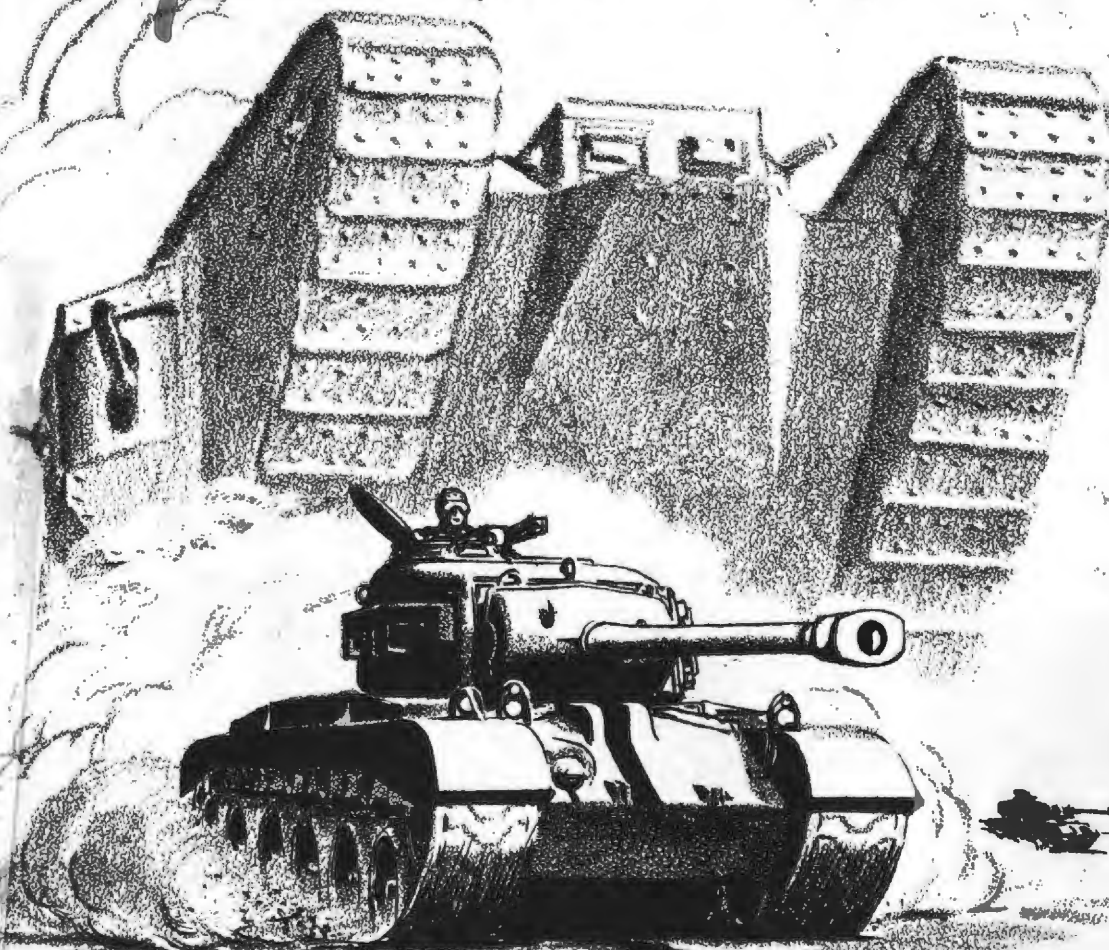


# Armor in OPERATION GRENADE (2d Armd Div)

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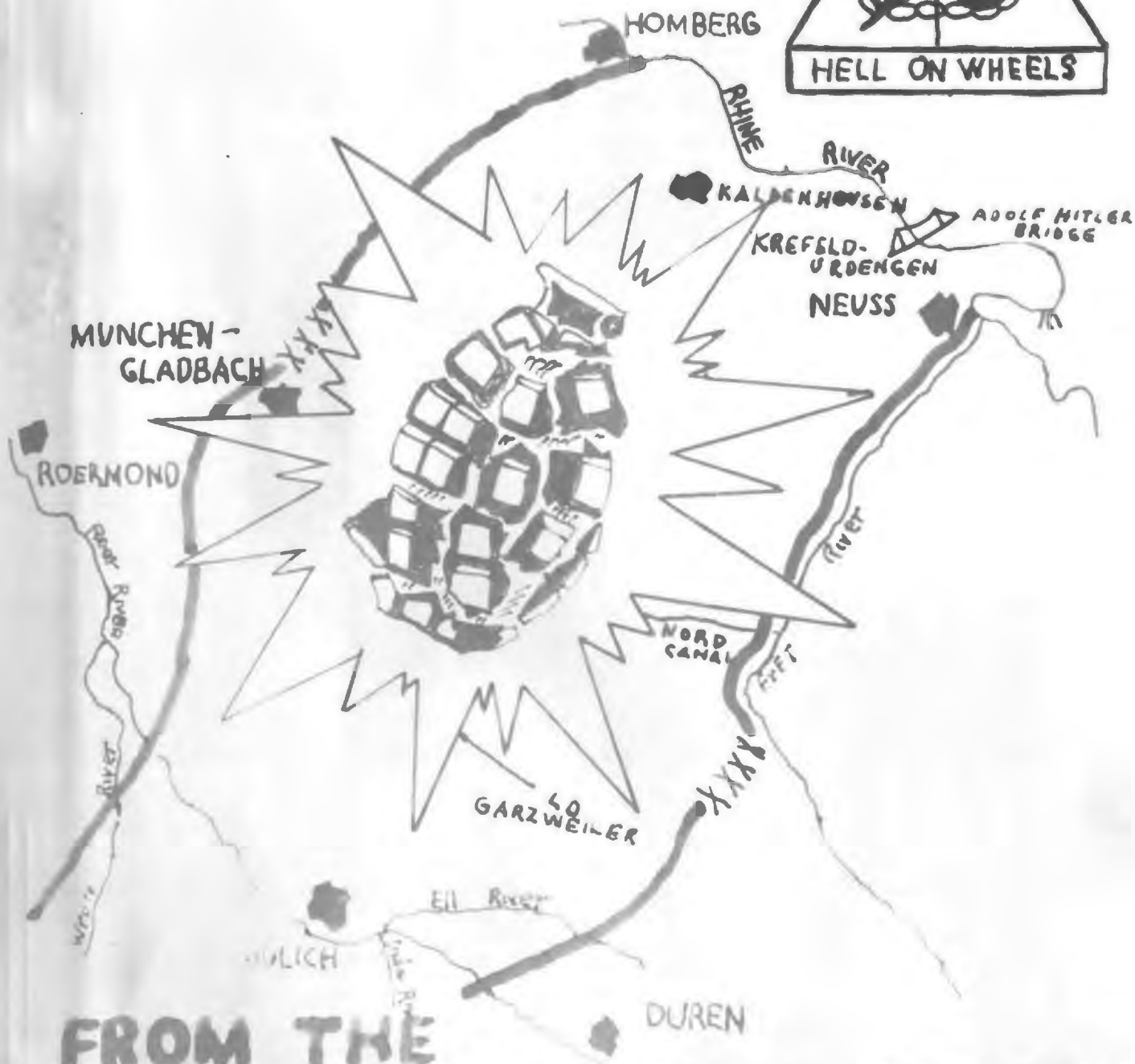


**A RESEARCH REPORT**

Prepared at  
**THE ARMORED SCHOOL**  
Fort Knox Kentucky  
1949 - 1950

e-501202

# OPERATION GRENADE



FROM THE  
ROER TO THE RHINE



Major General Isaac J. White - 1945



ARMOR IN OPERATION GRENADE  
(2d ARMORED DIVISION)

A RESEARCH REPORT PREPARED

BY

COMMITTEE 12, OFFICERS ADVANCED COURSE

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1949 - 1950

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MAY 1950

## PREFACE

The purpose of this study is to show the employment of armor in Operation GRENADE.

To cover adequately even a few examples of armored exploits during the war in Europe is a major task - so much so that the Department of the Army has seen fit to form for this purpose a special staff of the Historical Division, composed of highly trained individuals. The combined effort of these able technicians has by no means completed this assignment, even to the extent of having the end in sight. Literally thousands of reports, interviews and details have been studied. Comparisons must be made and analyzed, checked and rechecked, before evaluations and conclusions can be drawn. Putting the material together in useable form, in itself, is an assignment that will not be completed in the near future.

