the XIII Corps zone, the 84th Division was to attack on the left, with the 102d on the right, to force a crossing of the ROER River in the vicinity of LINNICH and to seize and secure a bridgehead in its zone.⁷ The stage was set for the start of Operation Grenade.

The Strategic Comparison

As the year 1945 opened, the Allies faced seventy-six German divisions along the West Wall and the RHEIN River. Although the German soldier continued to fight with determination, he began to suffer severe equipment shortages due to prolonged combat on many fronts. The permanent disparity between the resources of Germany and those of her three powerful adversaries could not be overcome by German technological advances in special weapons development. Hitler's emotional appeal for manpower in late 1944 resulted in the addition of 1,626,000 men to the ranks of the German armed forces during the first quarter of 1945. Many, however, were poorly trained, ill-equipped, and not physically capable of performing the demanding tasks required of a combat soldier. Ironically, a major role in the defense of the homeland would fall to training cadre, Hitler youth (Hitlerjugend) and the militia (Volksturm). The German Army had performed superbly to date but now had no capability to conduct a coordinated defense in depth. The German Fifteenth Army lacked the reserves and airpower necessary to blunt Eisenhower's offensive.

In contrast, the United States war economy was capable of producing ample equipment to support Allies on all fronts. Losses were rapidly replaced and the Allied effort had the unquestioned support of their respective peoples. All of the strategic advantages rested with the Allies. Ninth Army's 12:1 edge in manpower over opposing enemy forces in the objective area were representative of the force differential on all fronts. Furthermore, United States forces had rapidly gained combat experience and were at least on a par with German veterans. Although decisionmaking within the Allied coalition was often slowed by suspicion and grievances among senior officers, coordination was adequate to carry out planning. Strategic comparison between the warring powers presages a mismatch which leads to the final chapter of the war in Europe.

NOTES

¹General information for the strategic background was taken from the following references:

A Short History of World War II, pp. 175-187; 310-326; 349-358.

Eisenhower's Lieutenants, pp. 367-572; 596-612.

Hitler, A Study of Tyranny, pp. 753-765.

The American Way of War, pp. 317-320; 344-348.

The Last Offensive, pp. 70; 140-146.

The War Against Hitler, pp. 225-237; 264-265.

²Alan Bullock, Hitler, A Study in Tyranny (New York: Harper and Row, 1964) p. 755.

³Albert A. Nofi ed., The War Against Hitler (New York: Hippocrene, 1982) p. 229.

⁴Headquarters, XIII Corps, "After Action Report." (N-9868) 11 March 1945, p. 3.

⁵Nofi, The War Against Hitler, p. 237.

⁶Ibid.

⁷Headquarters, 84th Infantry Division, "After Action Report", Feb 1945, p. 19.

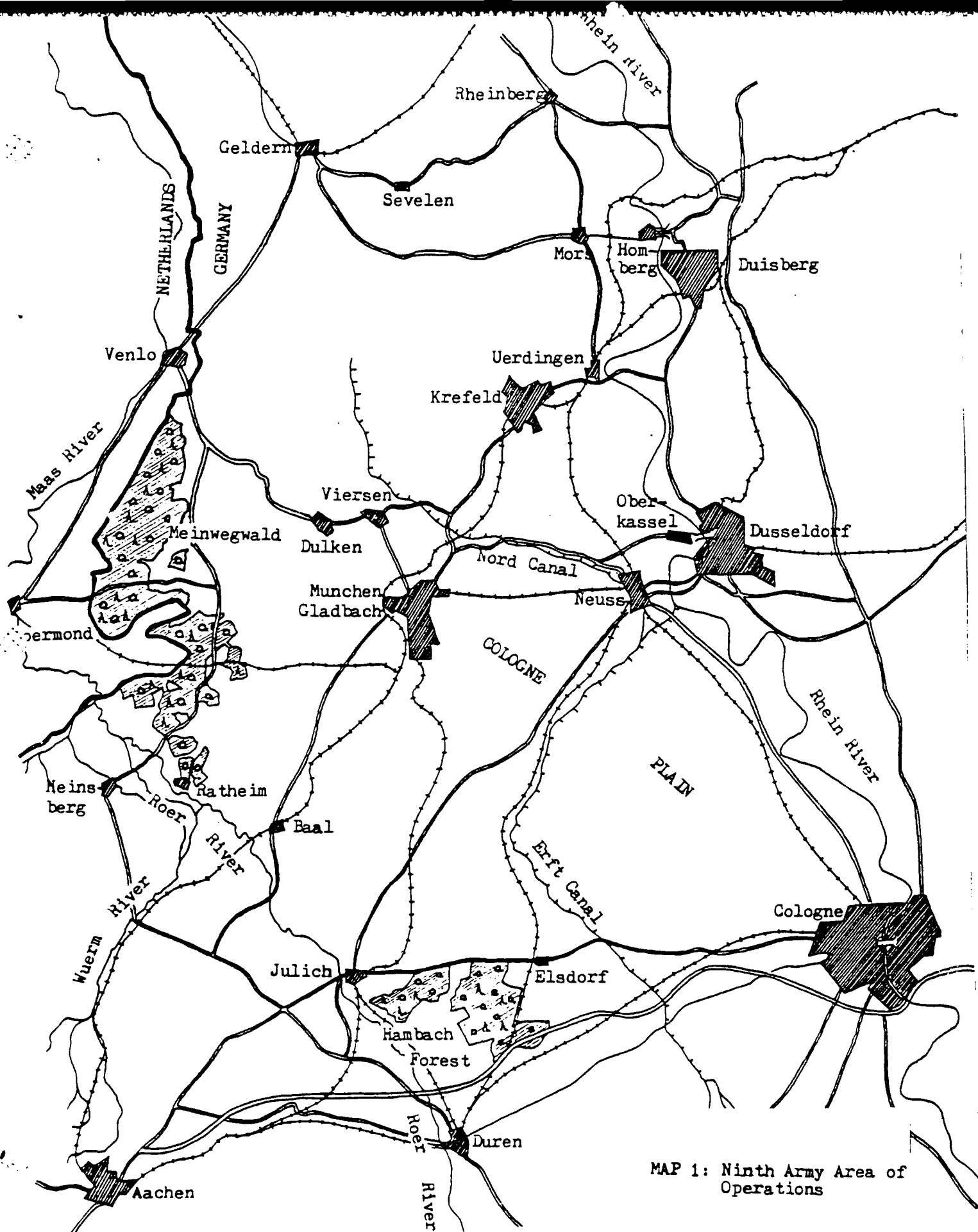
SECTION 3

THE TACTICAL SITUATION

The Area of Operations

The Ninth Army's sector for Operation Grenade would be across the open countryside of the Cologne Plain. The plain stretches from the Eifel mountains in the south to the lowlands of northern Germany and the Netherlands, as shown on Map 1. The land is flat and mostly arable, planted predominantly with sugar beets and grains.¹ The cash crop economy and the resulting need for farm-to-market transportation was supported by an extensive secondary network of hard surface roads. These roads linked the small farming villages with the larger market towns. The region's autobahn system linked AACHEN with COLOGNE. Other main roads ran north and northwest from AACHEN to DUESSELDORF and MOENCHEN-GLADBACH. The main roads ideally supported the Ninth Army's axis of advance.

The interlocking fields of fire from the small villages, and natural strong points afforded by the numerous "guts" in the area were significant to offensive operations. These "guts" were small collective farms, usually surrounded by stout, high stone walls, containing a maze of interconnecting stone buildings and deep root cellars, characteristic of sugar beet farming. Observation and fields



MAP 1: Ninth Army Area of Operations

of fire were excellent. The only key terrain across the ROER River was an egg-shaped plateau rising 400 meters to the east and southeast of LINNICH. Rising eighty meters in less than a kilometer, it dominates the flood plain and lowlands between GLIMBACH and TETZ. Command of this high ground afforded the defender excellent observation for about five miles west of the ROER.²

Natural obstacles in the area are two large forests, and the ROER and ERFT Rivers. In the north, the MEINWEGWALD is not a single forested area, but a series of contiguous woodlands beginning at RATHEIM and extending northward across the German-Dutch border toward VENLO. Since no single tract is large, forest roads were mainly tracks that provided minimal access, and limited movement throughout. Secondary roads followed the circumference of the forest. The limited roads and the numerous small streams east of the ROER, severely limit rapid military movement. These natural obstacles in the northern part of the Ninth Corps sector dictated that the XVI Corps, on the XIII Corps left flank, would conduct a supporting attack only.

The HAMBACHERWALD, a dense forest, lies between JUELICH-ELSDORF-DUEREN. Because of its size, a good internal forest road network did exist, as well as excellent secondary roads that bisect the forest and follow its periphery. The forest provided excellent cover and concealment for the employment of reserve or counterattack forces (as was done with the 9th Panzer Division on 25 February). Original plans were to assign all of this critical area to the First Army, but the

requirement to widen the Ninth Army's attack frontage caused the forest to be split, with the northwest portion being reassigned to the Ninth.³

Cutting diagonally across the Cologne Plain halfway between the ROER and RHEIN Rivers, the ERFT River is not an obstacle. However, it provided flank protection for a northeasterly advance toward MOENCHEN-GLADBACH, NEUSS and DUESSELDORF. The river and the ERFT Canal become an obstacle to east-west movement only in conjunction with the boggy valley (up to a 1000 meters in width) through which both flow.⁴

The most formidable obstacle in the area is the ROER River itself. A main tributary of the MEUSE River, which it joins in ROERMOND, the river runs parallel to both the German-Dutch border, and the RHEIN River, twenty five miles to the east. The ROER River and the German defensive positions keyed to it, formed the first defensive barrier against any attack from the west⁵ At its normal state, the river is 60-85 feet wide. However, with winter runoffs, this increases to 900-1200 feet in February and March. With a low and mean water level at 2-5 feet, the ROER may rise to a depth of 12 feet during the flood period of February to April. Although normally fordable in several places below LINNICH, this seasonal height severely restricts crossing operations.⁶

Upstream from the Grenade crossing sites and at the foot of the EIFEL Mountains, a series of seven dams had been constructed to impound and regulate the ROER River and its tributaries.⁷ To enhance the natural obstacle presented by the ROER, the Germans

succeeded during February 1945 in destroying or emptying three major dams - the SCHWAMMENAUDEL, the URFT, and the DREILAEGERBACH.⁹

Operations by the 78th Division and V Corps through LAMMERSDORF to SCHMIDT and HEIMBACH were successful in capturing the ROER dams by 10 February, the original start date for Operation Grenade. This effort was of little use. The enemy had destroyed the valve house at the Schwammenauel Dam with the discharge gates at HEIMBACH open, and had blown up the discharge valves on an outlet of the Urft reservoir. The result was a steady flow of water which created a long-lasting flood of the ROER Valley.⁷ The river rose to near maximum flood state and remained at that level for the rest of the month.

The Germans augmented the natural obstacle presented by the ROER and the canalization caused by the built-up areas of MOENCHEN-GLADBACH, ERKELENZ, and GREVERBROECH with a series of field fortifications laid out in three lines. The first lay along the east bank of the ROER itself. The other two ran six and eleven miles behind the first, with the third tying in with the ERFT River.¹¹

Entrenchments and antitank obstacles were designed to limit the attacker's cross country mobility and to force him into the towns and villages, which would serve as strong points. German personnel shortages limited the success of these fortifications. Troops were available only for the town and village defenses. Even then, strengths were insufficient to provide the interlocking fires required. When captured by the attacking American forces, these same villages became key defense positions during pauses in the US attack, and during the

limited German counterattacks.

The best avenue of advance for the Ninth Army became the XIII Corps sector. Flanked by HUECKELHOVEN on the left, and the high ground east of LINNICH on the right, an attack in this area could take advantage of numerous crossing sites, and the flat, open terrain with road networks leading to the northeast to support rapid movement, including large scale use of armor.¹² This avenue was also the boundary between the German XII SS and LXXXI Corps. An attack here would take advantage of both terrain and enemy weaknesses.

Comparison Of Opposing Forces

Strength and Composition

On D-day for Operation Grenade, forces from the U.S. Ninth Army, with ten divisions, totalled approximately 303,243 men. An additional 75,000 men from the VII U.S. Corps of the 1st Army participated in the advance across the ROER River designed to crush the German army in a drive to the heartland. The XXIX Tactical Air Command, employing five groups of fighter-bombers (375 planes) and one tactical reconnaissance group, was in direct support of Ninth Army. Ninth Army had the largest concentration of artillery that had yet been gathered for an offensive on the Western Front, over 130 artillery battalions, more than 2000 guns of all calibers. The amount of the artillery available gave the

three corps making the crossing an artillery piece for every ten meters of front. The armored divisions, one to each corps, and the numerous independent tank battalions, gave the Ninth Army an armored fighting vehicle strength of about 1400 tanks and tank destroyers.¹³

The composition of the Ninth Army is shown in Figure 1. The Army was composed of three corps, each with 2 infantry and an armored division. The XVI Corps was attached to the Army in early February from the Second British Army. The attachment was made to facilitate

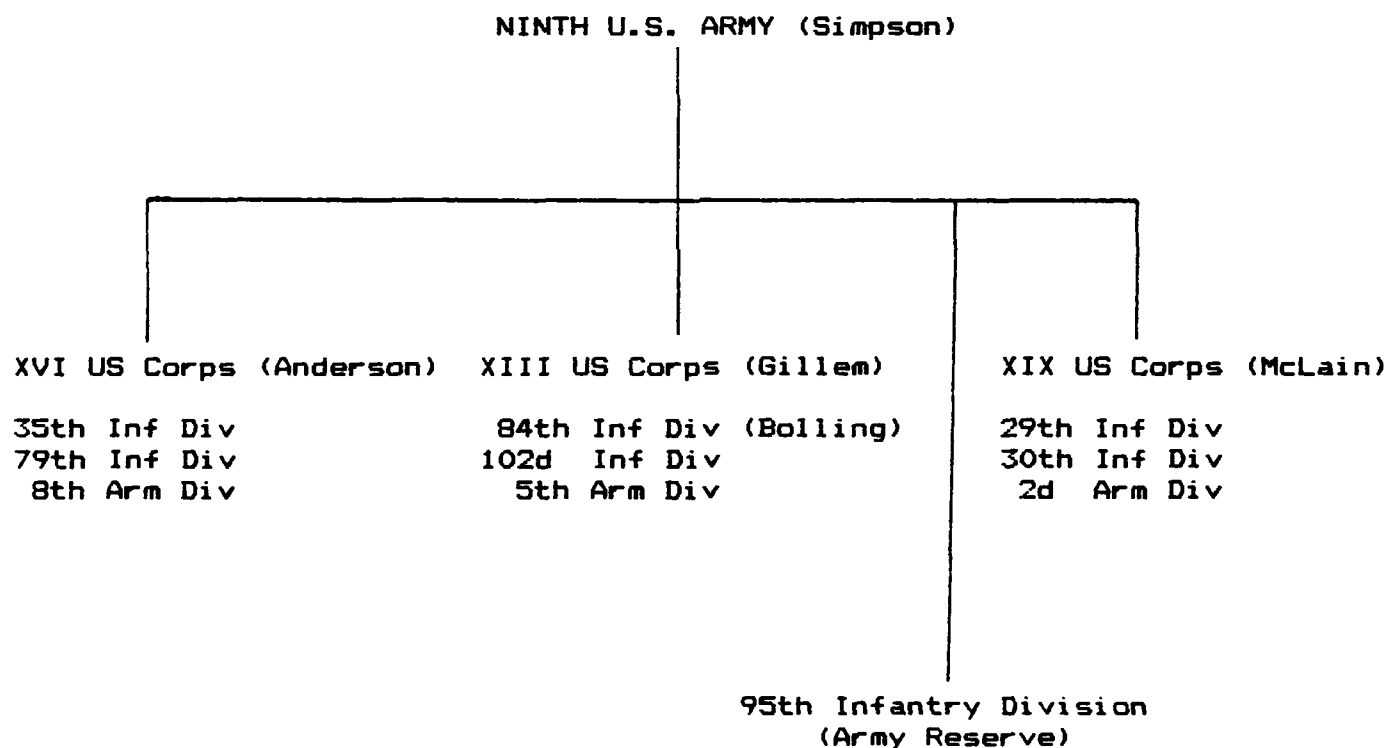


Figure 1. Composition of the Ninth US Army on 23 February 1945.

British command and control for Operation Veritable, which began on February 8.¹⁴ In addition to the Ninth Army units, the VII Corps of the First Army would attack on the right flank during Operation Grenade. The VII Corps was composed of the 8th and 104th Infantry Divisions, with the 3d Armored Division in reserve.¹⁵ The crossings in Operation Grenade would be conducted by six infantry divisions from the XII, XIX, and VII U.S. Corps. The XVI Corps, in the north, would make a supporting attack across the river after the success of the XIII Corps.

The U.S. forces boasted ample combat support and combat service support units. In addition to organic division support, Corps and Army engineer battalions were placed in direct support of crossing units. The 84th Division was one of the two lead divisions of the XIII Corps. At full strength, the 84th Infantry Division had an authorized strength of 14,253 men.¹⁶ The composition of the division is given in Appendix A. The division had the traditional triangular structure of three infantry regiments and supporting units structured by General Leslie J. McNair in the early 1940's. However, by this time in the war, the "pooled" units, which were to be attached as needed, had become semi-permanent attachments.¹⁷ Thus, in addition to its authorized combat strength, the division also contained the 771st Independent Tank Battalion, the 638th Tank Destroyer Battalion, and the 557th Anti-Aircraft Artillery Battalion. These attachments, all completely mobile, played a role in the crossing operation. But, more importantly, however, they were to form the key part of TF Church. TF

Church was the breakout and exploitation force formed on 27 February 1945, after the securing of the bridgehead line on the east side of the ROER.

The 84th Division controlled a wealth of artillery to support the crossing. In addition to its organic artillery battalions the division controlled the fires of an attached field artillery battalion, the division artillery of the U.S. 95th Infantry Division, and a field artillery brigade from XIII Corps Artillery. In all, 12 battalions of mixed calibers were available solely to support the 84th Division. An additional four battalions of artillery were controlled by the XIII Corps to be used in a general support role throughout the corps sector.¹⁶

The 84th Division occupied positions well away from the river line prior to the start of Operation Grenade. The three infantry regiments were located near LINDERN, BEECK, and GEILENKIRCHEN. This disposition allowed them to prepare and train while taking respite from combat. Patrolling monitored the river line, which provided an effective barrier against German incursion into the sector. Complete U.S. control of the west bank of the ROER allowed crossing preparations, both combat and logistical, to proceed unimpeded by German action.

Opposite the powerful Ninth U.S. Army, the German Fifteenth Army defended the ROER sector with approximately 30,000 men, supported by 85 assault guns, 32 tanks, and 30 battalions of artillery.¹⁷ The Fifteenth Army defended with two corps in the Ninth Army sector.

The Army organization is shown in Figure 2. The XII SS Corps consisted of the 176th and 183d Volksgrenadier Divisions. The LXXXI Corps, to the south, consisted of the 59th Division and 363d Volksgrenadier Division. Artillery support to the corps was from the 766th Volks Artillery Corps, with about 75 guns.²⁰ German forces were estimated to be at 67 percent strength in artillery and 67-75 percent strength in other forces. Artillery units had critical shortages in non-commissioned officers and enlisted strength.²¹ Consequently, German forces had approximately 271 guns of varying

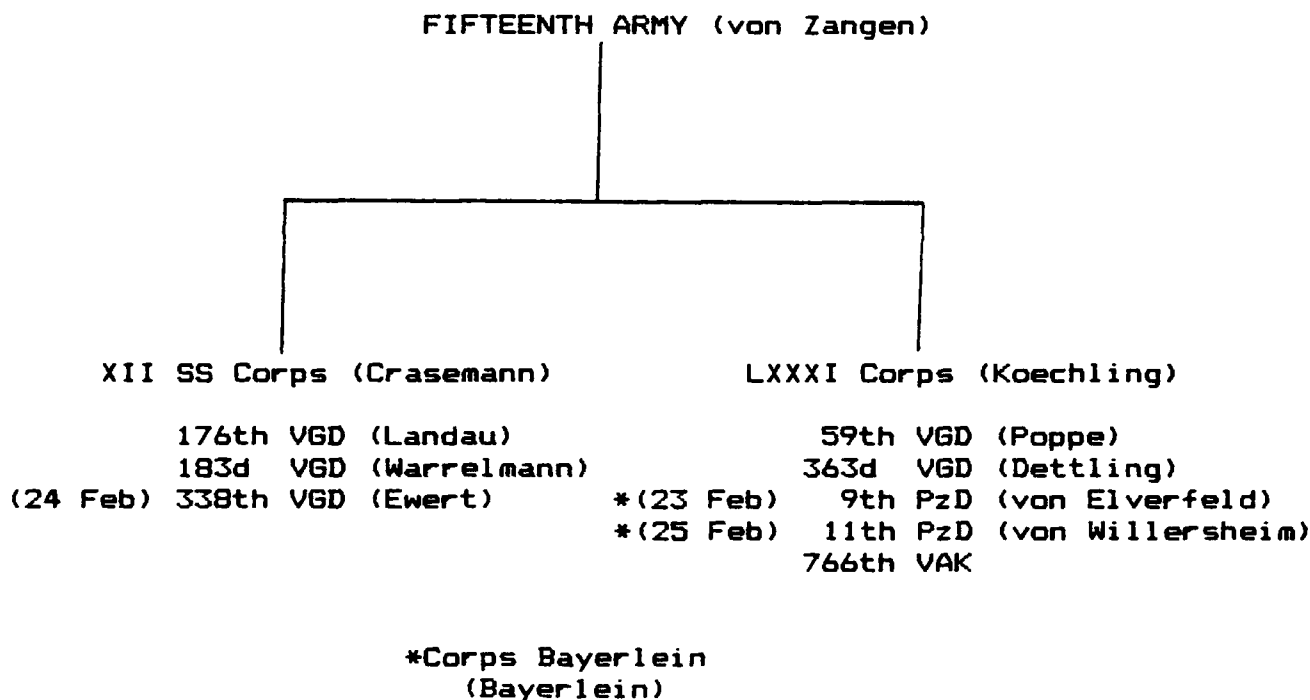


Figure 2. Organization of the Fifteenth Army

calibers available at the outset of the battle.²²

In the XIII U.S. Corps sector, the 59th Division defended the northern flank of the LXXXI Corps with two of its infantry regiments, the 1034th and the 1036th. The 1035th Regiment was still being formed at a rear training ground. On the eve of battle, combat strength in the infantry regiments was about 67 percent strength, while artillery was about 75 percent strength. Of the five defending infantry battalions, only one had been completely refitted after action at AACHEN. The division commander had only an understrength infantry battalion of about 250 men as a division level reserve for the corps.

The reserves available above division level were also weak. The LXXXI Corps held on to the 341st Sturmgeschutz Brigade (24 tanks), a battalion from the 363d VGD, and the 501st and 506th Panzer Abteilung (tank sections with about 48 tanks total), in reserve.²³ Four Volksturm battalions were available to the LXXXI Corps, but these were not considered combat capable.²⁴ A 600-man engineer battalion used for preparation of defensive positions and two PAK companies, armed with non-mobile 75mm anti-tank guns, completed the list of the reserves of the LXXXI Corps.²⁵ General Koechling, the LXXXI Corps commander feared that his lack of reserves made it impossible to prevent an American river crossing.²⁶

Fifteenth Army had no reserves.²⁷ Army Group B, its higher headquarters, had the 9th Panzer Division (PzD) at LECHENICH-BRUEHL, and the 11th PzD assembling near MUENCHEN-GLADBACH. Army Group B had been ordered by Hitler to reposition the 11th PzD from the SAAR-

MOSELLE triangle.²⁹ The 9th PzD had 30-35 tanks, one-half of its infantry, and was rated as a category II unit by the German high command. The 11th PzD had 50 tanks, almost all of its infantry, and was rated as a category I-II unit.²⁹ After the river crossing on 23 February, Army Group B was to form a panzer corps under Generalleutnant Fritz Bayerlein as a counterattack force. This force was never allowed the time to assemble. German artillery units were of mixed quality. The 766th VAK was considered to be an excellent unit, rated category I. The Corps consisted of seven battalions, with howitzers in calibers ranging from 100-210mm. However, the Corps also had two fortress artillery battalions, rated as category III (fit for defense in emergency only) due to problems in command and maneuverability.³⁰

General Koechling considered the 59th Division command

"...adequate for the requirements of large scale fighting. At the time of the American offensive...(on 23 Feb 45), the combat efficiency of this could be evaluated with category III (fit for defense)."³¹

Officers were rated good and enlisted men average.³² The 59th Division consisted of some 7000 men, with an infantry strength of around 2000.³³

The crossing site for the 84th Division was defended by the 1034th Infantry Regiment. The 1st Battalion of this regiment was outposted along the river.³⁴ The remainder of the regiment was deployed with the division replacement battalion. The 341st Assault

Gun Battalion was in reserve. Consequently the 84th Division faced only a token force of less than 500 men at the ROER crossing site. The 59th Division commander, Generalleutnant Poppe, rated his artillery as good and felt they provided his only effective means of defense.³⁸

These views of the strength and composition of the opposing forces present a stark contrast. The well-equipped, numerically superior Ninth Army was arrayed in orderly zones of action, its dispositions were secure and the army possessed a confidence born of numerical superiority and recent victory. The German side was a study in scrambling reorganization. The German forces arrayed on the ROER were struggling to establish a coherent defense with ill-equipped, understrength forces. Additionally, the Germans were reeling from a series of defeats. The ardor rekindled by the Ardennes offensive had vanished, and the German forces again faced an American Army at odds of at least five to one.