Because of these difficulties, our report is limited to the action of one unit - specifically the action of the 2d Armored Division during the period 23 February - 5 March 1945. The action discussed involves a comprehensive study of the preparation, operation and employment of the 2d Armored Division during this period. It covers the Division initially in Corps reserve when the operation commenced, then passing through the infantry, and finally carrying out the exploitation phase from the ROER River to the RHINE River. This was known as Operation GRENADE in the European Theater of Operations.

Included is a narrative of events, coupled with an analysis of the over-all employment, to determine from the action itself the

lessons learned and the conclusions to be drawn.

Reference material is limited. Chief sources have been After Action Reports and Unit Histories of the 2d Armored Division; Conquer, the Story of the Ninth Army; and General Eisenhower's Crusade in Europe. We were fortunate in being able to contact several former members of the 2d Armored Division and through their recollections were able to piece together important facts that would have otherwise been lost. Grateful acknowledgment is given to these individuals.

Only time and space limits this paragraph in its acknowledgment of the magnificent job performed by the 2d Armored Division in its major contribution toward victory in Europe.

Committee No. 12



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## CHAPTER 1

### THE BIG PICTURE.



The day had finally arrived. It was 0245 on the 23 of February 1945 and the artillery of the Ninth Army supplemented by those of the British Second Army on the north and the American First Army on the south began laying down its preparation on the eastern shore of the ROER River.<sup>1</sup> This preparation lasted 45 minutes and extended from ROERMOND on the north and continued south along a 105-mile front to DUREN. Over 1,000 guns were used by the Ninth Army alone, so great was this artillery bombardment. It was under this fire cover that the leading infantry elements pushed their assault boats into the flood waters of the ROER River, and established on the eastern shore a bridgehead through which the 2d Armored Division was to follow. Operation GRENADE had begun and this operation was to break the back of the German Army in the next few weeks as the Germans were destroyed or pushed back to the eastern shore of the RHINE. Since Operation GRENADE was one of a number of special operations planned by the Supreme Allied Headquarters, it behooves the military student to look into the problems, plans, considerations and conditions which brought about Operation GRENADE and her sister operations, that is, VERITABLE, VARSITY, PLUNDER, and LUMBERJACK. This study will briefly show how the above mentioned operations fit into the big picture. However, it is the intent of this document to specifically bring out the 2d Armored Division's part in the XIX Corps operation from the ROER to the RHINE River.

Edwin S. H. 10 2-4-45

Revised 8-14-45



**DEVELOPMENTS**  
 DURING THE PERIOD  
 7 FEB - 1 APR 1945

 PLANNED OPERATIONS  
 SUBSEQUENT DEVELOPMENTS  
 (SCHEMATIC)

## The Basic Concept<sup>2</sup>

It was the Supreme Commander's intention to cross the RHINE and envelop the RUHR with the main effort on the north. This intention was confirmed in a series of commander's conferences and staff discussions which took place both before and immediately following the German counter-offensive in the ARDENNES. The master concept of operations to cross the RHINE and envelop the RUHR was developed thereafter in a series of component plans which covered three phases: closing to the RHINE, crossing the RHINE, and enveloping the RUHR Valley.

### Component Plans

Closing to the RHINE. Upon the conclusion of the ARDENNES campaign, it was estimated that the Allies had no marked superiority over the Germans in ground force strength. To free the maximum number of divisions for offensive operations, therefore, it was considered essential to establish the remainder of the Allied forces along key terrain features that could be defended strongly by comparatively few troops. Obviously, the RHINE would be the most effective barrier which could be turned to the advantage of the Allies for this purpose. Consequently, in summarizing on 20 January his plans for advancing into Germany, the Supreme Commander announced the intention to close his forces to the RHINE along its length before advancing east of the river. At most, the enemy would be permitted to retain west of the RHINE only small bridgeheads incapable of supporting a major counter stroke against the Allies. The following steps were visualized for the accomplishment of this task:

- a. The initial attack was to be made by Twenty-first Army

Group, with US Ninth Army under its operational control. The Ninth Army had under its control the 2d Armored Division. Previously, the 2d Armored Division had been fighting with the Twelfth Army Group in the ARDENNES Campaign. While the Second British Army exerted pressure frontally in the center, the First Canadian Army on the left was to sweep in a southeasterly arc between the MAAS and the RHINE River from the vicinity of NIJMEGEN to the GELDERN - XANTEN area (Operation VERITABLE).<sup>3</sup> This drive was to be complemented by a Ninth Army advance on the right in a northeastward direction across the ROER River to meet the Canadian forces at MORS and to close along the RHINE from DUSSELFORF to WESEL (Operation GRENADE).<sup>4</sup>

b. At the same time, Twelfth Army Group was to secure the ROER dams and attack on its left across the ROER River to protect Twenty-first Army Group's south flank during the GRENADE advance. Throughout the remainder of its front, Twelfth Army Group was to assume an aggressive defense generally along the existing front line.<sup>5</sup> Upon the completion of Twenty-first Army Group's advance to the RHINE, Twelfth Army Group was to resume the offensive and, with the means then available, to close to the RHINE in its zone of the MOSELLE (Operation LUMBERJACK).<sup>6</sup>

c. While the Army Groups to the north were successively engaged in offensives to close to the RHINE, Sixth Army Group was to remain generally on the defensive and was to be on Twelfth Army Group's right flank.

Crossing the RHINE. a. In keeping with the intention to make the main effort north of the RUHR, plans were made for an assault crossing of the RHINE by Twenty-first Army Group, with US Ninth Army

under its operational control, in the WESEL - EMMERICH area (Operation PLUNDER). Airborne forces, dropping behind the enemy positions on the east bank of the river, were to assist the ground assault forces (Operation VARSITY).

It was intended that this operation should be carried out with the maximum possible strength that could be supported logistically. To reinforce Twenty-first Army Group, the Supreme Commander directed that Twelfth Army Group be prepared to build up US Ninth Army to a strength of twelve divisions. It was at this point that the 2d Armored Division was placed under the control of the Ninth Army.

b. It was also proposed that Twelfth Army Group contribute forces to Sixth Army Group in order to accelerate its advance across the PALATINATE. In these circumstances, Twelfth Army Group would likely be limited to containing COLOGNE and BONN, possibly crossing the RHINE in that area after the enemy in its front had been forced to withdraw because of developments in the north and south.

c. With regard to the employment of Sixth Army Group during this period, it was visualized that the creation of a threat to the FRANKFURT industrial area would form a useful diversion in support of Twenty-first Army Group's assault across the RHINE. General Eisenhower considered that by restricting Allied action between the RUHR and the Swiss frontier to the defensive in all but the SAAR area, it would be possible to make this demonstration strong enough to constitute the beginning of an Allied secondary effort.

Enveloping the RUHR. Prior to the ARDENNES operation, a proposal had been made that the RUHR be isolated by a double envelopment

with the main effort (Twenty-first Army Group and US Ninth Army) along the northern edge of this area and a complementary advance by US First Army along the general axis COLOGNE - HAMM. The Supreme Commander's staff suggested in late December that the RUHR be isolated by complementing the northern drive with air action to disrupt the southern and eastern exits of the RUHR. However, General Eisenhower indicated his hope that it might be possible to carry out a double envelopment with a wider sweep in the south along the natural corridor FRANKFURT - KASSEL. This maneuver would circumvent the rugged terrain east of COLOGNE and would be a speedier means of accomplishing the complete isolation of the RUHR. Since a definite commitment would have to await an estimate of the situation closer to the time for initiating operations east of the RHINE, no decision was made at this stage of the planning.

Summary. The master plan and component schemes of maneuver reviewed above thus contemplated:

- a. A strong effort across the RHINE and north of the RUHR by Twenty-first Army Group, with the reinforced US Ninth Army under its operational control.
- b. A diversionary effort in the SAAR to threaten the FRANKFURT area, by Sixth Army Group, which would also be reinforced with forces drawn from the central front.
- c. Containing action and feints along the west bank of the RHINE by Twelfth Army Group.
- d. Subsequent operations, east of the RHINE, as determined by developments. An assault crossing in the MANNHEIM - MAINZ area and an advance up the FRANKFURT corridor, if possible, would be welcome



contributions to the success of the main effort in the north.