The serious ground disadvantage was compounded by almost total Allied control of the skies. The new Me-262 twin jet fighter was not available in sufficient quantities or with sufficient fuel stocks to permanently influence the situation. The German forces faced an almost insuperable disadvantage in battle forces

Technology

The weapons technology created no overwhelming advantage for the

German or American forces during the ROER crossing. The battle was essentially a dismounted action, supported by tanks only in the latter stages. The basic American infantry soldier carried the M1 rifle, a semi-automatic, clip-fed weapon. Probably the best infantry rifle in the war, it gave the American rifle squad good firepower when used in conjunction with the Browning Automatic Rifle.³⁶ The weapons platoons of the infantry companies were issued .30 and .50 caliber machineguns and the 60-mm mortar for indirect fire support. The heavy weapons company of the rifle battalion added additional .50 caliber machineguns and a platoon of 81-mm mortars.

Field artillery was one area in which the Americans excelled. The artillery pieces were of excellent quality, and fire control techniques unsurpassed. Fire control techniques allowed the fires of distributed battalions to be coordinated to fire on a single target, thus maximizing destructive effect. The 84th Division Artillery controlled the fires of 12 battalions during the crossing operation. The massing of these fires during the 45-minutes of preparatory fires facilitated the crossing by causing casualties, disrupting troop movement, and communications. After the crossing, artillery barrages, some as close as 25 yards from friendly troops,³⁷ consistently disrupted German attempts to counterattacks.

American armored vehicles were reliable, but not technologically advanced. The M4 Sherman of the 771st Tank Battalion was vulnerable because of its gas engine, and its 75mm gun would penetrate the armor of the newer German tanks only at close range or from the

flanks.³⁸ Because of the limited nature of the tank threat and the delay in bridge building, the Shermans were primarily used to support the capture of local strongpoints by the infantry regiments. The M36 tank destroyer of the 638th TD Battalion mounted a 90mm gun in a thin-skinned turret, a gun which could fire effectively in the indirect fire role. The 557th Anti-Aircraft Artillery Battalion was armed with the .50 caliber M2 machinegun in an electric-powered quadruple mount. While somewhat short on range, these weapons still managed to down the first two Me-262 jet fighters in the XIII Corps sector. Of more importance was their use in the river crossing. In the ground support role, 24 of these weapons fired an incredible 272,000 rounds in one hour in support of the crossing, burning out 125 barrels in the process.³⁹ This high volume of flat trajectory fire complemented the artillery preparation and was effective in suppressing enemy fire and minimizing casualties in the crossing units of the 84th Division.

The two areas of technological weakness which most affected the operation were the communications links and engineer bridging. Even though all U.S. units from platoon up were equipped with Signal Corps radios, significant communications problems occurred. Links between units were not established or maintained. The 84th Division's right flank regiment, the 335th Infantry, was unable to maintain contact with the 102d Division on its flank.⁴⁰ In one case, an infantry battalion was required to use the radios of a supporting tank company to call for artillery support.⁴¹ Sources are not clear

on the exact source of the problems, equipment or procedures, but there was a significant communications problem. Wire, the alternate means of communications, was difficult to string across the river and vulnerable to shell fire.

American bridging and assault crossing equipment were the most vulnerable areas of American technology. The assault crossing battalions used the M2 Assault Boat. The boat weighed 410 pounds, was manned by three engineers, and carried a single rifle squad or mortar crew. Built of plywood, the boat was heavy and noisy when items banged against it. Since it lacked an outboard motor, the crew and infantry squad provided the motive power with paddles.⁴² On the assault crossing, the rapid current carried the assault boats downstream, causing some to miss their landing sites. The return trip was more of a problem. Only two paddlers and a boat commander were left with the boat to bring it back to the friendly bank. Although not mentioned in the accounts of the crossing, the strong current probably overwhelmed the crews or dissuaded them from making a return trip. In any event, a lack of assault boats, when coupled with the slow completion of the footbridges, delayed the crossing of the follow-on battalions of the 84th Division.

After the initial few waves were across the ROER, infantry foot bridges and vehicular bridges were to handle the crossing flow. All American bridges were hand erected and emplaced. The infantry foot bridge was a lightweight aluminum pontoon bridge, designated the M1938. Fairly easily assembled, it could be emplaced at a rate of 150

feet in a 10 minute period.⁴³ The key difficulty in erecting the infantry footbridges came in their vulnerability to shell fire, fragility to floating obstacles, and the requirement to secure them to the far bank. In the ROER crossing, all of these elements were to disable or delay completion of the infantry footbridges for significant periods of time. Had the German defense been more capable, the delays could have been costly.

Vehicular traffic was to use the M2 Treadway bridge. An inflatable pontoon-type bridge, the Treadway was capable of holding Class 40 loads. The bridges were hand erected, and required significantly more labor due to their size.⁴⁴ Their vulnerability to shell-fire and the time needed to construct them were their major weaknesses. Scheduled to be completed by 8 hours after the initial crossings, the first vehicular bridges were not actually completed until 30 hours after the crossing, due to shell fire, aircraft attack, and engineer casualties. Again, had the Germans reacted with tanks against the American crossing, serious losses might have occurred.

On the German side, weapons technology was more advanced. Except for the bolt action Mauser 98 rifle, German small arms were generally superior. The Panzerfaust was an excellent anti-tank weapon and the German MG42 was probably the best light machinegun in the war, combining light weight, quick barrel change and a high rate of fire. Although possessing both 50 and 120mm mortars, the Germans generally preferred the latter.⁴⁵ German artillery was used in many

calibers. Although generally the equal of US artillery, fire control and ammunition availability would limit its effectiveness.

German armored vehicles were generally adequate, the later model tanks, Panzer Mark IV, V and VI, proving more than a match for the M4 Sherman of the Americans.⁴⁶ Numbers of vehicles available and fuel shortages limited the role they would play. The ROER crossing also saw use of the German Me-262, the first operational jet fighter.⁴⁷ Though effective, it was never deployed in enough numbers to have much effect on the battle.

With the exception of the panzer grenadier and panzer divisions, mobility proved to be an Achilles heel for the Germans in the action. Most German units used horse drawn transport and had limited motorization. Part of this was due to fuel shortages, but the use of horses was standard German Army practice.⁴⁸ The reduced mobility of horse drawn transport significantly affected the ability of German artillery to mass at critical points or withdraw in the face of the American advance.

In the main, technology did not deliver significant advantages to either side in the action. The vulnerability of American bridging could have been significant if the Germans had the capability to exploit it. On the other hand, German forces were hampered by a lack of mobility in bringing forces and supplies to the battlefield.

Command, Control and Communications

By February 1945, General Simpson's Ninth Army was an organized,

cohesive headquarters, capable of controlling the effective employment of its three corps elements. His headquarters had established a reputation for steady, workmanlike performance. As General Bradley was to put it later, "the Ninth Army, unlike the noisy and bumptious Third, and the temperamental First, was uncommonly normal."⁴⁷

The Army had shown its mettle in operations against the West Wall in November-December 1944, and in the Ardennes in December 1944 - January 1945.

The flooding of the ROER was beneficial not only in the supply buildup it allowed, but also in allowing increased planning time. The original 10 February target did not allow Ninth Army units to do complete planning and preparing for the operation. The postponement until 23 February allowed precise staff work, thorough briefing, and adequate rehearsal time. The Ninth Army was well prepared and coordinated to launch the attack.

Major General Alexander R. Bolling's 84th Division was a veteran unit at the time of the ROER operation. The division first saw combat in November 1944. Its combat actions were hard, but casualty tolls were such that the continuity of the division, built in training and tested in battle, remained intact. Most of the original commanders, down to company level, remained from the original division structure. The division's operations in the past three months had enabled the chain-of-command to become organized and cohesive. The division staff was unchanged, as were the two assault regiment commanders, Colonel Hay of the 334th Infantry and Colonel Parker of the 335th Infantry

Regiment.⁵⁰

Command relationships for the operation were standard. Since the initial operation was a dismounted one, there were few attachments of supporting units to the infantry regiments in the initial 36 hours of the operations. Basically, the infantry commanders controlled their own personnel using practical procedures. The only division of control came at the river crossing itself. Here the 309th Engineer (C) Battalion provided the control of the crossing area. Infantry squads of the assault regiment linked up with engineer guides who moved them to assault boat sites. Engineers controlled the crossing sites and commanded the assault boats. Since the operation had been practiced up to six times under day and night conditions, potential problems had largely been solved. The infantry regiments were not burdened with crossing site responsibility, and the engineers were able to maintain continuous control of the crossing area.⁵¹

Battlefield communications became a problem once contact was made. Wire, strung across the river, was cut by enemy shelling. Efforts by the 334th Infantry Regiment to establish contact with the 407th Infantry of the 102d Infantry Division failed on the right. The 102d, which crossed below the 84th south of LINNICH, had further to go after its wheeling movement to the north. The eventual linkup was accomplished without radio communication. The 3d Battalion, 335th Infantry had to be committed in a gap on the right flank of the 334th Infantry in an effort to make contact with the 407th Infantry at LOVENICH.⁵² Despite the communication problems encountered by

the 84th, the Germans were never able to impact on the command and control of the division. This fact can be attributed to tactical surprise achieved during the operation and to the disruption caused by the preparatory fires. Radio listening silence was imposed before H-hour to enhance security.

The 84th Division's after action report states that a problem existed in directing calls for artillery fire.⁵³ For example, on the night of 23-24 February, an infantry platoon leader, without radio communication with the company commander, had to send two soldiers to the company CP during a German counterattack at BAAL with requests for fire. For some unexplained reason, they never made it. That successful artillery support was delivered to the platoon seems just a matter of coincidence. This was not a unique occurrence. In DOVEREN on the following night, calls for fire had to be directed through the tank crews of C Company, 771st Tank Battalion. The crews radioed a liaison officer located in the artillery fire direction center with requests for fire support. No further information is available on the nature of the problem, or steps taken to remedy the situation.

As compared with the other factors, the German forces seemed to be at a disadvantage. The German Fifteenth Army was an effective command, but was not considered among the best on the Western Front. Field Marshal Model, the Army Group B commander, had decided to replace the Fifteenth Army headquarters with General Manteuffel's Fifth Panzer Army, because he wanted "his best generals at the point

of danger."²⁴ General von Zangen, the Fifteenth Army commander, seems to have been very negative concerning the chances of his success. It is possible that this attitude was communicated to Model, who then decided to replace him. The transfer of command was in progress when the ROER offensive began.

The LXXXI Corps seems to have been effectively organized, with an efficient staff. General Koechling's accounts of combat during this period reflect that he was a realistic, positive commander, with a firm grasp of the situation. While he knew the odds of a successful defense were small, he continued to direct his elements to maximum effectiveness.

The 59th Division commander, General Poppe, was an unknown quantity to Koechling. He was not highly regarded, but was experienced and appeared competent. As a newly assigned unit to the LXXXI Corps, some breakdown in communications was to be expected. Integration of the 59th Division into the LXXXI Corps had not yet been accomplished by 23 February.²⁵

At the junior leader level, there had been many losses among the junior officers and non-commissioned officers. Others were very inexperienced. Both the Army and Corps commanders rated their junior leaders as marginal at best.²⁶

One of the major command problems faced by the German units on the ROER was Hitler's command that all units hold fortified positions at all cost. This policy had been in effect for some time. The general feeling in the Wehrmacht was that had the policy not been in effect,

German strength on the ROER would have been higher. The "no retreat" command for emplaced units caused heavy losses in the earlier battles in Western France and Germany. Had the policy been relaxed, German commanders would have fought a more mobile, flexible defense and would have had more troops available for critical later battles. General von Zangen made a strong case for establishing the main defense on the RHEIN.⁹⁷ As it was, the 84th Division was able to make a fairly easy breach of the river barrier.

Command and control seems to have been about equal for both sides in the operation. American initial planning was simple and quite good. The control plan for the river crossing was simple and clear. Once across the river, American units maintained the ability to control the actions of their units, but time sensitive communications, such as artillery requests, were a problem.⁹⁸ On the German side, the lack of time-sensitive communications seems to have hampered German efforts to employ their traditional defensive tactic of quick, hard-hitting counterattack.

Logistics and Administration

General Simpson and his corps commanders initially planned to sustain forces beyond the ROER with LVT's, DUKW's, Treadway bridges, and airlift should they be ordered to cross the ROER with the upriver dams not yet secured and likely to be destroyed. When the dams were disabled and Operation Grenade postponed, the logistical support

concept was not changed. The plan still called for each assault division to carry five days' supply of rations and gasoline. Amphibious craft were to ferry essential supplies and 500 C47 transport aircraft were to stand by loaded with enough supplies to maintain a division in combat for a day. An addition to the new plan required that corps engineers build three vehicular bridges in each division sector beginning at H-hour. Plans were prepared to carry on in the event that bridges were destroyed and not opened according to schedule.²⁷ Careful rationing and supply buildup within Ninth Army was instrumental in securing an ample stock of artillery ammunition, though a strategic shortage in the theatre still demanded careful control of allocations. Ninth Army would begin D-day with 46,000 tons of ammunition on hand, enough for at least twenty days' firing at normal rates of expenditure. This was four times the normal army stockage in the theatre. It enabled all artillery units of XIII Corps to place 2 units of fire at battery positions in addition to basic loads for the 84th and 102d Divisions, and one unit for that of the other two divisions.

In preparation for start of the operation, the Ninth Army's accumulated stocks of supplies rose to huge proportions. In one five-day period (10-14 February), for example, the army received well over 40,000 long tons of supplies, the largest delivery to any army in the theater in a comparable period. Most of it arrived by rail in more than 6,000 freight cars. Stocks of gasoline in the army's depot rose to over three million gallons, representing over five days of supply

with five days reserve. Because of the control of the lines of communications and transport assets, the supply routes were open from HEINSBERG to ROERMOND and provided the Army the logistical ability to continue to the RHEIN.40

The personnel situation in the Ninth Army was considered adequate. Despite a theatre wide shortage of infantry replacements,41 the Army, perhaps because of a period of light combat, continued to receive personnel at an acceptable rate. In the 84th Division, for example, more personnel replacements were received in January than the total of casualties for the month.

In the 84th Infantry Division, which was to cross on a one battalion front, there were an insufficient number of assault boats to carry follow-on units across. Therefore, the units planned to shuttle with assault boats or use infantry footbridges to get follow-on elements across. XIII Corps planned to use three ammunition companies under corps control to assure that ammunition supply points were established beyond the ROER soon after crossing. In case the bridges went out, LVTs and DUKWs (2-1/2 ton amphibious trucks) were to ferry essential supplies to committed forces.

In planning, special emphasis was placed on the role of the engineers, artillery and traffic control. Coordination of all plans was ensured by frequent meetings during which each part was described by every individual responsible for a vital factor in the crossing and carefully fitted into the master plan. Engineer bridge equipment and assault boats were moved to forward positions before the operation to

facilitate easy access to the river. The assault regiment moved up supplies and its heavy weapons. The assault troops picked up weapons and supplies as they neared the crossing areas, rather than being forced to carry them. Engineers began the construction of the footbridges at H-hour.⁴²

Logistically, the critical emphasis was on engineers and bridging equipment. In general, the 309th Engineers, the division engineer battalion, were responsible for the assault boat crossing and the 171st Engineer Battalion from XIII Corps was responsible for bridge construction. The lead infantry battalion would cross in assault boats in two waves, two companies and 35 boats in each wave. The first two waves would be provided with their own boats so that shuttling would not be necessary to bring over the entire battalion. In the event that footbridges were not available in time, provisions were made to shuttle succeeding infantry battalions across in assault boats. The construction of the Treadway and infantry support bridges were key elements in the logistic plan for the division. Without those bridges, supplies had to be carried by hand across the footbridges or assault boats. The delay in opening the bridges until late on D+1 could have proved costly in terms of logistics.

The German logistical situation was the inverse of that on the American side. All critical classes of supply were short. Allied bombing had so disrupted transport that almost all rail lines west of the RHEIN were destroyed. In addition, oil refineries were severely damaged and unable to meet even the minimum Wehrmacht requirements for

aviation and motor transport fuel.⁴³ Within Fifteenth Army and the LXXXI Corps the situation was critical and no commander felt well prepared logistically to fight a major defensive battle.⁴⁴

The LXXXI Corps had conserved ammunition throughout the month of February. Artillery ammunition expenditure was limited to four rounds per tube per day, with an additional two rounds allowed for known enemy positions. Exceptions to this policy could be approved only by the division commander.⁴⁵ The result of this policy was that each artillery battery had one full basic load of ammunition on hand. Division and corps stocks contained an additional one-quarter basic load each.⁴⁶ Similar amounts for other weapons were on hand. Conservation measures were to be continued even after the expected enemy attack commenced, because increased rates of supply to the corps were not expected.⁴⁷

Fuel was the most important shortage in the LXXXI Corps and the 59th Division. Army commanders were informed of the critical shortage by the Western Front commander, von Runstedt, in a meeting on 7 February. More stringent measures of fuel conservation were put into effect throughout Germany and the Wehrmacht.⁴⁸ The result was that only the highest priority Panzer units received fuel. Commanders at all levels feared that reserves would be made useless if the fuel was not available to get them to the critical point of the battle on time. The result was an increased reliance on tactical reserves close to the Hauptkampflinie, or forward edge of the battle line. This significantly reduced the flexibility of reserve formations.⁴⁹

As was noted in the strength comparisons, shortages of heavy tactical equipment was also a problem. Tanks were in short supply, as were artillery tubes and motor transport of all types.⁷⁰ These items were not being supplied to the Fifteenth Army, as it had a very low priority until just before the Ninth Army offensive.⁷¹

Personnel replacements were also a problem. The LXXXI Corps commander reported that the only replacements available locally were received in the weeks prior to the ROER offensive, despite the fact that corps units had suffered many casualties during the battle for AACHEN in October.⁷² Between 16 December 1944 and 23 February 1945. Army Group B suffered 82,234 casualties, while receiving only 29,708 replacements. Until just prior to the ROER crossing, Fifteenth Army had the lowest replacement priority in Army Group B.⁷³ The result was the overwhelming personnel imbalances shown in the strength comparisons.

The few replacements received were not well trained and generally caused problems in the units. Particular problems existed with the Luftwaffe infantry and Volksturm REPLACEMENTS. Both were poorly trained, even though the Luftwaffe replacements were considered to be some of the highest quality recruits in the German military. The Luftwaffe recruits simply received poor infantry training. Volksturm soldiers from home guard units, some overage or limited by previous wounds, some just boys, were used as replacements as a last resort. Although effective at guarding their home regions, Volksturm soldiers proved useless when integrated into regular Wehrmacht units.⁷⁴

The logistics comparison of the opposing forces again handed a major advantage to the Americans. U.S. units were well supplied and personnel strengths were high. On the German side, the Allied bombing of the German heartland had limited the ability of the Germans to resupply their armed forces. A shrinking replacement pool dictated the prioritizing of war sectors and the ROER sector held by Fifteenth Army did not receive the well-trained, capable replacements needed for the fight at the ROER.

Intelligence

The static period along both sides of the ROER during the month of February both enhanced and hindered intelligence operations. Both the American G-2's and the German Ic (intelligence officer) relied on aerial reconnaissance, systematic patrolling, captured POWs and documents, and the interception of enemy radio messages. The lack of combat operations and the floodstage of the river reduced the level of aggressive patrolling and POW/document exploitation for both sides. More reliance was therefore placed on air reconnaissance and signals intelligence. The Germans did benefit from the excellent observation afforded by the high ground on the east bank of the ROER which dominated the majority of crossing sites in the XIII Corps sector. To counter this, most of the movement of supplies and bridging equipment and engineer work of approach roads and crossing sites had to be done at night.⁷⁹

Radio intelligence units supported both sides down to corps level, with the 3258th Signal Service Company being subordinated to XIII Corps.⁷⁶ These units exploited enemy low to medium level code systems. They provided insight into command and control and the introduction of new units by simple traffic analysis of net communications structures. Periods of static operations are very conducive to the development of this type of order of battle information.⁷⁷ Unfortunately, only a few references remain to specific incidences of signal intelligence. The principles, still used today, of protecting this source of intelligence were initiated during WWII and were strictly enforced.

Unique to the Allied intelligence effort was the breaking early in 1939 of the German high level cipher system - ENIGMA. The intelligence derived was classified "ULTRA" secret and disseminated down to army level. Details of ULTRA operations during the ROER crossing are contained in Appendix 2. Like the tactical level signal intercept, ULTRA's usefulness was underscored during the period of buildup prior to Operation Grenade. German order of battle information as well as formation boundaries, strong points and reserve locations were available to the planners at Ninth Army. Since LTG Simpson had stressed strict operational security procedures for the preparations of Operation Grenade,⁷⁸ ULTRA was particularly useful in providing U.S. forces with the information that German intelligence had detected some of the ROER crossing sites. The Germans had identified the main effort to be in the LINNICH-DUEREN area.⁷⁹

The Germans had begun to anticipate a major attack in the LXXXI Corps area by the middle of February. This seemed confirmed with the deployment of new American units, identified as the 102d and 30th Divisions into the sector, as confirmed by the capture of prisoners in the areas north and south of LINNICH.⁸⁰ Furthermore, German troops were reporting increased American patrolling and reconnaissance activity and the presence of river crossing equipment⁸¹ When reported by the Germans, ULTRA messages revealed this weakness in American security. After action reports indicate that the Germans had identified, through POW interrogators, the presence of the American 8th and 104th Divisions of the VII US Corps, in the DUEREN areas. The presence of the 3d Armored Division in a reserve capacity was also detected. The intercept of a German signal intelligence report revealed that German intelligence was aware of the shifting of up to eight U.S. divisions into the area.⁸² They also knew that by 19 February these deployments were complete,⁸³ and that an attack was imminent. This unique intelligence - counterintelligence chess game was a product of the static situation of the period.

Aerial reconnaissance was the other key source of intelligence during this period. Despite a lack of air superiority, the Luftwaffe regularly scheduled air reconnaissance missions along the ROER. Even after the U.S. attack had been launched, aerial reconnaissance was the primary means of identifying the main U.S. effort.⁸⁴ Weather seems to have been the main limiting factor on air reconnaissance for both sides. U.S. after action comments suggest that supporting

airfields were too far removed from the front causing missions to be SEPARATELY cancelled. Differing weather conditions at the two places frequently caused planes to be grounded on home airfields, although the weather at the front was excellent. A lack of a night aerial reconnaissance capability was also a hinderance. Due to American air superiority, the Germans habitually moved only at night,⁶⁶ U.S. security procedures also took advantage of a similar German lack of capability to mask their movements.

The U.S. photo interpretation system was designed to streamline the dissemination of results. Photo interpretation teams performed the majority of their interpretation at the airfield. Results of the first phase exploitation was received by the Army G2 by electrical means (telephone or radio). Further dissemination was made via broadcasting on the artillery radio net. Hard copy photos were supplied directly to subordinate corps from the airfield and never examined first at the Army level. The lack of an inflight reporting net was the only deficiency noted in the system.⁶⁷ Since front line basic coverage often took two days to distribute down to division level,⁶⁸ the period of static operations prior to the ROER River crossing enhanced dissemination. Photos were available to support engineer studies prior to the crossing and to provide each platoon leader with an aerial photograph of his crossing site.⁶⁹ Time also allowed photography to be used to overprint German defensive positions on 1:25,000 scale maps.⁷⁰ Special lithographs were also drawn of individual pillboxes at a scale of

1:5,000.⁷⁰ Both types of maps were provided to platoon leaders making the ROER crossing.