### Factors Influencing The Adoption Of The Plans

Enemy situation. The strength of the German forces opposing the Allies had been reduced by recent developments. The ARDENNES campaign had cost the enemy 120,000 men and much materiel.<sup>7</sup> Relying again upon the defensive value of the SIEGFRIED Line, the German High Command had thereafter transferred 15 divisions to the Eastern Front, including the Sixth Panzer Army.<sup>8</sup> Nevertheless, the German situation with regard to ground forces was still a cause for concern on the part of the Supreme Commander. In late January, the 71 divisions of the Allies were confronted by 80 German divisions. Although many of the latter were seriously depleted in both men and materiel, the enemy's combat strength was not considered markedly inferior to that of the Allies. Moreover, should the Russian winter offensive weaken and the Germans carry out a partial withdrawal from Northern Italy, an additional 20 enemy divisions might be diverted to the Western Front. These possibilities could not be ignored.

Terrain. Consideration of the several natural obstacles facing the Allies at the time supported the plan to make the strong effort on the north.

a. Before emerging into the COLOGNE plain, US First Army would be required to clear the dense HURTGEN Forest and to seize the ROER River dams. While these reservoirs remained in German hands, the possibility of artificially created floods would deter any Allied advance across the ROER Valley. US Third Army and Sixth Army Group were still engaged in the SIEGFRIED positions; the former would have subsequently to negotiate

the difficult terrain extending to the RHINE along its front, the latter still would be separated from the Middle RHINE by the broad expanse of the PALATINATE. Despite the industrial and built-up sections which were to be found in the north, this area seemed best suited for immediate exploitation.

b. East of the RHINE, the North German Plain was considered to offer the terrain best suited for resumption of the mobile-type warfare which favored the Allies. It was recognized that the region embraced an intricate drainage system which, by timely demolition of dikes and bridges, the enemy could use to slow an Allied advance. A rapid drive by the Allies, however, might deny to the Germans this capability. It was felt, moreover, that the network of highways which served the North German Plain would provide greater freedom of maneuver than that offered by the narrow corridor leading northeast from FRANKFURT, the only other natural route of advance into Central Germany.

c. It was nevertheless apparent that a strong secondary effort in the FRANKFURT area would be desirable. With the SAAR over-run by the Allies, this region would constitute an industrial zone second in importance in Western Germany only to the RUHR. Allied thrusts in that direction would pin down enemy forces which might otherwise be shifted northward to strengthen the RUHR defenses. In trying to hold both vital regions, the enemy would expose himself to possible defeat in detail, since the rugged terrain separating the two areas tended to isolate them from each other.

Own forces. In January, when plans were being prepared in detail, the Allied forces amounted to 71 divisions, of which several were

understrength as a result of the ARDENNES Campaign. This figure would rise to 85 in March, including six airborne divisions.

The German onslaught in the ARDENNES and the Allied contraction had affected primarily Twelfth Army Group. However, Sixth Army Group had been reduced in effectiveness by transfer of forces to the affected area and by the extension of its zone northward.<sup>9</sup> While Twenty-first Army Group had diverted the efforts of US Ninth Army and a reinforced corps of five divisions to oppose the German drive, the Group as a whole had been less arduously employed during December than the two US Army Groups. It was considered, therefore, to be the logical force to undertake the next major Allied effort.

Logistical factors. Rail capacity and the overall availability of supplies, including ammunition, had steadily improved. Railheads in the north were close behind the front lines and not far distant from the RHINE River; rehabilitation had progressed so well that little time would be required to extend lines to the RHINE when the areas were cleared. Railheads in the center and the south were also close behind the front lines but still at considerable distance from the RHINE River; the rehabilitation of the rail lines through the general area of SAARBRUCKEN to the RHINE would require some time.

#### Air Force Considerations

Enemy situation. The continuous Allied effort against the enemy's production of fighter aircraft and fuel was showing its effect. In addition, it was believed that a part of the remaining German fighter strength had recently been shifted to the Eastern Front. Some of his new jet planes would continue to operate in the west but the superiority

of the Allies was considered incontestable.

Own forces. Air Force disposition would permit a greater tactical air effort in the north than in the south. To strengthen an effort in the south, additional airfields would have to be developed around METZ to accommodate US Ninth Air Force groups currently based north of the ARDENNES.

Conclusion. Based upon the existing situation, it was felt that the Twenty-first Army Group area was the most logical area to conduct an offense. The terrain and disposition of the enemy pointed to a successful exploitation by the Allied Forces east of the ROER River.<sup>10</sup> It became evident that a river crossing would have to be accomplished and a bridgehead established by infantry units. However, it was felt that after the bridgehead had been secured, the full capabilities of armor could be exploited, thus launching the exploitation phase of the campaign. Since armor was to play a major role in Operation GRENADE, it was natural that the 2d Armored Division would drive deep into enemy-held territory to secure the west bank of the RHINE River.

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#### NOTES FOR CHAPTER 1

<sup>1</sup> Conquer, History of The Ninth Army, Apr. 1947 (Washington: Infantry Journal Press)

<sup>2</sup> Strategy of the Campaign in Western Europe-1944-1945, Ch 4.

<sup>3</sup> 21 AGP Operation Order; 21 Jan 45

<sup>4</sup> Ibid; pp 3-7

<sup>5</sup> 12 AGP Letters of Instructions Nov. 15 \_ 16; 7 Feb & 3 Mar 45

<sup>6</sup> 21 AGP Operations Order; 9 Mar 45

<sup>7</sup>12 AGP G-2 After Action Report Destruction of German Armies  
In The West; Ch VIII

<sup>8</sup>Ibid; pp 2-10

<sup>9</sup>Third US Army After Action Report; Vol. I, Ch 8, P 244

<sup>10</sup>Crusade in Europe, Dwight D. Eisenhower, Publisher--Doubleday  
& Co. Inc., 1948, Garden City, N. Y.

## CHAPTER 2

### HISTORY OF THE 2d ARMORED DIVISION

No study of an operation is complete without a general knowledge of the background of the participating units. To understand thoroughly and to appreciate the reasons for the particular actions of the 2d Armored Division in Operation GRENADE, it is necessary that the reader be familiar with its history.

Activation and early training. This division was activated on 15 July 1940, at FORT BENNING, Georgia. Elements of the Division were drawn from various units already activated throughout the United States. After assembling at Fort Benning, and being redesignated as integral parts of the 2d Armored Division, an intensive training program was initiated under the direction of Brigadier General Charles L. Scott, the Division Commander. Later, when General Scott assumed command of the First Armored Corps in September 1940, Brigadier General George S. Patton, Jr., was placed in command of the Division.

In the spring of 1941, with the arrival of selectees and new equipment, General Patton vigorously emphasized the training program. At the completion of this phase, in June, the Division made its debut in the Second Army Maneuvers in Tennessee. In this series of maneuvers, the Division earned its title of "Hell on Wheels". It also participated in the Third Army Maneuvers in Louisiana and in the First Army Maneuvers in North and South Carolina in 1941.

The blitzkrieg tactics employed by the Germans in 1939 and 1940 had been observed and studied and the information gained therefrom,

along with the experience and knowledge gained in the intensive maneuvers, resulted in the armored divisions being organized into more flexible tactical units. It was decided to reorganize them into two combat commands each, the combat commands operating under direct control of the division commander, or, if the situation dictated, of acting independently.

In January 1942, Brigadier General Willis D. Crittenger assumed command of the Division, succeeding Major General Patton, who became commander of the First Armored Corps.

The Division spent most of 1942 on maneuvers and amphibious operations in the **CHESAPEAKE-FORT BRAGG**, North Carolina area. Maneuvers included landing, establishing beachheads, enlarging the beachheads to permit landing operations, followed by the seizure of inland objectives. Both officers and enlisted men at this stage of training realized the nearness of the time of actual fighting and they seemed to know that the more thorough the training, the fewer the casualties. This training was supervised mostly by Major General Ernest N. Harmon, who replaced General Crittenger as division commander in July.

Movement overseas and first combat. Early in September 1942, three invasion teams were selected from units within the Division. Organization of these teams was carried out with the greatest secrecy. To prevent leakage of information of the movement, equipment, and training, these units were moved to separate bivouac areas on the Fort Bragg reservation, placed under strict surveillance, and unobtrusively shipped out one by one, destination--North Africa.

Some twenty eight months after activation, tanks of the 2d Armored Division went into action for the first time. On November 8, 1942 tanks led the assault at three key points on the long coast of FRENCH MOROCCO. This was the beginning of the campaign that eventually smashed the Axis in North Africa. The invasion was divided into three task forces. The Western Task Force was given the mission of capturing CASABLANCA, and all of FRENCH MOROCCO. The Center Task Force was to have ORAN as its objective, while the Eastern Task Force was assigned the mission of capturing ALGIERS.