While in France, the U.S. benefitted from local partisans for intelligence. Once in Germany, the tables were turned and the U.S. had to worry about monitoring of civilians in their rear area.⁷¹ The tactical intelligence systems of both sides were almost equal. The two factors which threw the balance to the U.S. were the ULTRA capability and the fact that the time available and static nature of the situation gave American intelligence experts time to do a thorough intelligence assessment of the German side and disseminate this assessment to the combat units making the crossing.⁷²

DOCTRINE AND TRAINING

War Department Field Manual 100-5, *Operations*, provided the basis for U.S. Army doctrine in World War II. The Heeres Dienstvorschaef 300, *Truppenfuehrung*, of 1936 provided the same for the Germans. At the conceptual level, the doctrines were quite similar.⁷³ Yet, in their detail, they were quite different. The German operational doctrine was characterized by its system of Auftragstaktik, best translated as "mission oriented command system."⁷⁴ This doctrine stressed mission type orders and the commander's initiative. Commanders told their subordinates what to do, but not how to do it. Guidelines for actions were established, and the

system relied on uniformity of thinking and action. This practice, of course, required thorough training and long experience. Individual initiative was stressed, as long as it was expressed within the overall framework of the commander's intent.

American operational doctrine had much the same basis. In fact, much of the doctrine was lifted from German manuals.⁷⁰ As the doctrine was further explained, obvious differences emerged. American doctrine stressed the objective, simplicity and management of the battle. Successful combat came not as a result of initiative, but as the result of the proper application of techniques in a specific situation. The manual goes into detail when applying rules to certain situations. Simplicity is stressed. The uniformity of action which the Germans attempted to achieve by commonality of thought and a warrior tradition, is achieved by an application of rules to certain situations. In this way, the American system became more rigid and managerial in its approach to combat than did the German system.⁷¹

In the planning of the ROER River crossing, the 84th Division applied the principles to an almost text book case. Almost all of the principles stressed in the operations and engineer manuals of the time were applied. The plan for the initial location of forces, movement to the river, preparation of the near bank, and the crossing itself were casebook applications of doctrine. The plan to rapidly expand the bridgehead to a defensible size which allowed for a buildup on the far side of the river was also a conventional tactic. Breakout operations

could then be initiated. The 84th Division executed these operations in textbook fashion.

The use of assault boats, followed by footbridges, and then by vehicular bridges as the means to accomplish the crossing was the tactical approach favored by the then current engineer manual.⁷⁷ Only in the width of the crossing site was the doctrine violated. Doctrine of the time called for a wide front crossing, theoretically with three or four battalions on line. As has been shown, the actual conditions on the ROER did not support this, and the 84th Division chose to attack on a one-battalion front.

The 84th Division commander, General Bolling, realized the amount of training required for a successful crossing, and insisted on an intensive training program. The training began as the division reoccupied positions after the Ardennes operation. The engineers were trained first, then the infantry. The 334th Infantry, the regiment selected to cross first, conducted assault boat training at a platoon training site on the WUERM River near MARIENBERG.⁷⁸ The infantry battalions were instructed by the division engineers in the techniques of assault boat crossing. These included carrying the boat, getting in and out of the boat, the use of the paddle, boat team organization, and practice in running across infantry foot bridges. The 1st Battalion, 334th infantry, chosen to lead the assault, was drilled for three daylight periods and one night period. The 3d Battalion, 334th Infantry, the second to cross, had two daylight rehearsals. The 2d Battalion, which was expected to cross on foot

bridges, went through the boat drill in case the bridges became unavailable. Each battalion went through the training with its supporting elements from special and attached units.

The 84th Division also took full advantage of all postponements of the operation. After the 10 February cancellation, a more intensive training program was undertaken. On the nights of 13 and 15 February, two drills were conducted at a battalion training site on the WUERM River near SUEGGERATH. Here, the front was wide enough to put half a battalion (reinforced) on the river at once. As a result, the crossing battalions went through the maneuvers that would be involved in the actual crossing. Each battalion rehearsed the complete operation six times. Training involved: a footmarch by the infantry to the initial assembly areas, the march to the forward assembly area, and formation into individual boat groups when contact was made with engineer guides. Groups were then led to the boat assembly areas where boats had been previously offloaded by engineers. At the boat assembly area, the infantry met engineer crews, picked up their boat and the infantry-engineer boat group carried the assault boats to the water's edge. They then launched the boat and paddled to the far shore.

Final training was given on 19-20 February at the NEVILLE training site on the MEUSE River approximately two miles north of VIRE, Belgium. The conditions on the MEUSE, about 400 feet wide and a current of 4-6 miles per hour, closely resembled the condition that was expected on the flooded ROER River. Only one boat was overturned during the training and the sole casualty was a 60mm mortar.

The training program was not limited to the technical operation of the crossing.¹⁰⁰ All new weapons were tested and familiarization firing was conducted for all recent reinforcements. Squad tactics refresher training was conducted and the infantry units were thoroughly briefed on enemy dispositions, attack plans, and operation objectives.

The replacement technique used by the U.S. Army appeared to have little effect on the overall training level of the division in the ROER fight. Because of the relatively small number of American Army divisions in the theatre, 59 in February 1945, replacements from the training base were fed directly into the line.¹⁰¹ Divisions were rarely pulled off line to refit or retrain. It was thus up to the division to cohesively integrate the new replacements. Experiences in other divisions showed that this system was unsuitable and led to sharp reductions in combat efficiency, especially in sustained combat operations, due to the drain on experienced personnel.¹⁰² This does not seem to be the case with the 84th Division. The period before the ROER crossing was one of light combat, and the two week postponement of the operation allowed the division to train and integrate replacements into their new units.

The defensive doctrine of the German Army had to be modified for the defense of the ROER. Traditional doctrine called for a defense in depth with a strong, centrally-located, mobile reserve. Barriers were to be tied in with hindering terrain to canalize enemy forces. When allowed by the situation, commanders preferred to conduct this type of

mobile defense, which incorporated frequent use of offensive action by concentrated armored formations.¹⁰³ In early January and late February, German units were thinly spread along the ROER with divisional frontages in excess of 10 miles within the Fifteenth Army sector. Minefields were laid and some wire obstacles emplaced. However, defensive sectors had no depth, due to a lack of fuel, equipment, and personnel. Units relied on weak local, or "tactical" reserves, rather than on strong counterattack forces.¹⁰⁴ Senior commanders realized that the LXXXI Corps sector was weak and efforts were made to reinforce it.

The addition of units to the LXXXI Corps in early February enabled the Germans to align their defenses in consonance with their doctrine. According to General Koechling,¹⁰⁵

"...echelonment in depth was ordered for all divisions, which was accomplished by a considerable weakening of the front line whereby the (strongest) one-third of forces occupied the front positions, another one-third occupied the artillery covering position, and the weak remainder of troops (engineer, replacement training battalion, supply, etc.) occupied the c-column (similar to the trains)."¹⁰⁶

On the eve of the attack, he rated his defense as adequate.¹⁰⁶ Because of the lack of mobile reserves, he would not be able to conduct the strong counterattacks required to defeat the attack, and thus feared he would be unable to prevent a crossing of the ROER.¹⁰⁷

The strongpoint segment of German defensive doctrine required

well-trained infantry to hold strongpoints, then to retreat behind a rear-guard and artillery support. In the case of poorly trained or exhausted troops there was danger that this tactic would lead only to delay, and not to a defense which held a position for the maximum period, and then moved to fight again.¹⁰⁸ This tactic was hampered by the quality of troops and the lack of mobility of the artillery. Because of mobility problems, only about one-third of the German artillery was forward, limiting the amount of fire which could be delivered in the defense.

The lack of tank reserves forced the Germans to abandon the use of tanks for counterattack. Whatever units were available would be used to intercept enemy penetrations and bolster the defensive line. Numerical inferiority forced significant modification to German doctrine.

In the use of replacements, German doctrine differed markedly from that of the U.S. The Germans raised many divisions, up to 300 in the entire war.¹⁰⁹ When depleted, these formations were pulled off line and refitted and retrained. In this way, the Germans emphasized building cohesiveness as well as unit proficiency.

Conditions, Morale, and Leadership

As it usually is with a victorious army, the conditions and morale within the 84th were excellent. Since its first combat in November 1944,¹¹⁰ the division had been successful in all its

engagements. As a part of the 21st Army Group, it participated in the West Wall campaign, helped mop-up in the Ardennes, and was now positioned for a drive to the German heartland.

The physical state of the troops in the 84th was good. Training in the period before the crossing included physical conditioning to increase troop endurance. Orientation on field sanitation and prevention of trench foot were an integral part of the training phase and daily recreation included a motion picture.¹¹¹

The chief asset among the leadership of the 84th Division was its continuity and experience. Major General Bolling, the Division Commander, assumed command in June 1944 and remained for the rest of the war. The Assistant Division Commander, Brigadier General John H. Church, was a veteran of combat in Sicily, Italy, and southern France. The 84th General Staff remained unchanged from its arrival in Europe until the end of the war. Similar conditions existed in the units of the division. American policy was to keep a unit together and feed replacements as necessary. In the case of the 84th, heavy contact had not seriously drained the division. Many of the units were composed of soldiers who had been with the division since its activation in 1942 and throughout its long training period.¹¹²

On the other side of the ROER, the German soldiers still had hope that German victory was possible. According to General Koechling, the morale of the soldiers was recovering from the loss at AACHEN. However, morale still suffered because of repeated withdrawals, the defeat in the Ardennes counteroffensive, failure of the "wonder"

weapons, and a dissatisfaction with the German High Command. These factors prevented morale from reaching a high state. In spite of the morale problems, unit cohesion remained.¹¹³ This was the result of the cohesion of the German people and the ability of the Wehrmacht to instill in its soldiers a sense of duty and responsibility to their families and apply this sense of duty to operations at the squad level. The fact that the soldiers were now fighting on German soil increase the fighting spirit.

This cohesion was reduced by the infusion of poorly trained troops, especially those from Volksturm units. General von Zangen reports that these soldiers, being used for the first time as replacements for regular formations, infected units with "the unwillingness to fight" which they brought with them. He felt these replacements were a net burden on units, requiring continuous supervision and providing little in combat effectiveness.¹¹⁴

In spite of difficult circumstances, the German soldiers perceived that they were well taken care of. Medical support remained adequate. Administration remained intact. Some support was received from the German population.

The net difference in conditions and morale was due primarily to the victorious march of the Allies. American soldiers perceived that the war was nearing a conclusion, and were sustained by adequate supplies. German soldiers were beginning to see that the war was lost and a negotiated armistice, which provided the end of World War I, was not going to occur. That German morale remained even marginal is a

mark of cohesion and a result of their national character.

German and American leadership styles were quite different, yet almost equally effective at this time of the war. The German Army had proportionally fewer officers than the American Army,¹¹⁵ and stressed initiative at all levels. Officers were products of intense training schools and intensely screened, a heritage of the Prussian military tradition. The American Army reflected American traditions of the citizen-army. Officer schools trained educated civilians quickly and put them into battle. Proportionally, more accountability was placed on the American officer.¹¹⁶ U.S. officers often performed duties that were the responsibilities of German NCOs. In the final analysis, however, the American overall advantages in the war negated any leadership advantage the Germans may have had by virtue of a superior system. American leaders proved resourceful, and had the assets to fulfill their missions. Good German leadership was unable to compensate for marked material shortages.

IMMEDIATE MILITARY OBJECTIVES

The immediate objective of the 84th Infantry Division was to "force a crossing of the ROER River in the vicinity of LINNICH and secure a bridgehead in its zone."¹¹⁷ As such, the division assigned its organic regiments the towns on the east bank of the ROER as initial objectives. The 334th Infantry was to seize RURICH and

KDERRENZIG as the lead unit across the river. Subsequent objectives were located on a northeasterly path and included BAAL, GRANTERATH, HETZERATH and MATZERATH. The 335th Infantry Regiment was to continue the attack around the 334th and seize the towns of DOVEREN, DOVERHAHN, HOUVERATH, GOLKRATH, HOVEN and HUECKELHOVEN. The 333d Combat Team was organized as a reserve. While the immediate objective of the 84th Division was to secure crossing sites, the command hoped to spearhead a breakthrough and pursue German forces all the way to the RHEIN River. The XIII Corps order issued to the 84th called for a "relentless" pursuit of the enemy "to the limit of endurance for (our) men and material."¹¹⁰

The mission of the German 59th Volksgrenadier Division, into whose sector the 84th Division initially passed, was to prevent a bridgehead from forming and to defend in sector. Army Group B, on the other hand, wished to take advantage of the high waters created by flooding the ROER River and economy of force mission in the sector to allow the movement of forces to the north. Thus, the area into which the 84th Division entered was lightly defended by forces attempting to take advantage of defensible terrain. Once the crossing was underway, the 59th Division withdrew to trenches 800 yards east of KDERRENZIG. They expected to intercept the 84th Division as they continued the advance to the east. However, after crossing the ROER, the 84th attacked to the north and northeast, bypassing 59th Division defensive positions. They engaged, instead, elements of the depleted 183d Volksgrenadier Division. The Germans had failed to prevent the

crossing and the only hope left was to conduct strong counterattacks to reduce the newly formed bridgehead. However, artillery and close air support broke up several piecemeal enemy counterattacks before the opposing forces could actually clash on the ground. At the end of the first day, the 84th Division had penetrated to a depth of six kilometers and occupied BAAL, far ahead of schedule.

The 84th Infantry Division had several feasible courses of action. The division decided to cross on a narrow front instead of the traditionally favored broad front after considering the local factors of terrain and enemy force disposition. The river characteristics had been drastically altered by the flooding of the ROER, which caused the river to overflow its banks. The 84th Division would cross on a one battalion front at a single location where the river had remained in its channel. The selected crossing site offered good cover and concealment with the exception of the last 400 yards, which were exposed. The town of LINNICH also had a good supporting road net. Other crossing sites would have exposed the troops for up to 1000 yards while moving up to the west bank. In addition, crossing on a narrow front provided an additional bonus in that the artillery could concentrate on the enemy and isolate the battlefield.¹¹⁷ The 84th Division decided to conduct a night attack in order to obtain the concealment needed during the last 400 yards to the river and while crossing the river itself. This tactic took the Germans by surprise and the 334th Infantry Regiment was able to complete the crossing almost unopposed.

The Germans selected a defense based on terrain alteration (flooding the ROER) and a system of fixed fortifications in three belts anchored to the built up areas. Forces had been stripped away from Fifteenth Army by Army Group B and sent north to counter the Canadian offensive known as Operation Veritable.¹²⁰ The Germans relied on their ability to rapidly switch reserves from sector to sector. Allied air superiority made this tactic extremely difficult. The Germans could not move during daylight hours and movement at night was slowed by the weather and terrain. Thus the area into which the 84th Division attacked was defended by units that were seriously depleted and were without a large reserve to back them up. Once across the ROER, the 84th Division further complicated the German situation by shifting its attack to the north. The Germans had depended upon an American advance using the the most direct routes east to the RHEIN. Thus, by attacking north, the 84th Division outflanked many defenders. A successful course of action would have called for stronger fixed forces with much stronger counterattacking reserve. However, neither the troops, equipment, nor supplies were available. Throughout Ninth Army sector, the Germans were outnumbered at least 5 to 1.¹²¹

The planning factors of mission, enemy, terrain and time were extensively exploited by the 84th Division. The men were well-trained. When the operation was postponed on 10 February, the 84th Division used the extra time for additional practice. The 334th Infantry Regiment, leading the operation, conducted assault boat training on

the WUERM River near MARIENBERG. The readiness of the men can best be summed up by the after action report:

"In general, this was one operation which lacked nothing in planning, preparation and training. It was literally true that every man knew his job, that every man was sufficiently rested..."¹²²

In addition to the men, the enemy situation had been thoroughly and accurately analyzed. Sources had tracked the movement of reserves out of the SAAR triangle and the Ninth Army was able to concentrate an overwhelming superiority in terms of relative combat power across the entire front, so that each German battalion faced about two-thirds of an American division.¹²³ The 84th Division also exploited an enemy weakness by concentrating forces at the boundary between the XII SS and LXXXI Corps. The 334th Inf attacked the 59th VGD, which was on the extreme north flank of the LXXXI Corps. Contact between the 183d and 59th Divisions was lost throughout most of D-day. They then turned north and northeast and attacked the 183d VGD in the neighboring XII SS Corps sector.

Terrain was another important consideration for the 84th Division. The sharp escarpment immediately east of the ROER favored the enemy defense. This is an added consideration that promoted an attack along a narrow front. Once the division penetrated the first defensive belt, the terrain opened up and favored the attacker in an exploitation toward the RHEIN.

The Germans were frantically committing available units into the

battle. The 338th Division was typical of the units available. On 12 February, the division had been ordered to move by rail from the FREIBURG area to the ROER. The division had been reduced to two regiments, each with two battalions of 200 men each. The combat power of these two regiments was much reduced. The 338th Division was delayed enroute to the XII SS Corps sector because of Allied air interdiction. Once there, the unit was committed to battle on 25 February against the 84th Division without signal, antitank units, or two light artillery battalions. In the words of Generalmajor Wolf Ewert, who wrote the after action report, "In this case, the employment of manpower against materiel was bound to have a disastrous end."¹²⁴ The Germans had lost the initiative and were reacting to Allied moves against them. Careful mission planning could not overcome Allied superiority in forces and material.

NOTES

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¹⁰¹Weigley, op. cit., pp. 568-571.

¹⁰²John Ellis, The Sharp End, The Fighting Man in World War II, New York: Charles Scribner's Sons, 1980, pp. 337-340.

¹⁰³Von Zangen, op. cit., pp. 78-79; Koechling, op. cit., pp. 25-26; Von Mellenthin, op. cit., p. 254.

¹⁰⁴Koechling, op. cit., pp. 6, 32.

¹⁰⁵Ibid., p. 31.

¹⁰⁶Ibid., p. 33.

¹⁰⁷Ibid., p. 34.

- ¹⁰⁸Von Zangen, op. cit., pp. 79; Schramm, op. cit., p. 148.
- ¹⁰⁹Weigley, op. cit., p. 13.
- ¹¹⁰Draper, op. cit., pp. 20-22.
- ¹¹¹84th Div AAR, op. cit., p. 19.
- ¹¹²Draper, op. cit., p. 5.
- ¹¹³Koechling, op. cit., pp. 4-5 and 25-26.
- ¹¹⁴Von Zangen, op. cit., p. 70.
- ¹¹⁵Van Creveld, op. cit., pp. 152-155.
- ¹¹⁶Ibid., pp. 129-137.
- ¹¹⁷84th Div AAR, op. cit., p. 19.
- ¹¹⁸Draper, op. cit., p. 141.
- ¹¹⁹MacDonald, op. cit., p. 153.
- ¹²⁰84th Div AAR, op. cit., p. 39.
- ¹²¹MacDonald, op. cit., p. 140.
- ¹²²84th Div AAR, op. cit., p. 20.
- ¹²³MacDonald, op. cit., p. 141.
- ¹²⁴Generalmajor Wolf Ewert, "The Engagements of the 338th Infantry Division in the Rhineland," Part II, undated, MS# B-531.

Section 4

THE FIGHT

Narrative of the Action

After operations in the Bastogne area with the First U.S. Army, the 84th Infantry Division closed in the XIII Corps zone of action during the first week in February and took up defensive positions on the left of the 102d Infantry Division facing the ROER River. This disposition of the 84th Division was advantageous in that it placed the division in the same relative position to the 102d Infantry that it had occupied prior to its December commitment to the Ardennes. An additional advantage was gained by placing the unit in a familiar zone of action. The Division had studied the terrain and projected ROER river crossing and had previously formulated plans for that sector.¹ It was thus ready to join the Ninth US Army as part of the XIII Corps in Operation Grenade.

Preparations for Operation Grenade were extensive, as previously discussed. Unit training, rehearsals, and intelligence and artillery preparations prior to the operation were significant. From 10-22 February, the XIII Corps Artillery carried out a harassing and interdiction program which struck targets such as command posts, billets, assembly areas, supply depots, kitchens and communications

centers. These targets were selected each day from latest aerial photo interpretation, aerial reconnaissance, and PW interrogation reports. This program was designed to prevent the improvement of enemy defensive positions east of the ROER River.² During the same period, nightly engineer reconnaissance patrols brought back valuable information on the location of barbed wire entanglements, minefields, west bank conditions, slopes, softness of ground, water puddles, trees and the like. Many enemy automatic weapon emplacements were pinpointed when the patrols were fired upon from the eastern bank of the ROER.

The crossing of the ROER River and the first stage of the drive from the ROER to the RHEIN, known as "Operation Grenade", was set forth in Field Order No. 6 (revised), issued at 2200 hours, 21 February 1945. The XIII Corps planned to cross with two infantry divisions abreast, the 84th on the left and the 102d on the right with the 5th Armored Division in reserve. Both divisions were to make their main effort at LINNICH as the river above and below the town had flooded the lowlands to some 1500 to 3000 feet in width. In the channelized section in and near LINNICH the river was narrower and varied in width from 200 to 250 feet. The field order said:

The 84th Infantry Division (-), (Reinf) forces a crossing of the ROER River in the vicinity of LINNICH to seize and secure a bridgehead in its zone.

The 334th Infantry, (Reinf) attacks in a column of battalions, forces a crossing in assault boats and seizes as its first objective KOERRENZIG. It seizes the area around BAAL and continues the attack to seize a series of

objectives including the towns of GRANTERATH, HETZERATH, and MATZERATH in conjunction with the 102d Infantry Division advance on division order. It maintains contact with the 102d Infantry Division on the right.

The 335th Infantry, (Reinf), crosses the ROER River immediately in the rear of the 334th Infantry and moves rapidly to seize a series of objectives including the towns of DOVEREN, DOVERHAHN, HOUVERATH, GOLKRATH, HOVEN, and HUECKELHOVEN. It establishes and maintains contact with the XVI Corps on the left after the XVI Corps crosses the ROER River.

The 333d Combat Team employs all available weapons in support of the crossing and coordinates its fires with those of the XVI Corps on the left. On division order, it assembles in corps reserve in the vicinity of WUERM, LEIFFARTH - BEECK for either employment under control of the 5th Armored Division or reversion to the 84th Infantry Division.³

A major breakthrough was the aim of the 84th Infantry Division from the first. In addition, the division was to secure the crossing sites of the XVI Corps on their northern flank, which was to cross the river unopposed. For these reasons, the direction of the drive, once across the ROER, was north and northeast rather than east, which would have been the most direct and shortest course to the RHEIN. This was designed to cause the most confusion to the defender. Main supporting fires for the crossing were provided by artillery and other supporting ground fire. Corps artillery was used for counterbattery fire and division artillery for close support of the infantry. The crossing was restricted to a narrow one-battalion front because of the limitations in the road net and better cover and concealment leading up to the

river. Elsewhere, units would have had to cross about 1000 yards of open flooded meadowland, compared to about 400 yards at LINNICH. Crossing at night, the danger of exposure would be reduced to a minimum. The river was still in its channel at LINNICH. Elsewhere, flooding had made the other positions of the river in zone too wide. In addition, the effectiveness of artillery fire was greatly enhanced by the narrow front.

The enemy troops and their commanders were, in spite of their low morale, ready to defend the positions. After 20 February, a strong reserve unit had still not been attached or even announced to the LXXXI Corps. It became clear to the Corps Commander, General Koechling, that, in case of a major enemy attack, available forces would be:

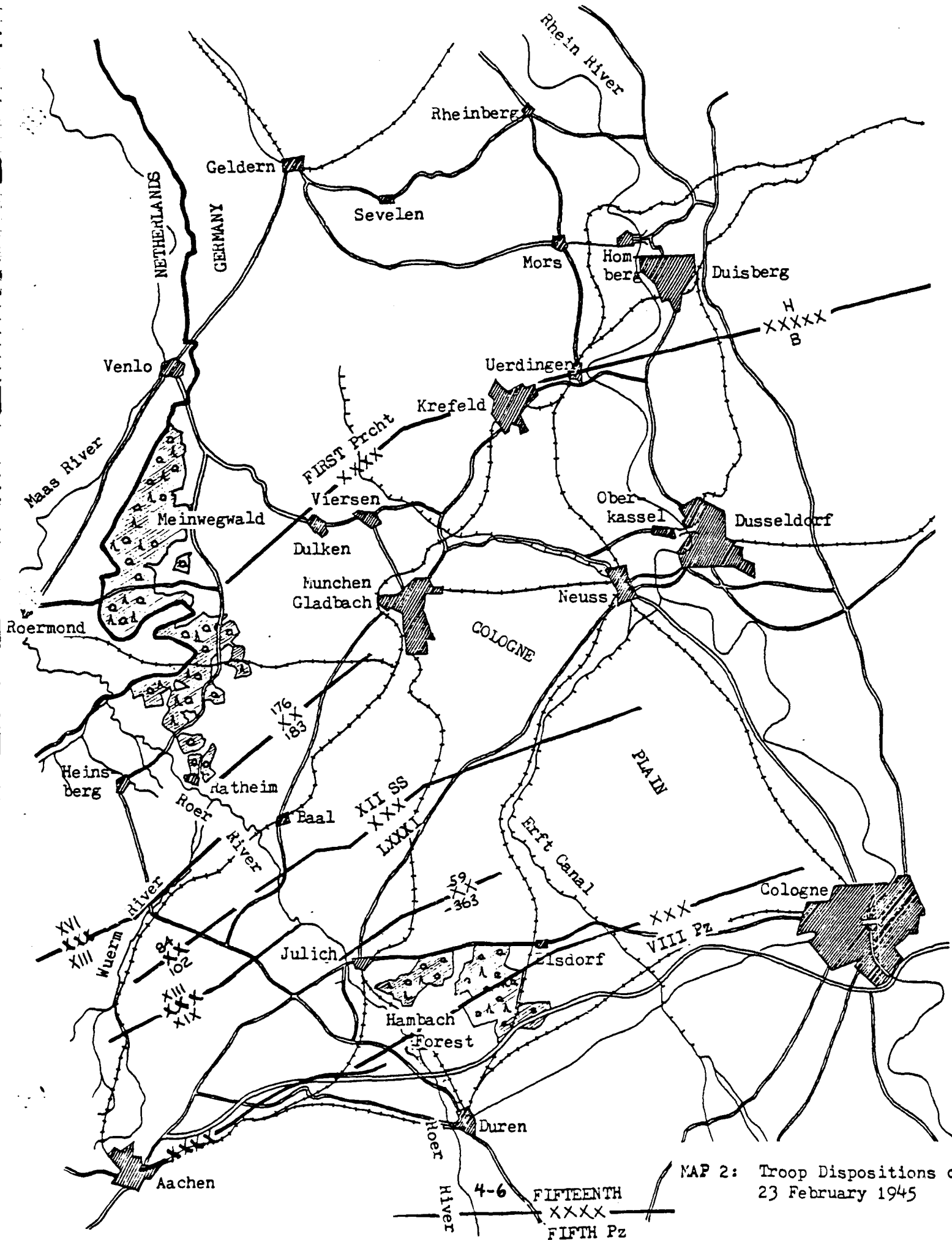
- (1) unable at every point to prevent the Americans from crossing the ROER.
- (2) unable to prevent the Americans from establishing a bridgehead.
- (3) in danger of breaking up as a result of strong enemy attacks launched from the bridgeheads.*

The Germans had augmented the built-up sectors with extensive field fortifications in three lines that a large foreign labor force had been constructing since late fall. The first hugged the east bank of the ROER. The other two ran six and eleven miles behind the ROER, with the rear line tying in with the ERFT River. These fortifications consisted of entrenchments in a sawtooth pattern with exits into the

towns and villages. Antitank obstacles and emplacements for antitank, antiaircraft, and field pieces were located at irregular intervals within and between the lines. Mines and barbed wire were placed rather spottily along the east bank of the ROER.²

While intelligence sources deemed the defensive network well planned and organized, all indications were that the enemy had far too few troops to man the lines. This strengthened the belief that the defense would be based on strongpoints in towns and villages rather than on a continuous prepared position in depth⁴

As D-day for Operation Grenade approached, the German order of battle in the Ninth Army sector was as shown on Map 2. From a boundary in the north near ROERMOND corresponding to a boundary between the British and Americans, Army Group B's Fifteenth Army (General von Zangen) was responsible for a front some fifty miles long, extending south to include DUEREN. The northern sector was held by the XII SS Corps extending south to LINNICH with two infantry divisions, the 176th and 183d Volksgrenadiers with a common boundary astride HUECKELHOVEN. The center Army sector was held by the LXXXI Corps (General der Infanterie Friederich Koechling) with two infantry divisions, the 59th and 363d Volksgrenadiers. This Corps was also bolstered by a volks artillery corps. The 59th Volksgrenadier Division had been assigned to the LXXXI Corps since the beginning of February and reported barely 2/3 its authorized strength. Of the five battalions of the division, only one had been reconstituted and was fully fit for service. The artillery had about 3/4 of its strength



MAP 2: Troop Dispositions of
23 February 1945

4-6 FIFTEENTH
XXXX
FIFTH Pz

available. A divisional assault gun company, whose attachment had recently been announced, had not yet arrived. The 1035th Rifle Regiment was still in the process of being formed at one of the troop training grounds. Divisional command had sufficient experience and could boast of capable officers and trained subordinate commanders and enlisted men rendering it adequate for the requirement of large scale fighting. On D-day, the combat efficiency of this division could be evaluated as category III (fit for defense).⁷ The Fifteenth Army had no reserves. Army Group B's reserves consisted of the 9th Panzer Division, assembled along the ERFT River east of JUELICH, and the 11th Panzer Division was in the process of assembling near MUENCHEN-GLADBACH after Hitler personally ordered the division pulled out of the Saar-Moselle triangle. Neither panzer division was anywhere near full strength.⁸ The 84th Infantry Division was directed to strike at the boundary between these two German corps.

The disposition of the Ninth Army is shown on Map 2. In the XIII Corps sector, on the left flank of the army, the 84th and 102d Divisions were positioned to attack on line. The 84th Division sector straddled the boundary between the German XII SS Corps and the LXXXI Corps. The 5th Armored Division was in Corps reserve, scheduled to be committed to exploit the breakthrough of the river line. The 84th Division was essentially at full strength. It could rely on ample support in the form of engineers, an attached AAA battalion, tank destroyer battalion, tank battalion, and an overwhelming array of supporting artillery.

Two feints were conducted by XIII Corps to start Operation Grenade. On D-2, an artillery preparation was directed on the east bank of the ROER River from 0200 to 0205 hours and a two hour smoke screen was maintained along the far shore. On the next night, the concentration was repeated at a location further upstream. A smoke screen was maintained most of the night to allow the 309th Engineers to move assault boats to covered positions within 1000 yards of the river at LINNICH while the 171st Engineers, a Ninth Army engineer battalion in direct support of the 84th, placed the footbridge equipment into covered positions 500 yards further back. These smoke screens were generated by smoke pots, although white phosphorous shells fired by mortars were also used to cover the assault on 23 February. The Germans, expecting the crossing to occur on both of these nights, remained in alert but decreased their readiness when it failed to materialize.

On the night of 22-23 February, under cover of a smoke screen, the 309th Engineers cleared the routes to the river and marked them with tracing tape. Map 3 shows the detail of the crossing site. Six lanes were laid out from the final assembly area to the boat group area, a distance of approximately 700 yards, and 35 lanes from the boat group area to the water's edge, a distance of approximately 200 yards. The enemy was expecting a crossing all night and his artillery was unusually heavy in the whole area so that the engineers had to work in the dark under severe fire.

On D-day, at 0100 hours, the 309th Engineers began to carry the



MAP 3: The Roer Crossing Site.

assault boats to the boat assembly areas. They finished at 0200 hours. The 171st Engineers carried the footbridge equipment to positions directly in front of the bridge sites and carried the plank for the plank tread approach road to the proper sites. By 0230 hours, everything was in position. Soon after midnight, the 1st Battalion, 334th Infantry marched from its rear assembly area in the vicinity of LEIFFARTH and WUERM to the initial assembly area in LINNICH. By 0130 hours, the battalion had closed the assembly area and the weapons platoons had picked up their heavy weapons. The 1st Battalion went to its final assembly area at 0245 hours to meet the engineer guides. There they picked up the assault boats. One squad of infantry manned each boat with an engineer as boat commander with two engineers to return the boat to the near side.

At 0245 hours, Division, Corps, Army Artillery and all supporting weapons to include those from the 557th AAA (AW) Battalion and the 771st Tank Battalion opened up with a 45-minute preparation. The effect was a devastating, continuous curtain of fire close to the river bank on the far shore. XIII Corps had decided not to precede the assault by a heavy daylight close-support bombing effort by the XXIX Tactical Air Command. A heavy bombing of enemy forward installations on the east bank of the river would have required a withdrawal, for the safety of ground troops, 3000 yards to the west. This would have required assault elements to approach the river in broad daylight over ground that afforded little in the way of cover and concealment. The heavy bombers were instead directed to conduct deep interdiction of

key enemy targets to isolate the battlefield."

THE RIVER CROSSING. H-hour (0330 hours, 23 February 1945)

At 0300 hours, the 1st Battalion of the 334th Infantry left the final assembly area for the water's edge. From this point on, each boat load was strictly on its own until it reached the next assembly area on the other side of the ROER River. At exactly 0330 hours, H-hour, the artillery barrage was shifted back a few hundred yards from the river line. The engineers rushed forward to the footbridge sites with their equipment. The first wave of 35 boats, carrying A and C Companies entered the water and crossed on a front of approximately 700 yards. The boat trip took about ten minutes. The second wave of boats, bearing B and D Companies hit the water at 0345 hours and by 0405 hours, the entire 1st Battalion was safely across. The casualties were negligible. Company A came over intact and Company C lost two boats. Many boats drifted 75-100 yards downstream in the strong current. Once across, the troops stormed the shore and headed for the railroad track running parallel to the ROER River, about 400 yards away. Although they first encountered a field full of German stake mines, all of the trip wires had been cut by the heavy artillery and mortar preparation that preceded the crossing so that not one exploded. The 1st Battalion did not wait to secure the bridgehead, but stayed only long enough at the railroad track embankment to reorganize and then drove north before dawn for KOERRENZIG, 1500 yards away.

At the footbridge sites, elements of Company A, 171st Engineers had crossed in assault boats with the first wave of infantry and had attached the anchor and float cables to holdfasts on the far side. All three bridges were partially constructed before the enemy reacted to the attack with heavy mortar and artillery fire. Construction continued in spite of numerous casualties to the engineers. The footbridge on the right (Number 1) was almost completed when enemy automatic fire broke out from a stretch of shore that had not been cleared by the 1st Battalion causing severe casualties and forcing the engineers from the site. The center footbridge (Number 2) was completed by 0410 hours, but it was immediately knocked out by assault boats that drifted downstream from the crossing site of the 102d Division. The left footbridge (Number 3) was completed at approximately the same time, but it was knocked out by a direct hit from enemy artillery before the second wave could use it. As a result, none of the footbridges were operational when the 3d Battalion, 334th Infantry was scheduled to cross. At the same time, all the assault boats had not returned from the east bank because so many had drifted downstream. Under fire and in the darkness, it was impossible to recover them in time for use by the 3d Battalion. The fate of the first three footbridges and the assault boats delayed the 3d Battalion's crossing until 0645 hours. Even then, the crossing was slow because the battalion had to resort to a shuttle service with the remaining boats. The few available boats went over and back for about four hours, and by 1035 hours the entire 3d Battalion was across.

Although enemy artillery fire was becoming more intense, casualties in the crossing were relatively light.

Spare equipment and equipment salvaged from the destroyed footbridges was brought up to the site of Footbridge Number 2 and at least one footbridge was placed into operation. However, this footbridge was not ready for use until the 2d Battalion, 334th Infantry crossed the ROER at 1130 hours. The same enemy automatic fire that caused abandonment of Footbridge Number 1 also caused a considerable delay in starting construction of the infantry support bridge. Engineers from Company A, 171st Engineers suffered a number of casualties on the site before elements of the 3d Battalion had cleared out the remaining pockets of resistance across the river. By 1700 hours, engineers had completed the plank-tread approach and bridge and had it open for traffic, although only for a short time. Enemy resistance from a demolished factory and concrete pillbox located at the road junction directly opposite the Treadway bridge site kept engineers off the site until noon when an assault team from 2d Battalion cleaned out the enemy pocket. Both bridges received extensive damage throughout D-day and D+1 by enemy artillery, mortar and aircraft conducting strafing and bombing runs. However, after 42 hours of constant effort on the part of the engineers and a major reapportionment of personnel and equipment, the Treadway and infantry support bridges were finally opened on D+1, at 1130 and 1400 hours, respectively. Antiaircraft units were now able to keep the enemy air away from the bridges while ground forces had driven the enemy light

and medium artillery out of range from the crossing sites. Now the infantry could get the reinforcements and supplies needed to sustain their operations beyond the ROER River.¹⁰

ESTABLISHING THE BRIDGEHEAD. (H+4 to H+12 hours, 23 February 1945)

By 0445 hours, the lead elements of the 1st Battalion 334th Infantry, which had proceeded 500 yards beyond the east bank of the ROER River, turned north towards the first objective, KOERRENZIG. Because enemy opposition was relatively light, the infantry quickly moved 1500 meters to the outskirts of the town. Just before entering, they called for a special five-minute artillery concentration on the objective. A and C Companies moved into the town at 0610 hours while it was still dark. Company C, securing the river side of town, encountered machinegun fire which temporarily held up the advance. The machinegun crew surrendered when a rifle grenade and a bazooka round were used against the position. A German officer mistook the American soldiers for his own and was quickly captured by Company A in the very first street of the town. The few snipers that appeared from the houses were quickly subdued. Initial fears of encountering German armor in the area had subsided since neither a tank nor antitank weapon except bazookas were seen in KOERRENZIG. The town was cleared by 0830 hours. A heavy German artillery barrage was directed onto both companies as soon as they began to dig in. The barrage caused more casualties than the total of both the crossing and the capture of

the town.

The 3d Battalion, 334th Infantry, the second battalion in the crossing, did not begin to shuttle soldiers across the ROER until 0645 hours because enemy fire, though not heavy, scored a number of fortunate hits on the foot bridges. The 3/334 Infantry completed their crossing by 1030 hours, and disposed of enemy resistance that had been bypassed at the crossing site. The battalion then moved rapidly to KOERRENZIG to seize its objectives and secure the 1/334 rear.

The 1/334 Infantry remained at KOERRENZIG only two hours. While Company A remained in the town, at 1030 hours Companies B and C drove on to the next objective, RURICH, located approximately 1500 yards to the northwest. Between KOERRENZIG and RURICH, only a few scared and scattered enemy posts were met.¹¹ RURICH was attacked at 1405 hours and was cleared in less than 30 minutes. The enemy in the town put up even less resistance than at KOERRENZIG. Although the town was taken without an immediate artillery preparation, the artillery was largely responsible for the triumph achieved there. The tremendous concentrations for the past 12 hours had completely torn up the enemy's communications to the extent that the German forces located in RURICH were unaware of the successful crossing at the ROER as late as 1400 hours. This was just before elements of the 3/334 Inf arrived in their own town. The 1st Battalion, 334th Infantry received only 30 casualties in the fighting at RURICH, compared to five times that number among the German units.¹²

The 2d Battalion, 334th Infantry, the third battalion to cross,

closed on the far bank by 1450 hours.¹³ The 334th Infantry, the first regiment over the ROER, took approximately 12 hours to cross the river and obtain a bridgehead about 4000 yards wide and 1000 yards deep. The depth of the bridgehead is less important because the advance was directed to the north, not east. Their mission was to secure crossing sites that would allow the XVI Corps to make an unopposed crossing. Companies F and G, 2/334th Infantry continued on the attack.

Casualties during the river crossing operation were surprisingly light. There were several reasons why resistance was much less than expected. The artillery concentrations were so effective and well placed at every stage of the attack that most of the enemy was still in his shelters when the first wave of the lead regiment hit the far shore. As a result, enemy outposts were overrun quickly and quietly. The 1st Battalion of the 1034th Volksgrenadiers, 59th Volksgrenadier Division, had outposted the river opposite the assault crossing sites. It tried to withdraw hastily to a new line of trenches about 800 yards east of KOERRENZIG. Enemy defenses appeared to be disposed to meet an attack directed eastward toward the RHEIN.¹⁴ As a result of the advance north from KOERRENZIG, the badly depleted 351st Volksgrenadiers and 219th Engineer Battalion from the 183d Volksgrenadier Division were encountered. These units consisted largely of elderly troops of poor calibre.

Even though the German LXXXI Corps expected an attack any day, they were surprised by the very strong preparatory artillery fires.

The 59th Division was defending the Corps right flank with three battalions along the ROER in its front line from TETZ to KOERRENZIG. One battalion was in reserve vicinity HOTTORF and about twenty-two medium and heavy howitzers were in support. American preparatory fires succeeded in causing considerable breaks in the defenses on the east shore line. American forces were able to cross the still swollen and rapid flowing ROER River in the 59th Division sector at LINNICH. The plan of the LXXXI Corps staff was to hold the American forces near the ROER River and await the assembling of two divisions in reserve. A combined counterattack would then be launched under the command of General Bayerlein. This plan could not be carried out because of initial American successes and because the combat units of these divisions did not arrive en masse due to transport and fuel limitations. Therefore, it was necessary to immediately commit the arriving portions of the two armored division piecemeal at the most vulnerable points to blunt the thrust.

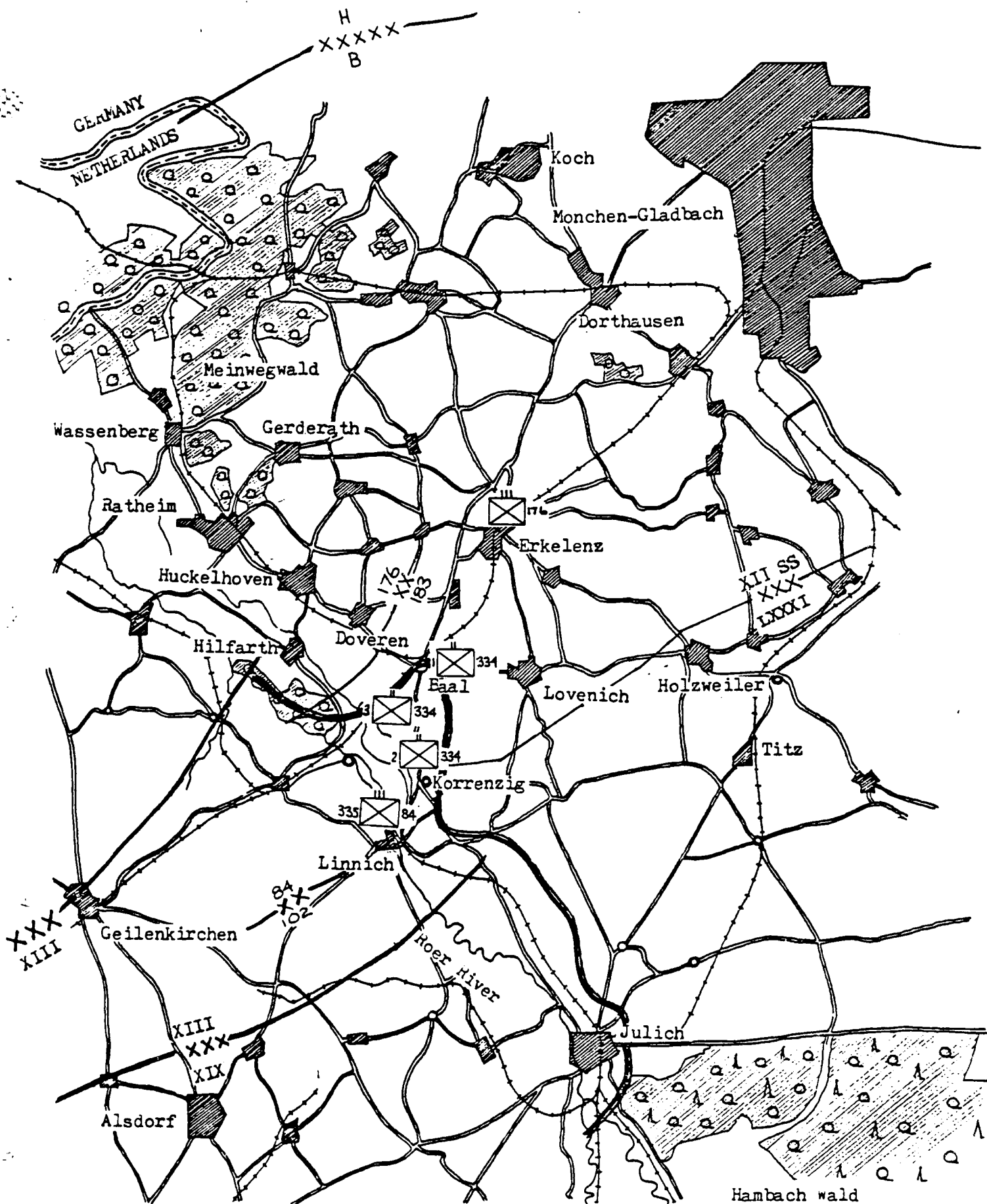
By the evening of 23 February, the LXXXI Corps staff realized that the two Volksgrenadier divisions, the 59th and the 363d, the weak artillery and the inadequate armored forces would be insufficient to hold the ROER defenses against at least four American divisions. The Corps and Army Group reserves were already almost completely committed, and the Fifteenth Army had no reserves. Since the entire Corps was under attack, it was no longer possible to organize reserves out of the infantry divisions.

In a last ditch effort to halt the rapidly expanding bridgehead in the north, General Koechling placed one company of the 341st Brigade and one company of the 506th Panzer-Abteilung at the disposal of the 59th Division for the purpose of recapturing TERRENZIG and GEVENICH and throwing the Americans back against the ROER¹⁴ (see Map 4).

THE BATTLE OF BAAL. (H+13 to H+36 hours)

Up to this time, the 3/334 Infantry's mission had been to eliminate isolated pockets of resistance bypassed by 1/334 Infantry. At 1830 hours, within 45 minutes of the 1st Battalion's capture of RURICH, the 3d Battalion, 334th Infantry moved out of RURICH to seize BAAL located approximately 2000 yards to the north. The attack was oriented on the road which ran from RURICH to BAAL. Company K started out on the left, Company L on the right, Company I in reserve. The road passed by a large chateau, a clearing, through a large patch of woods, and through a final clearing into BAAL. High ground generally ran to the right along Highway 57. About 300 yards to the right of the chateau, a pillbox, skillfully camouflaged as a haystack, opened fire. Companies L and K immediately drew back to the chateau. Mortars set fire to the hay, emptying the pillbox and saving the Americans the trouble of reducing the pillbox.¹⁵

As the 59th Division withdrew in the face of the 84th Division advance, the battle was passed to the XII SS Corps and the 183d Division which was defending the ROER on the XII SS Corps southern



MAP 4: Establishing the Bridgehead.
The Situation at H+18 hours
(2130 hours, 23 Feb 1945)

flank. No American crossing had yet been made in the XII SS Corps sector as the XVI Corps was waiting for the 84th Division to clear its crossing sites. Contact was lost between the XII SS and LXXXXI Corps which hampered coordination of the fight. As the 84th began to roll up the 183d Division flank, its defensive posture was hastily reoriented toward the south.¹⁶

At about the same time that the 1st Battalion 334th Infantry moved out of RURICH, the Germans counterattacked by sending 8-10 tanks or assault guns and 6 personnel carriers from BAAL to meet the American advance. This force received heavy casualties from XIX Tactical Air Command fighters as it reached the woods midway between RURICH and BAAL losing six armored vehicles and six personnel carriers. The remaining tanks or assault guns withdrew toward BAAL after dark. That the German attack had been broken before ground contact could be made underscored the degree of assistance the infantry was receiving from other supporting combat arms. The rest of the march from RURICH to BAAL, over open ground in the fading light, was relatively easy. At the outskirts of BAAL, the infantry held up while an artillery preparation shattered the weak enemy resistance. As a result, the occupation was swift against light resistance. By 2115 hours, BAAL was cleared.¹⁷

Also on 23 February, the 338th Inf Div consisting of two infantry regiments with two battalions numbering 200 men each, one Fusilier Battalion of about 200 men, and a light artillery battalion was alerted for commitment in the Fifteenth Army sector. The division was

not ready for action. It had only just been removed from the COLMAR pocket to the south and since essential units such as the medium artillery and antitank battalions, had not yet arrived. Despite these significant equipment shortages, protests to Fifteenth Army by the division were futile.¹

The capture of BAAL had not been expected to occur until 24 February (D+1). Since the advance across the ROER in sector on this first day was ahead of schedule and considerably ahead of the 102d Division advance, the 84th Division's flank was completely exposed, its left flank being secured on the ROER. The second regiment to cross, the 335th Infantry, started over the footbridge at 1615 hours and was completely across before 2400 hours that evening. By 2400 hours, the three infantry battalions were situated between RURICH and KOERRENZIG. The bridgehead, stretching approximately 3-1/2 miles from LINNICH to BAAL, was occupied by two full infantry regiments before D-Day was finished.

A Treadway bridge for vehicular traffic was finally completed at 1700 hours. At 2030 hours it was strafed by enemy aircraft and eight floats were hit. As a result, the bridge had to be repaired and no tanks or tank destroyers were able to cross the ROER on D-Day, leaving the infantry without armor support. Commo wire strung across the ROER River was constantly cut by enemy shelling. Lead elements of the 335th Infantry were unable to make contact with the 407th Infantry Regiment of the 102d Division on its right flank after both had crossed the ROER. The 407th Infantry, who had farther to go in its wheeling

movement to the north, had not caught up with the 335th Infantry. The 3/335 Infantry was directed to make contact with this unit in the vicinity of LOVENICH.

The 84th Division bridgehead on 23 February was not fully organized by nightfall. Units had moved rapidly during the day and were not yet reinforced by heavy equipment such as armor or antitank weapons. The weapons companies had brought only what could be carried by hand, mostly heavy machine guns, 81mm mortars, and some mines. The battalions of the 334th Infantry were dug in on the outskirts of BAAL in a horseshoe around the town. As of nightfall, no large counterattack had been received, with the exception of the assault guns and personnel carriers that had been routed between RURICH and BAAL by air and artillery.¹⁹

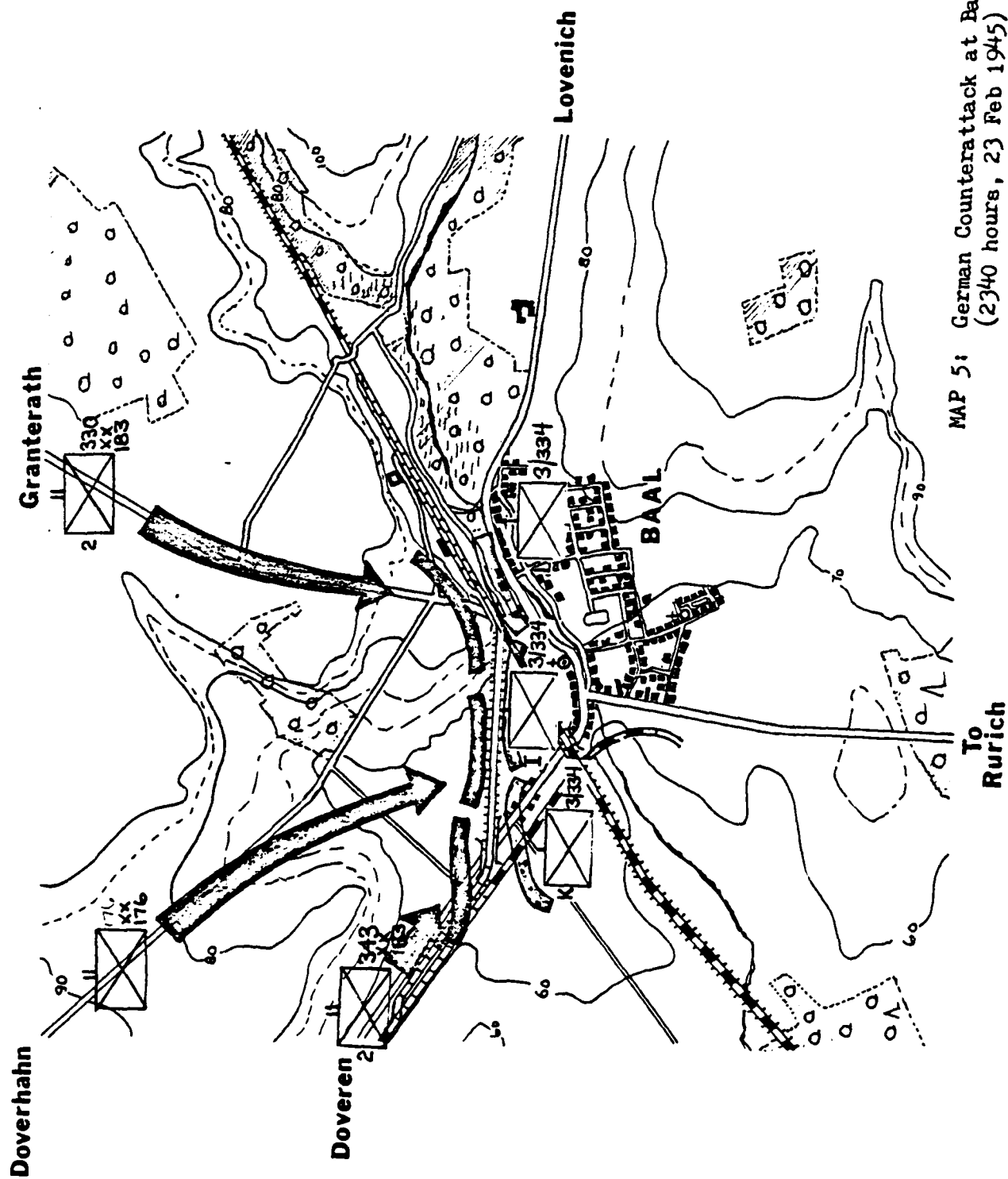
During the night of 23-24 February, Fifteenth Army ordered XII SS Corps to reestablish contact at LOVENICH with the weakened 59th Division on the LXXXI Corps right flank. XII SS Corps was further ordered to position one regimental group from the 176th Division in ERKELENZ to blunt the American advance. The 183d Division established a new defensive line north of BAAL, extending to LOVENICH in the east and to the ROER in the west. The XII SS Corps reported that it did not have sufficient combat power to hold ERKELENZ, and that the ROER defenses were penetrated for all practical purposes. Fifteenth Army promised the 338th VGD as reinforcement but it could not arrive before midday 24 February.²⁰

Only minor action occurred during the night of 23-24 February. Three German tanks entered BAAL from the rear with headlights blazing

and were mistaken for friendly vehicles. Meanwhile, several German machine guns opened fire from the railroad embankment at the far end of BAAL towards the tanks. In the darkness and confusion, several men tried to warn the "friendly" tanks and were met by coaxial machine gun fire. The tanks then engaged L Company's CP with point-blank fire and drove out of BAAL to GRANTERATH. This incident illustrates the tenuous defensive posture of the 334th Infantry Regiment at BAAL. A concerted enemy counterattack could have caused the regiment serious problems.

At 2340 hours on 23 February, three enemy battalions launched a counterattack at BAAL, accompanied by three assault guns. The 176th Fusilier Battalion of the 176th Volksgrenadier Division moved south from HETZERATH to fix elements of 334th Infantry Regiment. The battalion was halted outside the town by artillery fire. In the meantime, two battalions of the 183d Volksgrenadier Division moved to outflank BAAL from opposite directions. The 2d Battalion of the 343d Volksgrenadiers moved southeast from DOVEREN to attack K Company on the left. The 2d Battalion, 330th Volksgrenadiers, attempting to flank the town on the right from GRANTERATH, struck Company L. The disposition of the 1/334 Infantry at H+20 hours (2340 hours, 23 February 1945) is shown on Map 5.

Company L's 2d Platoon was defending a vital railroad underpass and road junction on Route 57 from a battered building. One German unit succeeded in reaching the railroad embankment and underpass, where they opened up with machine guns and rifles on the 2d Platoon. The platoon was able to hold the attackers with machine gun and BAR



MAP 5: German Counterattack at Baal
(2340 hours, 23 Feb 1945)

fire until ammunition ran low. The platoon leader, who was without radio communication to the company CP, sent runners to request that artillery fires be directed at the underpass. The runner never reached the company CP. The company commander, however, received word of the trouble and had the artillery shell the underpass, with 2d Platoon located in a building only 25 yards away. Eventually, about 25 Germans near the underpass charged across the road in small groups to surrender as the fire began to subside. Prisoners claimed that they were the only ones left of over 200 men who had started the attack from GRANTERATH.²¹

Artillery proved to be the decisive factor in blunting all counterattacks throughout the night. A platoon from Company K was also protecting a railroad overpass over the road running parallel along the ROER River to DOVEREN. The Germans, accompanied by a single tank, closed to within 75 feet of the platoon, which was holding houses on both sides of the road when the attack came. Artillery fire was requested and became so intense that the infantry and tank were forced to withdraw.

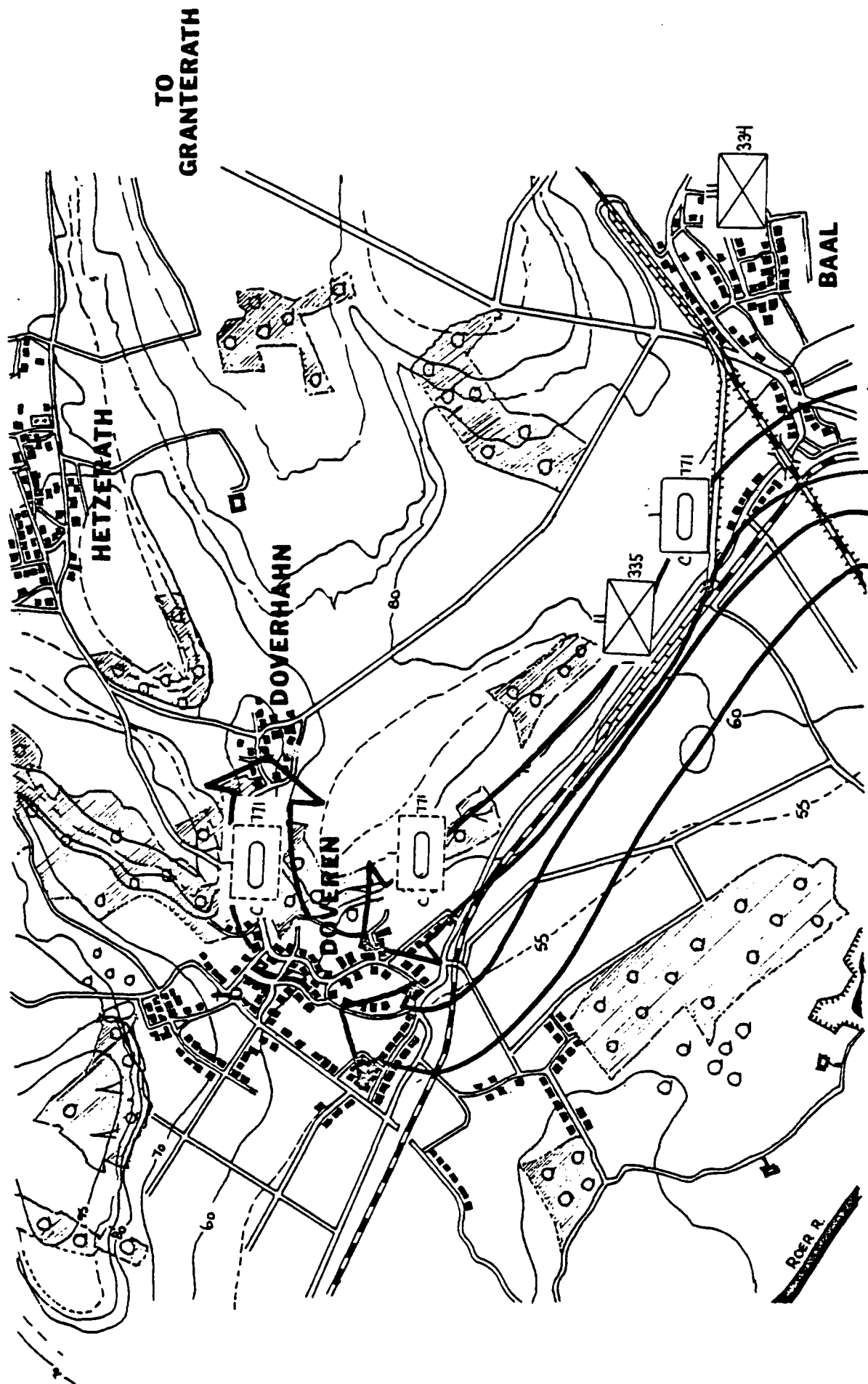
Just before dawn, three German tanks and infantry approached BAAL from GRANTERATH on Highway 57. 2d Platoon, Company L continued to defend the underpass from its original positions. The enemy force halted north of the railroad embankment beyond the underpass not more than 500 yards from the platoon. The tanks halted there for an hour, unaware the platoon had expended all machine gun ammunition, grenades and had only 1 bazooka round remaining. As the dim light of morning

spread out, the German tanks backed away.

Early in the morning of 24 February, the transfer of the 1st Battalion of the 334th Infantry from the southern edge of BAAL to the left flank of the division, enabled 3d Battalion to reorganize and to orient on the right flank in the direction of LOVENICH. Meanwhile, the 2d Battalion moved further west to provide more depth to the defense. This horseshoe defense established at approximately 0430 hours proved very timely. At 0800 hours, the 5th and 7th Companies of the 330th Volksgrenadiers, 183d Volksgrenadier Division tried to advance south on an axis directed towards RURICH in order to cut off American forces in BAAL. Without accurate intelligence, the German columns stumbled into the 3d Battalion, 335th Infantry, who held their fire until the Germans closed to within 100 yards. The 3d Battalion directed artillery fire onto the enemy positions throughout the day. At about 1600 hours, when the battalion was ordered to advance to NIERHOVEN through the enemy's positions, they found them full of casualties from the terrific shelling. The battle of BAAL was over before dusk on 24 February. The 334th's 3d Battalion received a presidential unit citation for its part in the ROER-RHEIN advance, and primarily for its defense of BAAL.²² Division dispositions as of 1600 hours on 24 February are shown on Map 6.

THE ADVANCE TO DOVEREN. (D+1, 24 February 1945))

The XIII Corps commander, MG Gillem, reacting swiftly to the



MAP 6: The Advance to Doveren
(0900 - 1900 hours, 24 Feb 1945)

rapid seizure of BAAL, coordinated with the XVI Corps commander, MG Anderson, to release the division from its mission of securing the XVI Corps crossing sites so that the rapid success of the 84th Division could be exploited by deeper penetration and rapid pursuit of a disintegrating enemy. It was agreed that the XVI Corps would begin its crossing vicinity HILFARTH as soon as DOVEREN was taken. The Ninth Army commander, General Simpson, approved the change. This freed the 84th from securing the east bank of the ROER, and allowed the division to follow up on its rapid successes. The XIII Corps plan for 24 February called for the 102d to seize KOFFERN with the 84th seizing DOVEREN.²³

By the morning of 24 February, the bridgehead had been firmly established. The Treadway bridge was finally opened at 1120 hours after two ME-262's, German twin engine jet planes, attempted to bomb and strafe the crossing sites. The gunners of Battery C, 557th AAA (AW) Battalion hit both planes, the first of this type shot down by the XIII Corps. Company A, 771st Tank Battalion crossed the ROER on the Treadway bridge at noon and arrived in BAAL two hours later to assist in mopping up the last snipers and stragglers. The entire tank battalion was across by 2300 hours that same day.

Until the morning of 24 February, the 334th Infantry had done the brunt of fighting in the bridgehead. The 335th Infantry, following the 334th at RURICH and KOERRENZIG, received the mission to widen and deepen the penetration by advancing to seize DOVEREN, about 2500 yards

northwest of BAAL, and DOVRHAHN, a little village on the eastern outskirts of DOVEREN. At 0900 hours, the 1st Battalion crossed the line of departure near RURICH and led the advance to BAAL, where it would pass through the 334th. The 1st Battalion encountered several pockets of enemy resistance on the way to BAAL, especially around the large patch of woods which had given the 334th Infantry so much trouble the day before.

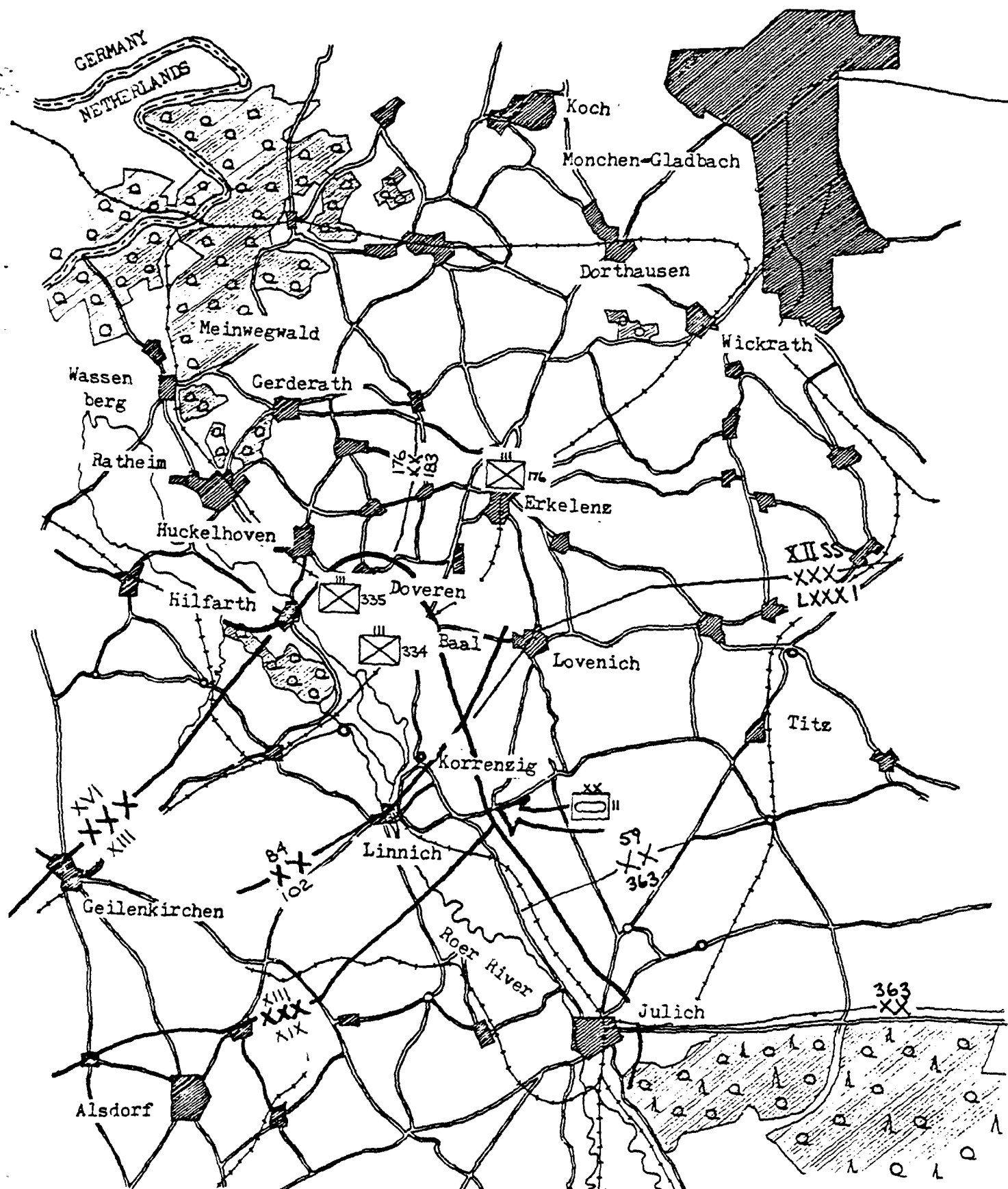
About 200 yards north of BAAL, just beyond the railroad along the BAAL-DOVEREN road, the 1st Battalion ran into stiff opposition from enemy small arms and machine gun fire. It was 1230 hours before the Germans could be forced to withdraw. The 1st Battalion's advance continued very slowly. At 1400 hours, 2/335 Infantry was ordered to move through RURICH to the northwest, cutting across country to bypass the fighting north of BAAL and strike directly at DOVEREN. Resistance was encountered almost immediately from entrenched enemy infantry positioned along the BRACHELEN-BAAL railroad, covering the trail that leads over the embankment and into DOVEREN. Instead of holding up, however, the 2d Battalion swung over to the right as far as the western edge of BAAL and bypassed the enemy positions.

At 1430 hours, Company C, 771st Tank Battalion arrived to support 1/335 Inf, still held up outside of BAAL. An attack was subsequently launched by the infantry supported by the direct fires of the tanks. A breakthrough was achieved. The tanks sped ahead of the infantry and entered both DOVEREN and DOVERHAHN. Although the tanks were able to secure DOVERHAHN, the infantry, which had been delayed by pockets of

resistance along the way, moved up to secure DOVEREN by nightfall. Meanwhile, the 335th's 2d Battalion, following the railroad from BAAL, arrived shortly after nightfall to assist in clearing the town of snipers (see Map 6). The tanks took up positions to the north to guard against counterattacks.

By the evening of 24 February (D+1), the bridgehead extended approximately 4 miles in length along the ROER River from LINNICH to DOVEREN, then continued inland another three miles from the eastern edge of HUECKELHOVEN, through DOVEREN, DOVERHAHN, and BAAL, as shown on Map 7. The flanks of the division were still exposed. The 102d Infantry Division on the right flank had been halted 3000 yards south of LOVENICH, where it was to link up with 3/334 Infantry. The 35th Infantry Division of the XVI Corps, on the left flank, had not yet crossed the ROER River in zone to take HILFARTH. Nevertheless, the 84th Infantry Division was looking to exploit its success.²⁴

On the night of 24 February, the 338th Infantry Division was to be transferred by truck to an area north of ERKELENZ where it would come under the control of the XII SS Corps. The division was to defend the vital road center and establish solid contact with the 59th Division which secured the LXXXI Corps right flank. The 759th Infantry Regiment of the 338th Division deployed immediately and linked up with the 176th Division near ERKELENZ where it defended the key road center until the remainder of the division arrived the morning of 25 February. Once deployed, the 338th Infantry Division was given the



MAP 7: The Battle of Doveren. The Situation at D+1 (1900 hours, 24 Feb 1945)

mission to defend on a line from ERKELENZ to KUECKHOVEN and prevent a breakthrough. However, the division did not have any antitank assets. Its artillery support, consisting of two light artillery battalions, was inadequate to repel enemy tank attacks.²⁶ Support from the Corps artillery, which had been promised, was doubtful, since that element was already over committed. A 300-man Volkssturm unit, of little combat value, was attached to the division. Because part of the signal battalion was still enroute by train, a critical shortage of signal communication assets also existed. Control of division elements was limited to wire lines, which were susceptible to interruptions from enemy artillery fire. The location of the 338th Infantry Division command post was at WICKRATH.²⁷

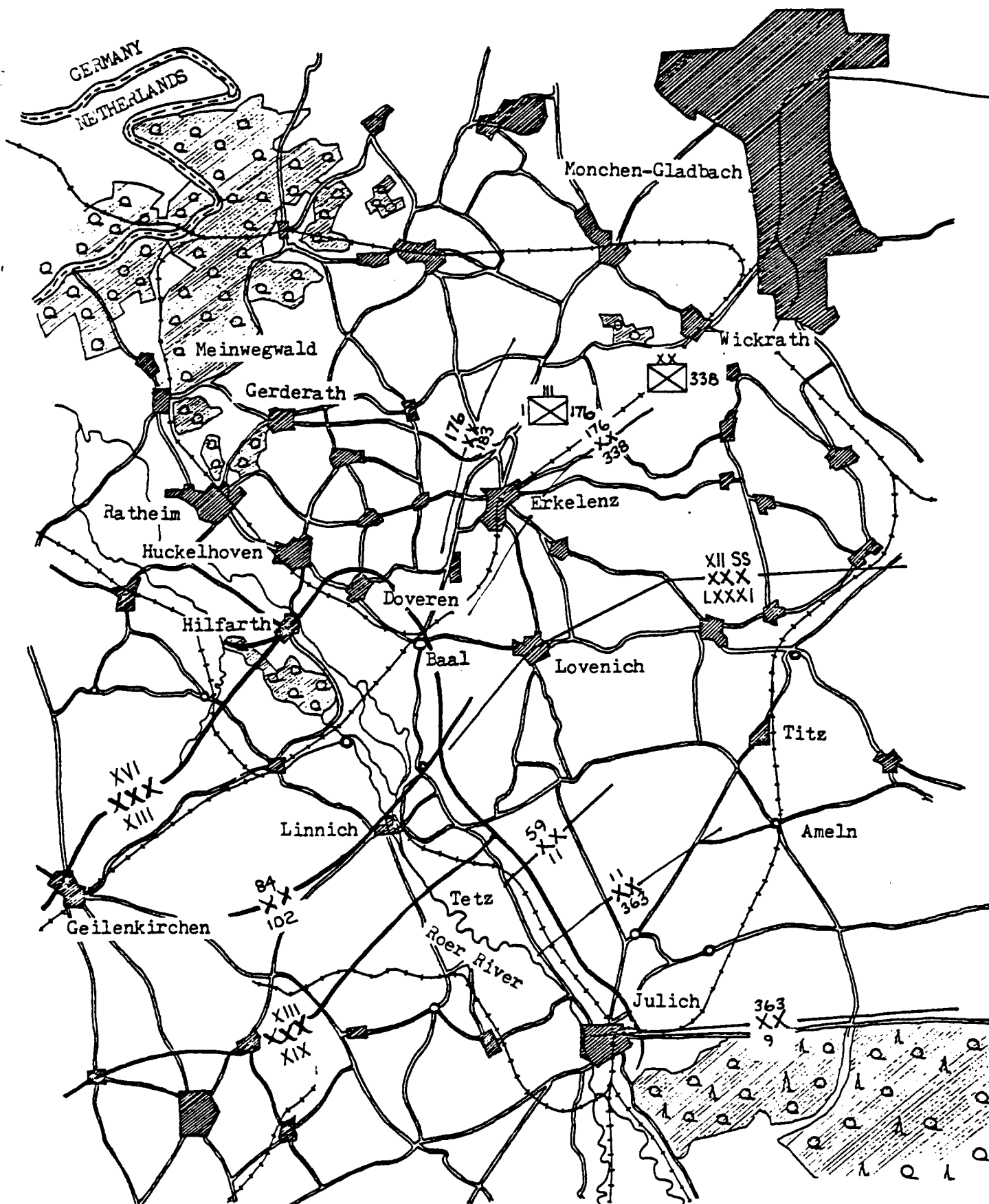
The overall situation in the XII SS Corps was rapidly deteriorating. Corps troops had lost DOVEREN, the 183d Division weakly held the ROER-BAAL-LOVENICH line and was preparing to withdraw to a new defensive line from RATHEIM to GOLKRATH. In LXXXI Corps sector, the 59th Division lost KOFFEREN, but maintained tenuous contact with the XII SS Corps at LOVENICH. By the morning of 25 February, contact was lost altogether. The situation made some adjustments necessary as shown on Map 8. In XII SS Corps sector, the 338th Division was committed into sector from assembling areas vicinity of WICKRATH to reestablish contact with LXXXI Corps at LOVENICH. It appears that the regimental group of the 176th Division which had been held in ERKELENZ was inserted on line between the 338th and what remained of the 183d Division. In the LXXXI Corps sector, the 59th Infantry Division would

remain on the corps right with a boundary extending from LINNICH to TETZ. The 11th Panzer Division was inserted to the south and had been augmented by the 1035th Infantry Regiment of the 59th Infantry Division. Its left boundary extended from HOMPESCH to AMELN. The 363d Infantry Division was next with a left boundary extending from JUELICH to COLOGNE. The 9th Panzer Division had been committed in the southern part of the LXXXI Corps sector with one regiment of the 363d Infantry Division, but minus the 10th Panzer Grenadier Regiment, which had been attached to the 363d Division on 24 February. The Panzer Grenadiers had been placed at the left flank of the 363d Inf Div, along the western edge of the KORBWALD.²⁸

EXPANDING THE BRIDGEHEAD. (D+2, 25 February 1945))

The XIII Corps plan for 25 February called for the 102d Division to attack in zone "and secure the high ground north of the general LOVENICH-KATZEM area," and to be prepared to continue the attack toward the KUCKHOVEN-WAHRENBUSCH area. The 84th Division "would continue the attack in its zone of action and seize the GRANTERATH-HETZERATH area on the right and HOUVERATH on the left."²⁹

Early on D+2, 25 February, two regiments of the 84th Division were situated abreast in a corridor north from BAAL and DOVEREN, the 334th on the right and the 335th on the left. 1st Battalion, 333d Infantry was attached to the 335th Infantry and 3d Battalion, 335th Infantry to the 334th Infantry. Allied air superiority and a breakdown

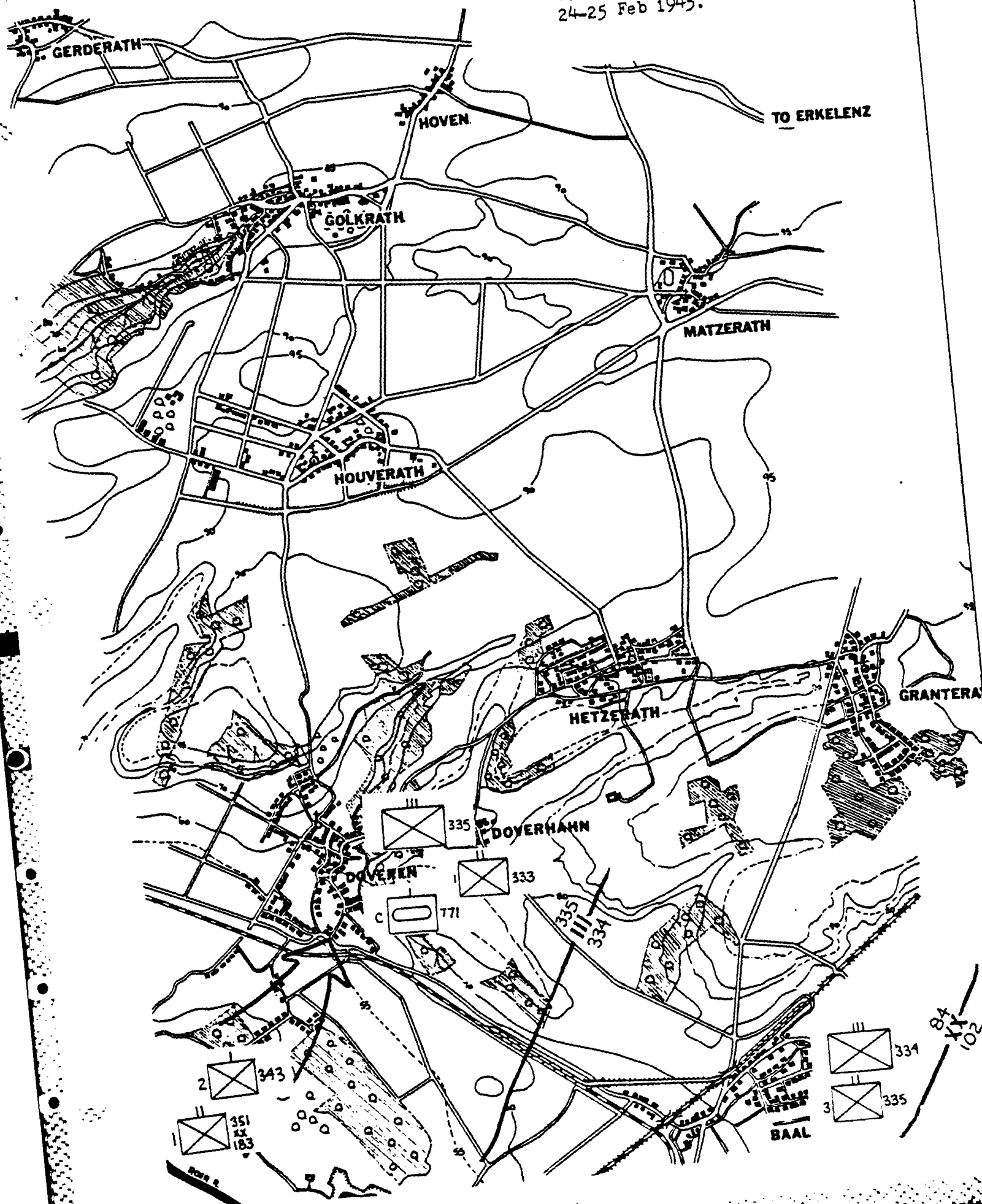


MAP 8: The Reorganization of the German LXXXI Corps. Disposition of units at 0600 hours, 25 Feb 1945

in German communications combined to offer U.S. forces the element of surprise. The German command was unable to keep up with the current battlefield situation. Reinforcements were frequently sent forward, expecting to defend positions, to find that they were no longer in German hands. In this way, German forces were committed piecemeal in premature attacks or were attacked before they could react to new situations. For example, at 2300 hours on 24 February, 2d Company, 343d Infantry was ordered to move from HILFARTH and take up defensive positions in DOVEREN. The Germans were unaware that the city was occupied by the 335th Infantry and the company was forced to organize defensive positions south of the town (see Map 9). 1st Battalion, 351 Volksgrenadiers, 183d Volksgrenadier Division, passed through 2d Company at about 0230 hours on 25 February to counterattack the 1/335, 2/335, and C/771st Tank Battalion, defending in DOVEREN. The tank battalion had located a liaison officer with a radio with the artillery battalion in direct support of the 335th Infantry. Each tank in C Company was able to call and adjust artillery fires. Units of the 335th Infantry that did not have radio communication with the artillery were able to request fire support through C Company. Effective indirect fire was credited with breaking up the counterattack and inflicting heavy casualties upon the Volksgrenadiers.

During the counterattack by the 1/351 Volksgrenadier Regiment, the Germans directed artillery fire onto the ROER crossing site and both the infantry support and Treadway bridges were damaged at 0230

MAP 9: The Battle of Doveren. German Counterattack on the Night of 24-25 Feb 1945.

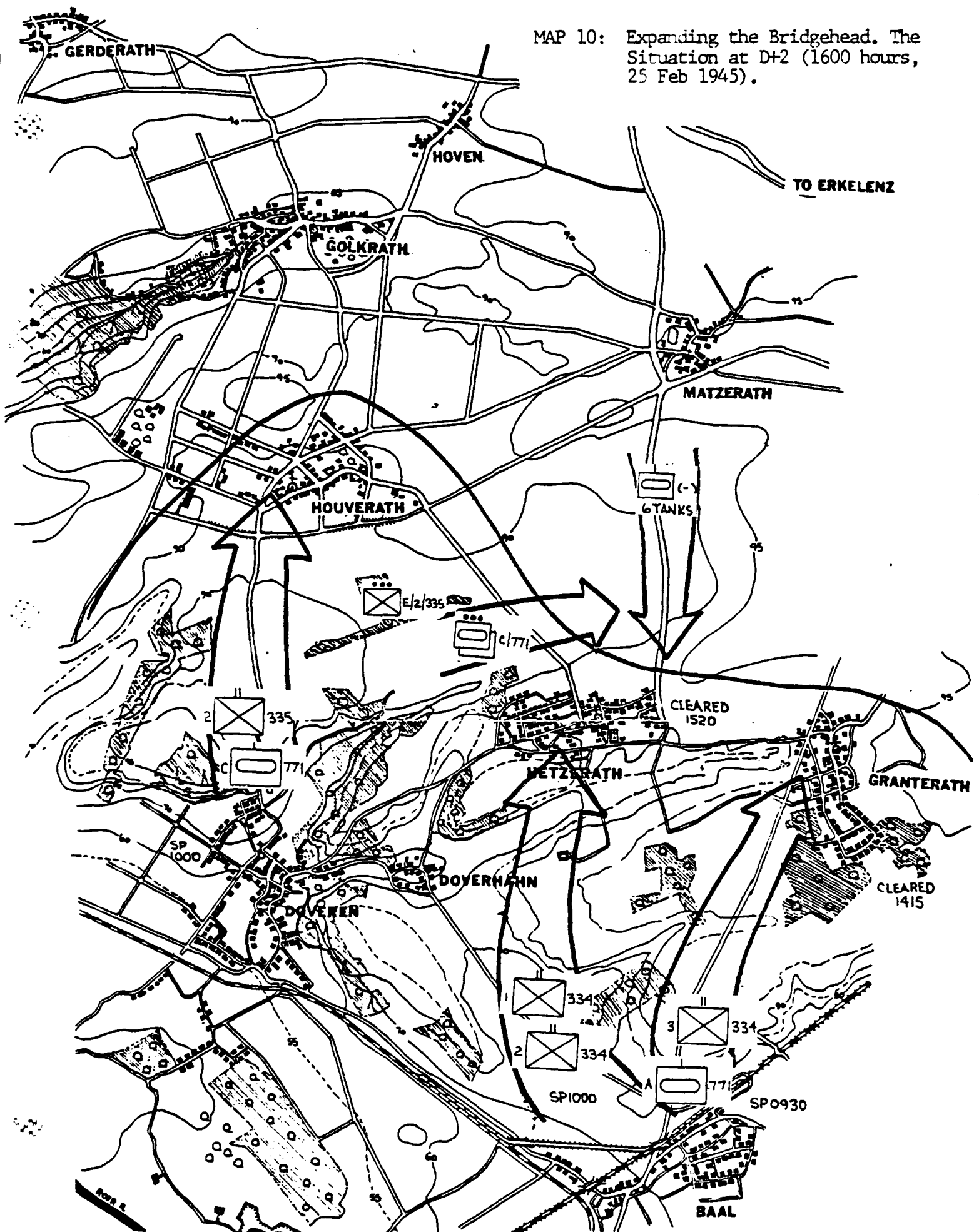


hours, 25 February. The infantry support bridge required repairs and was reopened for use later that day at 1400 hours. Damage to the Treadway bridge was slight and it continued to support 2-1/2 ton trucks, although without trailers. About 0400 hours, the Bailey bridge at LINNICH was completed so that the division's heaviest vehicles could cross the river for the first time. The last damage to the bridges occurred at 0545 hours when another burst of enemy shell fire struck the Treadway bridge. It was reopened for service by 1030 hours. Despite this harassment, the logistical effort by the 84th Division had pushed so many supplies across the river that the temporary closing of the bridges had no serious effect on offensive operations scheduled that morning.³⁰

The plan for 25 February was to have the 1st and 3d Battalions of the 334th Infantry attack in a coordinated effort from BAAL at 0930 hours to secure GRANTERATH and HETZERATH, respectively. 2d Battalion was to follow 1st Battalion in the main effort as the reserve. Meanwhile, 2/335 Infantry would advance north from DOVEREN to seize HOUVERATH (see Map 10).

The 3/334th Infantry attacked at 0930 and almost immediately encountered stiff resistance at several patches of woods 1000 yards north of BAAL on either side of the road to GRANTERATH. Tanks were called up from A/771st Tank Battalion to lay down a base of fire. The tanks knocked out a half-track, two self-propelled guns and a Mark V tank, enabling the infantry to proceed. Once in GRANTERATH, Company I cleared the northern half and Company K the southern half of light

MAP 10: Expanding the Bridgehead. The Situation at D+2 (1600 hours, 25 Feb 1945).



infantry resistance by 1415 hours.

In the center, 1/334 Infantry attacked at 1000 hours and moved quickly the 1200 yards to HETZERATH without tank support. Sniper fire held up A Company for a short time and units from 2/334 Infantry following the attack had to move up and provide fire support before A Company could continue the advance. German machine guns located south of HETZERATH and covering the approach into the town were silenced by small arms fire. By 1520, HETZERATH was cleared of enemy small arms and automatic weapons fire. The main resistance was offered by an enemy pocket in a large house in the town square which held after the rest of the town was cleared. Tanks and tank destroyers encircled the house and reduced it, taking 78 prisoners and leaving 20 dead and more wounded. Five enemy tanks were observed leaving HETZERATH as the 1/334 Infantry closed in on the town.³¹

On the left, Company E of the 2/335 Infantry and Company C of the 771st Tank Battalion led the advance of the 2/335 Infantry from DOVERN at 1000 hours. Moving northeast towards HOUVERATH, the units first encountered well-placed trenches, antitank ditches and obstacles. The infantry charged the enemy's positions using fire and maneuver, supported by machine gun fire from the flanks. The tanks provided main gun and machine gun fire from defilade positions over the heads of the infantry. The units advanced to a linear patch of woods 1000 yards south of HOUVERATH, and noted a column of 6 tanks moving down the road from MATZERATH to HETZERATH, towards the 1/334 Infantry. Two tank platoons of the 771st Tank Battalion moved east against the flank of

the German armor. One platoon of E Company secured the flank of the battalion while the other tank platoon concentrated direct fires on HOUVERATH. Within 40 minutes, the objective was secured by the remainder of E Company. On D+2, the enemy suffered 200 killed, 150 seriously wounded and 464 prisoners in actions against the 334th and 335th Infantry Regiments.³² The dispositions of the division at this time are shown on Map 10.

The Fifteenth Army commander faced a very difficult situation. He now understood clearly that the XIII Corps attack over LINNICH through ERKELENZ was not a supporting attack for the XIX Corps to its south, but an attack of equal importance. He now doubted that the weakened 338th Division would be able to hold ERKELENZ and he feared that the northward thrust could result in the Fifteenth Army losing contact with the First Parachute Army to his north. The situation in the XII SS Corps was grave. Only some units of the 338th Division had arrived as of the night of 25 February. The units that did arrive did not have the equipment or the morale to stubbornly defend against the expected American attack. In the other defending divisions, infantry strength had been reduced greatly by heavy losses. The Corps had again lost contact with the LXXXI Corps (59th Division) on its left and was unable to reestablish contact despite repeated attacks against American forces holding the gap. The Corps commander feared the threat to his left flank and the expected frontal assault on ERKELENZ.³³

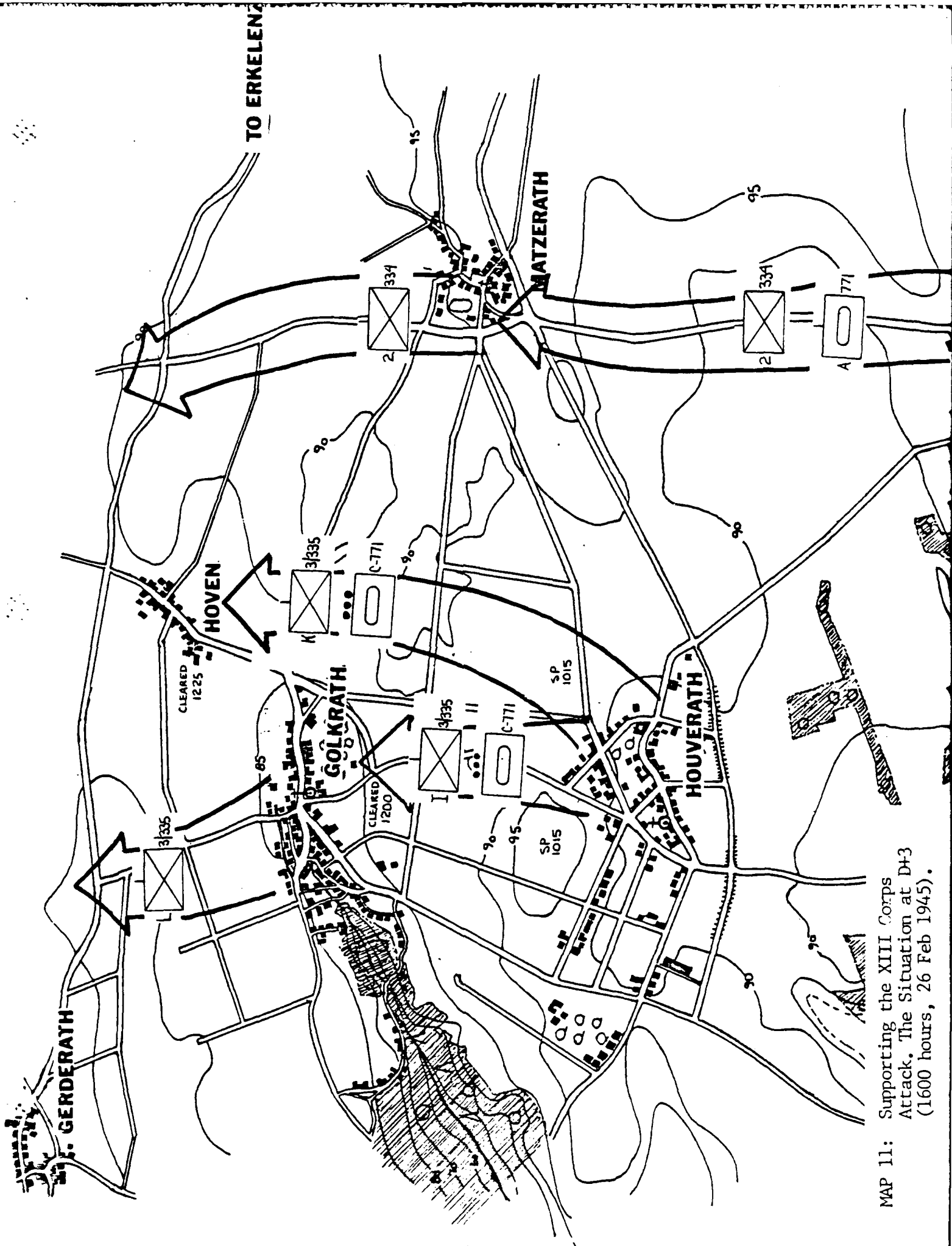
ISOLATING ERKELENZ. (D+3), 26 February 1945

For 26 February, MG Gillem convinced General Simpson that the 84th Division should be relieved of its responsibility for attacking the rear of the Siegfried Line. This mission was given to XVI Corps which sent some units across the ROER in the 84th Division's sector at KOERRENZIG then swung north. The decision was made in order to free the 84th Division for continued rapid advance to the north/northeast while securing the division's left flank. The Corps plan ordered the 102d Division to seize KUECKHOVEN-BELLINGHOVEN and continue the attack to capture ERKELENZ. The 84th was to continue the attack in its zone of action, capture GOLKRATH-HOVEN area and the high ground south of MATZERATH.³⁴

The 334th and 335th Infantry Regiments had by now fought without letup for three days and nights. By pushing forward approximately 5 miles and shifting the advance toward the northeast, the 84th Division forced the enemy to shift units hastily from the north to cover what they perceived to be the main effort. The sudden wheeling motion to the north after the ROER crossing had caused the Germans to displace an important portion of their artillery east of BAAL. They were unable to reposition the guns for 2-3 days because of the constant pressure along the entire front. The battered 183d Division was showing signs of increasing disintegration. Volksturm elements were being committed as replacements for the division, but not as entire units. Many were sent to the front so frantically that they did not know to whom they

were being attached. The number of prisoners taken by the infantry regiments increased as Volksturm units, thrown into the fighting, began to surrender after only slight resistance. Confusion set in among the German ranks and a large scale breakthrough seemed possible.³⁸

On 26 February, the division moved north to cut the east-west road that connected ERKELENZ and GERDERATH. Above this road, the Germans had shifted elements of three different divisions, the 183d, 176th and 338th Divisions. At 1015 hours, I Company of the 3/335 Infantry and a platoon of tanks advanced north from HOUVERATH over 1200 yards of open ground to seize GOLKRATH (see Map 10). The town was reported clear of resistance by noon. Meanwhile, K Company and another tank platoon advanced on the right of I Company and managed to secure HOVEN 25 minutes later. L Company, following I Company in reserve, passed through lead elements at GOLKRATH and continued to press north to cut the main ERKELENZ-GERDERATH road by securing the high ground near a road junction between the towns. Meanwhile, 2/334 Infantry and A/771st Tank Battalion moved from HETZERATH to seize MATZERATH. The battalion encountered no resistance and secured the village. The battalion then continued the advance to cut the ERKELENZ-GERDERATH road in its sector by securing the high ground overlooking a road junction 1800 yards northeast of HOVEN. As shown on Map 11, ERKELENZ was effectively isolated for the XIII Corps main attack that was to be conducted that day by the 102d Division.



MAP 11: Supporting the XIII Corps Attack. The Situation at D+3 (1600 hours, 26 Feb 1945).

When the 84th Division cut the main ERKELENZ-GERDERATH road, it effectively secured the bridgehead line for the river crossing in the division sector. With the bridgehead over the ROER secure, the 84th Division and its higher headquarters could now proceed to attack out of the bridgehead area to conduct its desired rapid advance through the crumbling German defenses. The XIII Corps was now free to plan and conduct operations to destroy enemy forces west of the RHEIN and to secure staging areas for a RHEIN River crossing.

By the evening of 26 February, the obvious disorganization of the enemy and the security of the bridgehead caused the division staff to consider breakthrough and exploitation operations in depth using combined arms task forces to make rapid gains toward the RHEIN. The division had all of the necessary ingredients organic to its structure to form such a combined arms force. The force would utilize speed, power, and flexibility to achieve the desired breakthrough and be capable of conducting sustained operations for up to 2-3 days in the event the rest of the division was held up. Brigadier General Church, the Assistant Division Commander, was designated to lead the force. TF Church was to be composed of the 334th Infantry Regiment, the 771st Tank Battalion, the 326th Field Artillery Battalion, one tank destroyer company, one engineer company, an anti-aircraft battery and required reconnaissance and support elements. Instructions to the Task Force set WEGBERG as the initial objective with the RHEIN as the limit. TF Church crossed the line of departure at MATZERATH at 0700 on 27 February and the breakout/rapid pursuit had begun.³⁴

KEY EVENTS

There are no actions which can be described as turning points in Operation Grenade. However, several factors and events can be described as key. These are:

1. The blowing of the ROER River dams with particular reference to the SCHWAMMENAUDEL and URFT dams on 9 February.
2. The attack of the 84th Infantry Division at a German corps boundary.
3. The decision that the direction of the drive would be to the north and northeast rather than east after crossing the ROER.
4. The rapid seizure of BAAL.

Surprisingly, all key events and factors favored American success, including the blowing of the dams. The discharge valves at the ROER River dams were damaged in such a way that a steady flow calculated to create a long-lasting flood in the valley of the ROER would occur. As a result, the river poured over its banks and inundated the valley floor in the Ninth U.S. Army sector, causing a two week delay in scheduling D-day for Operation Grenade. This action, although apparently a German success proved to be a decisive factor which would eventually lead to the success of the 84th Infantry Division. Four events resulting from the flooding are important: buildup of supply bases, preparation for the river crossing, diversion of German reserves, and tactical surprise.

The Ninth Army received a larger buildup of supplies and

equipment in the two week period before the attack than any other army during the war in the European theatre. This buildup resulted in a concentration of artillery tubes and ammunition that was staggering (one artillery piece for every 10 meters of front with two or three times the normal basic load of ammunition on hand). The buildup of other types of ammunition and classes of supply were equally impressive.³⁷ This buildup would not have been nearly as extensive had Operation Grenade begun as scheduled on 10 February. The massive artillery preparation prior to the crossing and effective artillery support of tactical operations on an unlimited basis was decisive in the rapid advance of the 84th Division. Artillery was decisive in the defense of BAAL and DOVEREN against counterattacks on the nights of D-day and D+1, respectively. The availability of ample stocks of food, POL, and ammunition made sustainment of the rapid advance of the 84th Division possible.

Preparation was another key result of the delay caused by the flooding. Staff planning as well as tactical and logistical plans for the operation were thorough, detailed, well coordinated and proved effective when executed. Planning in such detail would not have been possible without the delay. In addition, the soldiers were thoroughly trained in all aspects of the river crossing, each man in the assault regiment participating in at least six full rehearsals prior to the operation. Only two rehearsals had been executed prior to the original D-day. The result of this preparation was almost flawless execution on the part of the assault forces. This is perhaps the key factor in the

success of the risky one-battalion-front tactics used for crossing the river.

The flooding and the delay in the crossing also affected the commitment of the German reserve divisions. The delay made it possible for the Germans to divert two divisions from German Army Group B reserves north to Army Group H in response to the British and Canadian offensive (Operation Veritable) in the Army Group H sector. The result was that the Ninth Army's massive attack faced an enemy with only limited reserves available to counter success in the crossing operation. As a commentator from the German High Command (OKW) historical section stated

"...as units arrived...they were thrown into various crisis points in a piecemeal fashion; since crisis points developed more rapidly than reserves arrived, the enemy breakthrough widened quickly in areas which were not reinforced."30

The German forces in the 84th Division sector received limited reinforcements. Only the weak 338th Division was committed in the north at ERKELENZ, which was eventually taken by the 102d Division rather than the 84th. Consequently, only reconstituted front line units and the limited tactical reserves available to the 183d Division and XII SS Corps faced the 84th Division.

Tactical surprise, at least with respect to timing, was not possible prior to the flooding of the ROER Valley because the Germans expected the Ninth Army to attack across the ROER River as soon as its

dams were seized intact by the Allies.³⁹ Because the Germans destroyed the discharge valves at the dams in such a way that a long-lasting flood would be created in the valley, they did not expect an attack there until the flooding had subsided and the ground in the flood plain had dried to permit vehicular traffic. However, General Simpson decided to attack on 23 February before the flooding had subsided. This decision, coupled with several false artillery preparations prior to 23 February, enabled the Ninth Army to achieve tactical and limited operational surprise in the crossing operation.⁴⁰

The ability of the 84th Division to attack astride a Corps boundary contributed to the success of the crossing. The 84th Division crossed the ROER River at the extreme northern edge of the LXXXI Corps and 59th Volksgrenadier Division sector. Although the 84th Division's after action report claims that LINNICH was a heavily defended sector that received much German attention, German documents reveal that they expected the main attack near DUEREN or JUELICH, farther to the south. Consequently, the corps boundary was placed just north of LINNICH.⁴¹ Once the initial defenses of the 59th Division were breached, XII SS and LXXXI Corps were split and remained out of contact for two days. German coordination of the fight against the 84th Infantry Division was greatly complicated by the corps boundary.

The decision to attack in a north and northeast direction after crossing the ROER River seems a brilliant decision in retrospect. It had a decisive effect on the outcome of the battle. After splitting

the two German corps by penetrating the 59th Division's initial defenses, the 84th Division was positioned on the southern flanks of the weakened 183d Volksgrenadier Division (attached to XII SS Corps). The division was able to initially roll up the 183d VGD with its lead battalion, the 1st Battalion, 334th Infantry. The battalion engaged unit after unit from the flank in a piecemeal fashion. RURICH, KOERRENZIG and BAAL were seized in this way. Even after the Germans reacted to the 84th Division advance and oriented their defense to the south, the northward attack had an additional impact. Ninth Army units were successfully attacking simultaneously to the east and the north. Rapid advances were achieved in all directions. This caused great difficulty for German commanders to maintain contact between units that were being pushed in different directions. The result was an expansion of the defensive front of the already overstretched Fifteenth Army. Due to its previously mentioned difficulties, Fifteenth Army was like a brittle old rubber band which had lost its elasticity and could not withstand the pressure to expand. Consequently, it snapped and the 84th Division sector was where the first break occurred.

The rapid seizure of BAAL a full day ahead of schedule was also key. Had American forces paused in RURICH waiting for tanks to cross the ROER River (which did not happen until late on D+1), German units might have had time to prepare defenses. In addition, the Ninth Army and XIII Corps headquarters would not have been aware of the weakness of German defenses in the XII SS Corps sector. The rapid

seizure of BAAL by the 3d Battalion, 334th Infantry against token resistance was the result of a decision to continue the vigorous attacks to the north. The XIII Corps commander, MG Gillem, reacted swiftly to this unexpected success and made sure that XVI orders were changed so that the 84th Division could continue its rapid advance rather than be bogged down securing crossing sites or attacking the rear of the Siegfried Line in the XVI Corps sector.

German commanders on the other hand, did not react well to the 84th Division attack. As late as the evening of 24 February, the Fifteenth Army commander thought (or hoped) that the XIII Corps effort was a supporting attack.⁴² The absence of sufficient reserves meant that only the 338th Volksgrenadier Division could be deployed to ERKELENZ to secure what they expected to be the Corps objective. This ineffective response on the part of German commanders was primarily due to the lack of adequate reserves and the severe shortages of fuel and transport.⁴³

The seizure of BAAL and the subsequent cutting of the ERKELENZ-GERDERATH road completely unhinged the German defense. On 27 February, the 102d Infantry Division captured ERKELENZ, finding it practically deserted. The defensive efforts of the 338th Division were "so weak as to be hardly apparent."⁴⁴ When the 84th seized the ERKELENZ-GERDERATH road north of MATZERATH, the city of ERKELENZ was isolated. This action securely established the bridgehead east of the ROER. The American commanders were ready to exploit the advantages offered by control of ERKELENZ. The German High Command was unable to

respond.

THE OUTCOME

The ROER River crossing was an unqualified American victory. The river was crossed, objectives were seized, and the bridgehead was established, all events occurring ahead of schedule and with minimal casualties. Many factors concerning American forces were important determinants of the outcome.

Most units in the 84th Infantry Division were at close to 100% strength in personnel prior to the attack. Morale in the 84th Division was high, and the division was superbly prepared for the river crossing and subsequent operations. Personnel strength during operations prior to Grenade remained high, as the division received almost 200 more replacements than it suffered in casualties during the month of February.⁴⁵ Railsplitter units were experienced, cohesive fighting forces that contained veterans of the fight for the Siegfried line and the Ardennes counteroffensive. Leadership was also battle tested and very competent from squad leaders through division commander. The division was a strong unit in every aspect of personnel strength.

By this time in the European campaign, the American Army and the 84th Division were very effectively organized for combined arms operations. Integrated weapons and unit mixes, and cross attachment

and task forcing were common operations. Other combat multipliers were expertly integrated into battle plans at all unit levels. The decision to make the division river crossing on a one-battalion front violated current doctrine but seems to have been dictated by the circumstances. The crossing site north of LINNICH was the only location in the division sector where the ROER River had stayed within its banks. At other potential crossing sites, the river had swollen to form lakes 400-1000 meters in width, making a crossing at these locations very hazardous. In light of the ultimate success of the operation, this decision seems justified.

One of the keys to success of the river crossing on such a narrow front was the extensive training which resulted in almost flawless execution. Reaction to unforeseen circumstances on the part of soldiers and leaders alike was rapid and efficient. Another factor was very detailed staff planning and traffic control that enabled the 84th to cross all its units and equipment at one site without creating mass confusion. The effective use of smoke and artillery was also a factor. Many soldiers involved in this river crossing could not remember being fired upon due to the massive artillery preparation and suppression and use of smoke on the near and far banks. Tactical deception also contributed to success. Prisoners reported that massive artillery preparations on 21-22 February, which were not followed by assaults gave German defenders a false sense of security.⁴⁴

General Koechling, the LXXXI Corps commander stated in mid-February that prisoner reports and radio intercepts had alerted

Germans that the Ninth Army main effort was in his sector. He also claimed that he knew the crossing sites would be LINNICH, JUELICH, and DUEREN. He further stated that he expected the attack at LINNICH to be directed toward the road center at ERKELENZ. However, from the reaction of the 183d Division to the 84th attack on its flanks at KOERRENZIG, RURICH and BAAL, it does not appear that Koechling communicated this vital intelligence estimate to General Croseman, XII SS Corps commander on his northern flank. If he did pass this information, Croseman did not react. In either case, this indicated very poor coordination between XII SS and LXXXI Corps.⁴⁷

The Ninth Army's buildup of supplies and equipment was truly remarkable. In one five-day period (10-14 February), 40,000 long tons of supplies were received by the Army. "By D-day of Grenade, the Army had accumulated over 3 million gallons of gasoline (10 days supply), and had amassed 46,000 tons of ammunition (20 days of supply)."⁴⁸ Logistical support remained excellent throughout the operation. This overwhelming superiority in every category of supply and equipment proved one of many decisive factors leading to American victory.

A final factor in determining the outcome of the battle was luck. Good fortune was involved when the ROER River dams were not taken and the discharge valves were destroyed causing a two week delay. As discussed earlier, this delay proved decisive for future American operations, saving lives and probably time in the drive to the RHEIN. The selection of the crossing site at LINNICH was based on

the flooded ROER valley but also coincided with a corps boundary. Why the Germans allowed this key crossing site to fall so close to their corps boundary is uncertain. However, it is clear that the Fifteenth Army commander expected the major U.S. effort to come in the vicinity of JUELICH or DUEREN and a supporting attack at LINNICH.⁴⁷

Such light resistance was not expected by the American XIII Corps and division commanders but in part explains the rapid success of the crossing despite the battalion-size front with single crossing site. Infantry commanders at all levels were waiting for significant armor counterattacks in the area. Armor was expected to be positioned around KOERRENZIG or RURICH. Attacks by armor forces could have caused the 84th Division serious problems, in light of delays in deploying American armor to the east bank until late on D+1.

The German situation was the exact opposite of the American in almost every respect. German units had been retreating since the end of the Ardennes offensive and were in generally poor shape. German combat units were between 67-75% strength. Artillery elements averaged no more than 67% strength. The German units were poorly trained and composed of low quality soldiers. In addition, Volksturm, or home guard soldiers had been taken out of their units and sent to the front as replacements. This occurred, in particular, in 183d Division.⁴⁸ General von Zangen claimed that these replacements infected units to which they were assigned with an "unwillingness to fight."⁴⁹ Battle accounts from the 84th Division confirm this point as units reported significant increases in prisoners from all

regiments of the 183d Division as soon as Volksturm replacements were introduced.⁸² Another problem was the pervading sense of imminent defeat that gripped the German defenders after the Ardennes offensive. In reference to the ROER crossing, General Koechling stated that "already during all subsequent battles, most of the troops were guided by self preservation."⁸² Leaders at all levels from army group down were affected by a suspicion that the war was lost. General Koechling commented that "staffs and responsible commanders conducted the battle in accordance with methods which might be described as 'driving with slack reins' and conserving the substance!"⁸³

The German supply situation was also very poor. Although the ammunition supply to LXXXI Corps at the time of the ROER crossing had been significantly improved, only about 1-1/2 basic loads were available within the Corps. This included ammunition already issued to units. In American units, at least two and usually three basic loads of ammunition were issued and in artillery units positioned at the guns. Fuel was also in short supply causing "the use of horse-drawn vehicles and restrictions of all motoring." After the American attacks "whenever battalions or motorized units (especially tanks) were employed too late and failed, it was partly due to lack of fuel." Weapons were at 67% within LXXXI Corps. This seems to have been the case throughout Fifteenth Army.⁸⁴

German defensive tactics in the war were characterized by flexible positional defense and rapid counterattack. The execution of

the tactics was seriously hampered by the problems and weaknesses mentioned above. In addition, the directive from the German High Command to hold every town and defensive position at all costs wasted combat power and hampered the flexibility and initiative of German commanders at all levels. General von Zangen is very explicit in his condemnation of that directive, and his attitude reflects the that of most German leaders at Army level and below. It had a devastating effect on German defense of the ROER.⁹⁵ General Koechling's comments above indicate that the directive was probably not followed at lower levels, but it clearly had a decisive effect on Army and Army Group defensive planning.

Casualties were a minor problem for the 84th Infantry Division during Operation Grenade. Casualty rates were low, and casualty evacuation procedures had developed to a high degree of efficiency in the European Theatre. On the German side, casualties were also well handled, despite supply and transportation problems. General Koechling reports that

"The medical service continued to work well (after) 23 February (up to 150 casualties per division per day). Neither the enemy air force nor the lack of fuel were able to affect the transportation of the wounded and their further care. Doctors as well as medical corps personnel untiringly continued fulfilling their difficult tasks".⁹⁶

The American objective to cross the ROER River and advance rapidly to the north to create maximum disruption of enemy defenses to

the limits of endurance of troops and equipment were fully accomplished in Operation Grenade and afterward. The 84th Division struck deeper and faster with fewer losses than expected. German defenses were considered quite unsatisfactory by their leaders at all levels. American commanders, perceiving these German weakness, pressed the attack with vigor in the north, securing and consolidating the bridgehead for the ensuing breakout.

NOTES

¹After Action Report: February 1945, ETO XIII Corps, 11 March 1945. p. 2. (XIII Corps AAR)

²After Action Report, XIII Corps Artillery, 11 March 1945, p. 3. (XIII Corps Arty AAR)

³After Action Report: Action Against the Enemy; February 1945, 84th Infantry Division, 15 March 1945. p. 19. (84th Div AAR)

⁴General der Infanterie Friedrich Koechling, Defensive Combat of the LXXXI Armeekorps During the Period 25 Jan - 13 Apr 45, MS# B-576, undated, pp. 33-34.

⁵Charles MacDonald, The Last Offensive, United States Army in World War II, Washington, D.C.: Office of the Chief of Military History, 1973. p. 139.

⁶Ibid., p. 139.

⁷Koechling, op. cit., p. 9.

⁸MacDonald, op. cit., p. 142.

⁹Ibid.

¹⁰The description of events of the 84th Division crossing are drawn from the following three sources:

LTC Charles R. Measey, "Roer River Crossing at Linnich, Germany", Armored Cavalry Journal, Vol. VII, No. 3, May-Jun 48, pp. 54-56.

Theodore Draper, The 84th Infantry Division in the Battle for Germany, New York, The Viking Press, 1946, pp. 143-148.

84th Division AAR, op. cit., pp. 6-25.

¹¹Draper, op. cit., pp. 145-149.

¹²Ibid., p. 149.

¹³Ibid., p. 150.

¹⁴Generalleutnant Walter Poppe, 59th Infantry Division, (2 December 44 - 28 February 45), undated, MS# B-152, pp. 10-11 and Koechling, op. cit., pp. 3, 30-32.

¹⁵84th Div AAR, op. cit., p. 24.

- ¹⁴General der Infanterie Gustav von Zangen, Abwehrkaempfe an Roer und Rhein, Teil VI (Part VI), 12 January 1948, MS# B-812, pp. 1-2.
- ¹⁷Draper, op. cit., pp. 150-151.
- ¹⁸Generalmajor Wolf Ewert, The Engagements of the 338th INF DIV in the Rhineland., Part II, MS# B-531, p. 2.
- ¹⁹Draper, op. cit., p. 152.
- ²⁰Von Zangen (Part VI), op. cit., p. 2.
- ²¹Draper, op. cit., pp. 153-154.
- ²²Ibid., p. 155.
- ²³XIII Corps AAR. pp. 4-5.
- ²⁴Draper, op. cit., pp. 156-159.
- ²⁵Ewert, op. cit., p. 2.
- ²⁶Von Zangen (Part VI), op. cit., pp. 2-3.
- ²⁷Ewert, op. cit., pp. 2-3.
- ²⁸Von Zangen (Part VI), op. cit., pp. 3-5.
- ²⁹XIII Corps AAR, op. cit., p. 6.
- ³⁰Draper, op. cit., pp. 156-157.
- ³¹Ibid., p. 158.
- ³²Ibid., p. 159.
- ³³Von Zangen (Part VI), op. cit., pp. 13-14.
- ³⁴XIII Corps AAR, op. cit., p. 7.
- ³⁵84th Div AAR, op. cit., pp. 28-30.
- ³⁶Ibid., pp. 30-32.
- ³⁷MacDonald, op. cit., p. 137.
- ³⁸General der Infanterie Gustav von Zangen, Abwehrkaempfe an Roer und Rhein, Teil I-V (Part I-V), 12 January 1948, MS# B-811, p. u.

³⁹Ibid., p. 62.

⁴⁰This is in spite of the fact that the German command had determined the location and many of the details of the operation in mid February from prisoners of war and radio intercepts. However, the information was obtained from prisoners captured prior to 21 February when the date for the attack was set. (Koechling, op. cit., p. 30)

⁴¹Von Zangen (Part I-V) op. cit., pp. r-s.

⁴²Von Zangen (Part VI) op. cit., p. 6.

⁴³Koechling, op. cit., p. 6.

⁴⁴MacDonald, op. cit., p. 167.

⁴⁵84th Div AAR, op. cit., Annex I.

⁴⁶Ibid., p. 20.

⁴⁷Koechling, op. cit., p. 31.

⁴⁸MacDonald, op. cit., p. 137.

⁴⁹Von Zangen, op. cit., (Part V), pp. 6, 13.

⁵⁰Draper, op. cit., p. 159.; von Zangen, op. cit., p. 81.

⁵¹Von Zangen (Part VI) op. cit., p. 70. The word he used was "Kampfunwilligkeit."

⁵²Draper, op. cit., p. 159.

⁵³Koechling, op. cit., p. 25.

⁵⁴Ibid., pp. 3-6.

⁵⁵Von Zangen (Part VI) op. cit., pp. 79, u.

⁵⁶Koechling, op. cit., p. 9.

SECTION 5

THE SIGNIFICANCE OF THE ACTION

Immediate Significance

The battle following the crossing of the ROER was decisive in that it allowed the Ninth Army to make a rapid approach to the RHEIN River. German divisions were rendered combat ineffective through attrition and all their attempts at reconstitution failed through lack of centralized organization. The main reason for success of Operation Grenade was the sheer strength of the Allied offensive. Linked with that was the deteriorating condition of the German Army defending the western front. Units were suffering from heavy losses in materiel and experienced soldiers. The foolhardiness of the German High Command's decision for a rigid defense of the Rhineland instead of falling back to the natural defense of the RHEIN River resulted in the loss of thousands of German soldiers. When the bridges over the RHEIN had to be blown to halt rapid Allied advance from the ROER bridgeheads, these soldiers were trapped with no possible escape route. Senior German commanders discussed the creation of stronger mobile reserves at the expense of the ROER River defenses but this idea was rejected because the use of such forces in counter-thrusts required well trained and equipped troops, which were not available. In addition, the lack of

air superiority made the chance of success of such an undertaking unlikely. The net result was a lack of purpose all along the front with reserves being spread too thinly to meet all emergencies. In fact, Army Group B's Fifteenth Army (General von Zangen) was faced with an almost complete lack of reserves. Virtually this entire force was thrown into the front lines to stem the expected American initial assault. When Operation Grenade jumped off, Army Group B controlled only the weakened 9th and 11th Panzer Divisions.¹ German aerial reconnaissance had detected evidence of Allied troop movement and prepositioning of bridging equipment prior to 23 February. German intelligence also accurately predicted that XIII Corps would support the Ninth Army main effort. However, Fifteenth Army was unprepared to handle six division-size attacks that were, for all practical purposes, major efforts in sector. The movement of German reserves was complicated by the actions of the XXIX Tactical Air Command, strengthened to five fighter-bomber groups, which successfully attacked communications west of the RHEIN. 9000 aircraft took part in Operation Clarion on 22 February from bases in England, France, Holland, Belgium and Italy. This operation isolated the battlefield with the aim of disrupting transportation facilities. It was particularly effective on the German railway system, reducing traffic by 90 per cent.

The immediate effect that the Ninth Army's success had on the war was to cause General Schlemm's First Fallschirmjager Army to the north to send two armored and one infantry division south in March,

1945 in order to prop up the Fifteenth Army. This had the effect of weakening Schlemm's Army so much that he was forced by the British to withdraw towards the RHEIN. It is ironical that these reinforcements did nothing to relieve the broken Fifteenth Army. What then followed was almost a rout of disorganized and poorly coordinated German troops to positions east of the RHEIN. From an American point of view it was the first time in two months that any progress had been made in the war, and the successful crossing of the ROER probably had as much of a positive impact on morale as it had a negative impact on German morale. The Germans suffered very heavy losses of about 50,000 men in the first few days of the battle. The effect of U.S. and Allied successes further isolated Hitler and the High Command in Berlin from the generals at the front. Hitler persisted in giving orders which appeared to be irrational and in some cases they were ignored, an indication of the increasing frustration on the part of commanders at the front.

With regard to the strategic objectives of the two sides, it was clear to von Runstedt that the Allies were preparing to carry out the offensive they had been forced to postpone because of the Ardennes offensive. He knew that he had to protect the industrial resources of the SAAR and RUHR for as long as possible, and that he could not retire to the security of the east bank of the RHEIN. The effect of the battle was, therefore, to deny the Germans the strategic value of defense west of the RHEIN.

It had been decided that the Allied effort should eliminate

Germany's industrial heartland. Allied strategy was to concentrate maximum effort on securing crossings over the RHEIN on favorable terrain north of the RUHR. In the first phase of this plan, the Ninth and First U.S. Armies would attack across the ROER River between JUELICH and DUEREN with the Ninth Army heading for NEUSS on the RHEIN, and then advance north to meet the British troops pushing south. This objective was accomplished by 2 March. By 11 March, the west bank of the RHEIN, north of the MOSELLE, had been freed of German forces. The weakness of German opposition was largely the reason for the speed with which the Ninth Army achieved their objective.

The success of Ninth Army's operation contributed to the overall collapse of the German forces. The operation, as a whole, effectively took twenty-five divisions out of the German order of battle. The immediate advantage gained by the battle of the ROER occurred when Allied forces secured a strong foothold on the east bank of the river. There was then little the disorganized German forces could do but fall back to the RHEIN.

Following the defeat on the ROER River, the Germans were faced with a strategic disadvantage that allowed the Allies to make headway towards the industrial heartland of the RUHR. This failure to hold was contrary to the frantic order Hitler had given to his commanders, accompanied by his threats to have them executed in light of failure. This only served to make the German position worse. Some forces put up a meagre defense, despite the knowledge that casualties would be high and defeat certain.

Long-Term Significance

The success of Operation Grenade was instrumental in achieving the long-term objectives of the Allied Forces. The rapidity with which the U.S. Ninth Army was able to cross the ROER River coupled with the surprising direction of the main effort accelerated the Allies ability to get to and subsequently forge a crossing over the RHEIN River. Initially, the attack to the north from the Ninth Army bridgehead was thought by the Germans to be a secondary effort aimed at securing the road center around ERKELENZ. The commander of the Fifteenth Army, General von Zangen, thought that the U.S. main effort in his sector would be directed eastward toward the RHEIN in the vicinity of COLOGNE. The German High Command's insistence that the First Parachute and Fifteenth Armies hold west of the RHEIN cost large quantities of materiel and heavy losses in manpower. At the beginning of Operation Grenade, both of these armies had been the most significant German forces in the Western zone. Their defeat west of the RHEIN River meant an end to anything resembling reserves in the West. The success of Operation Grenade caused the German Army to lose the advantage provided by the RHEIN River for the protection of the German heartland. On numerous occasions, Hitler denied requests from his field commanders to send divisions east of the RHEIN in order to begin preparations for defenses at that major obstacle. Hitler's decision to risk troops on the wrong side of the river severely limited the German armies' capability of defending the RHEIN and supporting an integrated

defensive posture in the West.

The success of Operation Grenade coupled with the other attacks in the West placed the German Army in a position from which it was almost impossible to recover. The rapidity of the attack, once initiated, left significant numbers of Germans west of the RHEIN. Many of these forces were cut off by the northern direction of attack. As a result, the Germans had to wait until the last possible minute to destroy the bridges over the RHEIN. The capture of the REMAGEN bridge to the south of the Operation Grenade area was facilitated by the success of Ninth Army and advanced the invasion timetable by several weeks.

Operation Grenade also had a significant detrimental effect on the morale of the German soldier for this battle caused him to see the futility of resistance, especially after large numbers of German units were cut off and destroyed west of the RHEIN. The rapid advance of Allied forces to this river, facilitated by Operation Grenade, served to accelerate Hitler's use of a "scorched earth" policy. This practice had a debilitating effect on the fighting morale of the German soldier.

Operation Grenade did not decide the outcome of the war. However, it certainly contributed to an earlier conclusion of the war in the West than was otherwise anticipated. The success of the operation caused severe German losses west of the RHEIN. It was a detriment to morale, and the battle losses lessened the ability of the Germans to prepare a defense line along the RHEIN River. A final result of the

battle was a weakening of the German ability to defend the critical RUHR industrial area and subsequently the heartland of Germany.

Military Lessons Learned

Operation Grenade displayed a number of significant military lessons. Both sides in the battle learned. However, it was generally too late in the war for German combat units to capitalize on lessons learned.

Lessons from the American side were:

1. Use of Available Time. The 84th Infantry Division made maximum use of time available. The delay caused by the destruction of the discharge valves on the ROER River dams was capitalized upon by the 84th Infantry Division. The period of 10 February until D-day on 23 February was used extensively for planning, training, and the buildup of supplies. A training site was located which allowed the lead battalions to rehearse the river crossing exactly as it would occur on the ROER. Each battalion was able to conduct six rehearsals of all phases of the crossing under realistic conditions. It was especially critical that training and rehearsals were conducted jointly with engineer and infantry troops.

2. Detailed Planning. The 84th Infantry Division's detailed planning for the operation was, in retrospect, exceptionally effective. Several key factors in the plan point out critical lessons:

a. The selection of the crossing site was key. The selected crossing site had only 400 yards of unprotected ground prior to the river compared to over 1000 yards elsewhere. Even though the river was running higher than normal, it was still within its banks at LINNICH. The crossing was conducted on a very narrow front of one battalion width. These factors combined with conducting the crossing at night to reduce troop exposure to enemy fire. The narrow sector also increased the effectiveness of the artillery preparation.

b. The division plan made exceptional use of deception. First, the plan called for extensive artillery preparations on the two nights prior to the actual crossing. These preparations deceived the defenders on the night of the actual crossing. Second, the division's plan to attack to the north and northeast after crossing the ROER was a far reaching deception operation. The attack to the north not only deceived the Germans as to the true location of the main effort, but also caused the defenders to fight from unprepared positions. The 84th Infantry Division very quickly began to attack the flank of the weakest patch of

German defense.

3. The actual conduct of the river crossing brought out the following points:

a. Prior to the crossing site, it was critical to have an effective traffic control system. The proper marking of unit vehicles was essential to allow positive identification and control.

b. It was essential to have smoke available to support the crossing site. Smoke was found to be most effective when it was immediately available and directly responsive to the crossing site commander.

c. The crossing of the ROER by the 84th Infantry Division was delayed and hampered by the lack of some elementary protection to the infantry foot bridges. Protective cables upstream from the bridges would have precluded the damage caused by runaway boats and flotsam from upstream.

4. Tactical Lessons. The 84th Infantry Division's actions upon crossing the ROER also point out several tactical lessons:

a. Aggressive action was critical. The immediate move by

the lead battalion, 1/334 Infantry, to attack RURICH and BAAL was instrumental in seizing the initial bridgehead. This attack was carried out in the absence of the other two regiments and a supporting battalion which had been delayed at the crossing area.

b. The 84th Infantry Division continued its violent attack without letup. The enemy command and control apparatus was so disrupted that enemy forces were often ordered to move to locations which were already occupied by 84th Division units.

c. The 84th Infantry Division's quick creation of Task Force CHURCH to conduct independent combined arms operations was crucial in the division's ability to breakout of the bridgehead on 27 February (D+4).

d. The division's willingness to accept reasonable risk was also of note. On numerous occasions, the 84th Division could have avoided risks by waiting to continue the attack until flanks were secured. Risking exposed flanks and continuing the attack served to constantly keep the enemy off balance. The enemy was not allowed the opportunity to regroup or organize his defenses.

The German forces opposing Operation Grenade were faced with the

following limiting factors: lack of available forces, insufficient logistics support (particularly artillery ammunition), the drawing off of its reserves to the north to counter the 1st Canadian Army's thrust, and a restrictive command apparatus. Given the limiting factors faced by the German commanders, two significant points are apparent in retrospect. First, when faced with a situation like the ROER River defense, with a significant obstacle to the immediate rear, a planned delaying action back to the major obstacle would probably have been the most effective tactic. This was especially true since the defending force was clearly outmanned and outgunned. The German High Command would not permit this prudent course of action. Second, fighting outnumbered caused the commander's requirements for information to increase dramatically. The German commanders in Operation Grenade were faced with two information problems. First, the tactical situation caused inherent difficulties in obtaining accurate information. Second, personal "command by the Fuehrer" adversely affected the decision making capability of German commanders. In effect, German field commanders were not provided with the overall picture and were consequently forced to make tactical decisions without adequate information.

The lessons learned from Operation Grenade are important at two levels, tactical and political. The lessons demonstrated by both sides are applicable today. Field commanders must be permitted to operate within broad guidelines in accordance with their training and experience and to use their initiative when possible.

NOTES

¹Joseph Balkoski, "The Battle for the Rhineland 23 Feb - 5 May 45," Strategy and Tactics 84 (Jan/Feb 81): 11

Appendix 1: Composition of the 84th U.S. Infantry Division on 23
February 1945*

-ORGANIC UNITS-

333d Infantry Regiment
334th Infantry Regiment
335th Infantry Regiment
325th Field Artillery Battalion
326th Field Artillery Battalion
327th Field Artillery Battalion
909th Field Artillery Battalion
309th Engineer (C) Battalion
309th Medical Battalion
784th Ordnance Light Maintenance Company
84th Reconnaissance Troop, Mechanized
84th Quartermaster Company
84th Signal Company

-ATTACHED UNITS-

95th Infantry Division Artillery
280th Field Artillery Battalion
557th Anti-Aircraft Artillery Battalion
638th Tank Destroyer Battalion
771st Tank Battalion
Companies C and D, 3d Chemical Mortar Battalion
Troop C, 36th Cavalry Reconnaissance Squadron,
Mechanized (detached 230900 Feb 1945)
74th Chemical Smoke Generating Company

*Source - 84th Division After Action Report, February 1945,
15 Mar 1945, p. 5.

Appendix 2: The Use of ULTRA During the ROER Crossing Campaign

"ULTRA" was the codeword applied to intelligence material derived from the breaking of high level German code/cipher systems during World War II. The intelligence work was initially performed at Bletchley Park, U.K., by the Government Code and Cipher School. The U.S. was first given access to this intelligence in 1942, and then indoctrinated in the codebreaking techniques being used. By 1945, ULTRA intelligence was being produced by cryptanalysts at both Bletchley Park and Arlington Hall, outside of Washington, D.C.

No matter the source, ULTRA material was disseminated only to army and higher headquarters. It was provided to a few indoctrinated personnel, then destroyed after use. The result is that no field logs are available to indicate which message was received at a designated headquarters, and if the specific intelligence received influenced operations. Primary source material does, however, provide a record of all messages transmitted from Bletchley Park. The recently declassified after action reports of the Special Security Officers (SSO's) supporting the army (and higher) headquarters give an indication of how ULTRA material was used at a specific headquarters.

In addition to ULTRA, Signals Intelligence was obtained from the exploitation of medium and low grade German code systems by the Signals Radio Intelligence companies assigned to army group and army,

and the Signal Service companies assigned to each corps. Specific reference is made to the 3258th Signal Service Company as being subordinate to XIII Corps,¹ but no further information (to include intelligence produced) is available. If procedures used in other armies were followed by Ninth Army, compartmented SIGINT was sanitized, and forwarded in G2 estimates as air reconnaissance, or "PW-obtained" material.

After action comments of the Ninth Army SSO indicate that ULTRA material was extensively used by the G2 in the preparation of all intelligence estimates, and briefed separately to the commanding general and indoctrinated members of the staff on a daily basis.² Problems did occur in the handling of ULTRA traffic on several occasions. The chief problem was incorporating ULTRA material into G2 estimates without providing suitable cover.³

Interestingly, the SSO makes reference to problems within the Ninth Army G2 section, which led to the relief of the G2, Colonel Bixel, immediately prior to Operation Grenade. Specific problems cited by the SSO were lack of organization in the G2 section, a lack of training, and an inability to perform multi-source analysis.⁴ This latter deficiency had a direct bearing on ULTRA's operational use. Without a plausible multiple source picture of the enemy, it was difficult to provide the cover required for the release of ULTRA material to non-indoctrinated personnel. ULTRA provided remarkable insight into German command intentions, as well as movement and

positioning of reserves. An over reliance on front line reporting by lower echelons as a primary intelligence source limited the ability of the Allied command to release ULTRA intelligence, since it contained information not generated by front line reports. This limited the ability of the Ninth Army to disseminate information about troop movements in the enemy rear area.

The relatively static front along the ROER River for the three weeks preceding D-day gave ample time for ULTRA material to be included in the overall planning for Operation Grenade. The Panzer Lehr Division was identified in the German area of operations five days before it appeared between EUSKIRCHEN and BRUEHL. Its subsequent reassignment to Army Group H on 19 February was reported on 22 February. All division sectors identified in the XII SS and LXXXI Corps zones had been traced by the beginning of the operation. Evidence forecasting the arrival of the 9th and 11th Panzer Divisions to the east of DUEREN and ERKELENZ came in shortly before the offensive began on 23 February.^a The pattern of movement of German units clearly presented the German anticipation of an Allied attack across the ROER, but an inability to do much to thwart it.

Other specific items of interest for Operation Grenade gained from ULTRA intercepts include:

14 February. German Order of Battle reports on 14 February indicated major unit dispositions of XII SS and LXXXI Corps to include the intercorps boundary.^b This is particularly significant because

the 84th Infantry Division sector straddles this major boundary.

17 February. Luftwaffe aerial reconnaissance was scheduled for the LINNICH-JUELICH-DUEREN area as early as 17 February and at least every other day thereafter. A report on 22 February⁷ indicated Allied positions southwest of JUELICH, vicinity of KOSLAR and Route 1, were heavily smoked when approaching reconnaissance aircraft were detected. Vehicle columns with bridging material and unit assembly areas were detected opposite what would later be the crossing sites of the 29th Infantry Division. This corresponds with previous Allied deception operations on the nights of 20-21 February and 21-22 February.

17 February. The complete German Order of Battle to include strength reports of the Fifth Panzer Army and positioning of reserve elements was available on 17 February.⁸

17 February. As early as 17 February,⁹ the Germans were projecting the main Allied effort to be in the ALDENHOVEN - JUELICH (29th Infantry Division) sector with supporting attacks vicinity of LINNICH (84th and 102d Division sectors). Bridging units and trucks were accurately located. Eight U.S. divisions were noted as being shifted into the DUEREN area.¹⁰ These deployments were estimated to be complete by 19 February, when a decrease in engine noise and movement was reported.¹¹ German intelligence sources, particularly German signal intelligence units, had detected the narrowing of the Ninth Army front as early as 13 February, but were still confused on 19 February as to the exact tactical

disposition because of the reassignment of Ninth Army elements to the First Army.¹² The weakening of the EIFEL sector to strengthen the forces in the AACHEN area was reported on 20 February.¹³

20 February. Allied intelligence was aware the shifting of command and control headquarters between the Fifth and Fifteenth Armies was in progress on 20 February and would continue through 22 February.¹⁴

14 February. The Panzer Lehr Division was suspected of being subordinated to Army Group B as early as 16 February.¹⁵ Its arrival between EUSKIRCHE and BRUEHL was reported by ULTRA analysts on 18 February.¹⁶ However, Army Group B reserves were revealed to be depleted when an intercepted CinC West situation report on 19 February indicated that the 116th Panzer Division had departed the Army Group B area of operation, and that the Panzer Lehr Division was being reassigned to Army Group H. To compensate for these losses, the 11th Panzer Division was being subordinated to 15th Army as part of the Army Group B reserve.¹⁷ However, this division was previously noted as being reorganized to a strength below that of a standard 1944 Panzer Division.¹⁸ The division was in the process of moving (18 February) to an assembly area in WICKRATH, southeast of MOENCHEN-GLADBACH. In addition, the 9th Panzer Division was moving to assembly areas behind the forward elements at VII Panzer Corps vicinity of ERP. The same situation report continues to provide a German forecast of the ROER River flood state and the remaining water levels in the Erft and Schwammenauel Dams.¹⁹

21 February. Apparently in response to U.S. deception efforts during the night of 20-21 February,²⁰ and in anticipation of an attack, German air strikes were ordered for 1830 hours 21 February for troop concentrations and assembly areas in the vicinity of ALDENHOVEN.²¹ Strikes were also ordered for 1430 hours on 22 February,²² but later cancelled due to bad weather.²³

23 February. The German perception of the Allied attacks was first indicated in a German Air Force ground activity summary which gave their forward trace as of first light on 23 February.²⁴ At 1330 hours on 23 February, an unspecified German authority described the Allied attacks in the VALDROP and OBERBRUCH areas, in the XIV US Corps sector. The report commented on specific success in the vicinity of HILFRATH-BAAL-RURICH. Reserves were being ordered into this sector.²⁵ At 1600 hours on 23 February, close air support was requested for a planned counterattack during the evening hours of 23 February against the bridgehead north of LINNICH. The message also indicated that TETZ had been retaken by German forces.²⁶ A German intelligence summary for 23 February provided a summary of Allied activity in the Fifth Army sector giving a picture of confusion and a lack of intelligence.²⁷

23 February. By 1830 hours on 23 February, the situation in the LXXXI Corps sector had deteriorated to the extent that the defender could only hold if reserves could be brought up. Ground forces needed have Luftwaffe protection to counter Allied air support in the area. Further, Allied attacks were anticipated during the night of 23-24

February to expand initial U.S. successes. The message then provided a German front line trace between JUELICH and DUEREN, effective 1800 hours, 23 February.²⁸

24 February. Urgent calls for reconnaissance support were issued to ascertain the main Allied effort in the sector and to locate reserve forces.²⁹ Close air support was called on crossing sites for the night of 24 February.³⁰

24 February. An unspecified German headquarters intelligence summary anticipated a strong U.S. attack in the BAAL-RURICH sector, as well as increased attacks to the northwest, presumably in the XVI Corps sector. The 79th Infantry Division was specified as being located in the KARKEN area.³¹

24 February. A flurry of messages were transmitted on 24 February, but not decoded until 25 and 26 February. They reveal the full seriousness of the situation and the commitment of the 9th and 11th Panzer Divisions, which proved to be insufficient to stop the U.S. penetrations along the HILFRATH-JUELICH line.³² Finally, the Panzer Lehr Division was ordered into the sector but did not arrive until 27 February. By then, U.S. success was assured.

ULTRA MESSAGES COVERING THE ROER RIVER OPERATION

The ULTRA document reference file created by the Public Records Office (PRO) in England was published without editorial interference except for the addition of microfilm reel numbers, a required copyright notice, and a brief inventory at the beginning of each reel. The ULTRA messages are further sequenced by serial number, PRO reference and Date Time Group (DTG) of each message. The linkage, here, is that serial numbers were assigned in ascending order based on DTG of each message; messages were subsequently batched in groups of 250 and each batch was assigned a PBO Reference Number.

It should be noted that reel/PBO reference/serial numbers are cataloging aids assigned by postwar historians. The message DTGs and the message reference number found in the first line of the header data on each message were original assignments by Betchley Park prior to actual transmission. The DTG indicates neither time of intercept nor consumer receipt. In fact, there is no way to know if a given headquarters received any one message. ULTRA was provided to army and higher headquarters based on area of interest. Due to security reasons, no logs were kept by the field SSO's nor was any mention permitted in G2 logs.

For a multipage message, an individual PBO serial was assigned for each page, and as each page also had a separate transmission DTG, the only commonality is the original message reference number.

Multipage messages pertaining to ROER operations are grouped below under a single sequence number.

	<u>REEL/PBO REF/SERIAL</u>	<u>MESSAGE REF</u>	<u>DTG</u>
1.	62/507/443		132338/2/45
2.	62/507/261	BT4849	142101Z/2/45
	62/507/262	BT4849	142106Z/2/45
3.	62/507/24	BT4989	162147Z/2/45
4.	62/507/23	BT4990	162151Z/2/45
5.	62/508/361	BT5010	170846Z/2/45
	62/508/362	BT5010	170851Z/2/45
6.	62/508/344	BT5022	171354Z/2/45
	62/508/345	BT5022	171359Z/2/45
7.	62/508/328	BT5031	171613Z/2/45
	62/508/329	BT5031	171618Z/2/45
	62/508/330	BT5031	171623Z/2/45
	62/508/331	BT5031	171628Z/2/45
	62/508/332	BT5031	171633Z/2/45
8.	62/508/306	BT5047	172153Z/2/45
9.	62/508/280	BT5060	180048Z/2/45
10.	62/508/276	BT5064	180131Z/2/45
11.	62/508/265	BT5074	180732Z/2/45
12.	62/508/204	BT5110	181819Z/2/45
13.	62/508/189	BT5120	182021Z/2/45
14.	62/508/137	BT5163	191235Z/2/45
15.	62/508/114	BT5173	191524Z/2/45
16.	62/508/108	BT5178	191652Z/2/45
	62/508/109	BT5178	191657Z/2/45
17.	62/508/96	BT5188	191826Z/2/45
	62/508/97	BT5188	191831Z/2/45
18.	62/508/83	BT5194	192053Z/2/45
	62/508/84	BT5194	192055Z/2/45
	62/508/85	BT5194	192057Z/2/45
	62/508/86	BT5194	192059Z/2/45
	62/508/87	BT5194	192101Z/2/45
19.	62/508/77	BT5197	192124Z/2/45
	62/508/78	BT5197	192127Z/2/45
20.	62/508/25	BT5233	191348Z/2/45
	62/508/26	BT5233	201352Z/2/45

	<u>REEL/PBO REF/SERIAL</u>	<u>MESSAGE REF</u>	<u>DTG</u>
21.	62/508/376	BT5254	201727Z/2/45
	62/508/377	BT5254	201732Z/2/45
	62/508/378	BT5254	201737Z/2/45
22.	62/508/365	BT5263	202103Z/2/45
	62/508/366	BT5263	202108Z/2/45
23.	62/508/346	BT5274	202217Z/2/45
	62/508/347	BT5274	202222Z/2/45
24.	62/508/310	BT5301	210505Z/2/45
25.	62/509/213	BT5355	212234Z/2/45
	62/509/214	BT5355	212239Z/2/45
26.	62/509/190	BT5369	220139Z/2/45
	62/509/191	BT5369	220144Z/2/45
	62/509/192	BT5369	220149Z/2/45
27.	62/509/180	BT5373	220413Z/2/45
	62/509/181	BT5373	220418Z/2/45
	62/509/182	BT5373	220423Z/2/45
	62/509/183	BT5373	220428Z/2/45
	62/509/184	BT5373	220433Z/2/45
28.	62/509/174	BT5376	220436Z/2/45
	62/509/175	BT5376	220441Z/2/45
	62/509/176	BT5376	220446Z/2/45
29.	62/509/168	BT5381	220631Z/2/45
	62/509/169	BT5381	220636Z/2/45
30.	62/509/145	BT5398	221421Z/2/45
	62/509/146	BT5398	221425Z/2/45
31.	62/509/121	BT5417	221815Z/2/45
32.	62/509/116	BT5420	221957Z/2/45
33.	62/509/110	BT5425	222054Z/2/45
34.	62/509/105	BT5428	222131Z/2/45
	62/509/106	BT5428	222136Z/2/45
	62/509/107	BT5428	222141Z/2/45
35.	62/509/97	BT5434	222226Z/2/45
	62/509/98	BT5434	222231Z/2/45
36.	62/509/81	BT5445	230003Z/2/45
37.	62/509/60	BT5458	230531Z/2/45
38.	62/509/58	BT5460	230528Z/2/45
39.	62/509/55	BT5462	230618Z/2/45
	62/509/56	BT5462	230623Z/2/45
40.	62/509/39	BT5474	231255Z/2/45
41.	62/509/35	BT5476	231321Z/2/45
42.	63/510/376	BT5504	231810Z/2/45
	63/510/377	BT5504	231815Z/2/45
43.	63/510/371	BT5506	231955Z/2/45
	63/510/372	BT5506	232005Z/2/45
	63/510/373	BT5506	232010Z/2/45
	63/510/374	BT5506	232015Z/2/45

	<u>REEL/PBO REF/SERIAL</u>	<u>MESSAGE REF</u>	<u>DTG</u>
44.	63/510/367	BT5507	232225Z/2/45
	63/510/368	BT5507	232230Z/2/45
	63/510/369	BT5507	232235Z/2/45
	63/510/370	BT5507	232240Z/2/45
45.	63/510/342	BT5521	232159Z/2/45
46.	63/510/360	BT5523	232157Z/2/45
47.	63/510/319	BT5534	232344Z/2/45
	63/510/320	BT5534	232347Z/2/45
48.	63/510/337	BT5525	240028Z/2/45
	63/510/338	BT5525	240033Z/2/45
49.	63/510/295	BT5553	240635Z/2/45
50.	63/510/285	BT5558	240827Z/2/45
51.	63/510/280	BT5562	241153Z/2/45
	63/510/281	BT5562	241158Z/2/45
	63/510/282	BT5562	241203Z/2/45
52.	63/510/252	BT5586	241614Z/2/45
53.	63/510/236	BT5596	241905Z/2/45
54.	63/510/225	BT5602	241924Z/2/45
55.	63/510/120	BT5677	251607Z/2/45
56.	63/511/343	BT5777	262206Z/2/45
	63/511/344	BT5777	262211Z/2/45
	63/511/345	BT5777	262216Z/2/45
57.	63/511/214	BT5868	271813Z/2/45
	63/511/215	BT5868	271818Z/2/45
	63/511/216	BT5868	271823Z/2/45
58.	63/511/162	BT5902	280307Z/2/45

NOTES

¹Histories of Radio Intelligence Units, ETO, Sept 1944 to March 1945, SRH-228, Vol II, pp. 42-43.

²Reports by US Army ULTRA Representatives with Army Field Commands in the ETO. SRH-023, Part I, p. 28.

³Ibid., p. 29.

⁴Ibid.

⁵Ralph Bennett, ULTRA in the West (New York, Scribner's Sons, 1979), p. 235.

⁶Appendix A, message 2.

⁷Ibid., message 30.

⁸Ibid., message 7.

⁹Ibid., message 8.

¹⁰Ibid., message 12.

¹¹Ibid., message 16.

¹²Ibid., message 17.

¹³Ibid., message 21.

¹⁴Ibid., message 22.

¹⁵Ibid., messages 2 and 3.

¹⁶Ibid., message 9.

¹⁷Ibid., message 26.

¹⁸Ibid., message 24.

¹⁹Ibid., message 26.

²⁰Hqs. 84th Infantry Division After Action Report. 15 March 1945, p. 20.

²¹Appendix A, message 29.

²²Ibid., message 31.

- ²³Ibid., message 36.
- ²⁴Ibid., message 40.
- ²⁵Ibid., message 45.
- ²⁶Ibid., message 46.
- ²⁷Ibid., message 47.
- ²⁸Ibid., message 48.
- ²⁹Ibid., messages 50, 51, and 52.
- ³⁰Ibid., message 54.
- ³¹Ibid., message 53.
- ³²Ibid., messages 55, 56, and 57.
- ³³Ibid., messages 57 and 58.

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