Major General Patton, commanding general of the Western Task Force, ordered the 2d Armored Division to move on CASABLANCA. This was the first action of the Division in World War II, and one which gave recognition to the "Hell on Wheels" Division. All of French Morocco capitulated before the Division reached CASABLANCA, thereby completing the mission of the Western Task Force. The 2d Armored Division played no part in the conquest of ORAN or ALGIERS, but was held near CASABLANCA in the FORET DE MAMORA. (Cork Forest).

The landings in North Africa were of inestimable value to Allied strategy, and in addition were vitally important as "test runs" for future invasions. Lessons learned under actual conditions, at the cost of men and materiel, were to prove invaluable for future operations in Sicily and Europe. Armored vehicle lighters proved to be impracticable because of their tendency to become unmanageable and to upset in heavy surf. Several men and vehicles were lost in this manner, and, as a result, the lighters were replaced by LST's (Landing Ship Tank) in later invasions. It was found that the shallow draft LST could land



great numbers of tanks and their crews directly onto the beaches, whereas the lighters carried only one or two at a time. It was further found that the use of comparatively few large landing craft minimized the disorganization which was inevitable when a number of smaller craft were used.

After the armistice with the French in North Africa, the 2d Armored Division established itself for an additional training period in the FORET DE MAMORA (Cork Forest) near CASABLANCA. The remaining elements of the Division which had been left in the States had shipped from New York in the meantime, and were joined with the invasion teams on 6 January 1943.

While in the CORK FOREST, the Division was engaged in a renewed training program. It was also given the additional mission of guarding the French Moroccan-Spanish Moroccan border. The 2d Armored Division did not participate in the Tunisian Campaign, but furnished about two thousand highly trained officers and men as replacements for the 1st Armored Division in TUNISIA. On 6 April 1943, Brigadier General Allen Kingman assumed command of the 2d Armored Division, succeeding Major General Harmon, who was given command of the 1st Armored Division. Major General Hugh J. Gaffey later replaced General Kingman in May 1943, when the latter was assigned to duty with the French.

Early in May 1943, CCA was ordered to ALGERIA. Tanks and men were moved by rail, and halftracks and wheeled vehicles by road convoy. Here the command joined the Fifth Army Invasion Training Center. At the Invasion Center the troops were schooled in every phase of waterborne invasion, to include the loading of vehicles, firing of weapons,

anti-aircraft practice, and assault and consolidation of beachheads.

Shortly after completing invasion training, CCA, under the command of Colonel Maurice Rose, was attached to the 3rd Infantry Division and alerted for movement to TUNISIA. Upon arrival in TUNISIA CCA immediately resumed training for a water-borne invasion. Officers and men were given the opportunity to familiarize themselves with captured German equipment and vehicles. Meantime, the remainder of the Division, now in ALGERIA prepared for the water-borne invasion of SICILY.

The Sicilian Campaign. The second amphibious assault by the 2d Armored Division was the invasion of SICILY. Landing craft, carrying elements of the Division, left ALGERIA on 24 June 1943. Due to convoy requirements, these elements of the landing force did not rendezvous until D-Day (10 July) off GELA, Sicily. At 1800 hours on D-Day the 41st Armored Infantry Regiment of the 2d Armored Division was set ashore. The 67th Armored Regiment followed soon after, as did the remaining elements of CCA and CCB. During the period 10-23 July, the Division received a great deal of valuable combat experience in SICILY especially small unit tank-infantry action. A major objective was the city of PALERMO, which was occupied on 23 July, after all resistance had been smashed.

With the fall of the city of PALERMO, the 2d Armored Division assembled in bivouac northeast of the city, and units of the Division were assigned the mission of guarding airfields, utilities, ammunition dumps, and other important installations against possible sabotage. As Allied Military Government officials took over these duties, the scattered elements of the Division were assembled and the training

program resumed.

During the latter part of October 1943, the Division was relieved of responsibility for the police of Western Sicily and the city of PALERMO. The unit assembled north of the city of PALERMO and prepared for departure to the UNITED KINGDOM. All vehicles, weapons, and equipment, except individual items were turned in. That part of the Division which did not take part in the invasion of Sicily was still in North Africa, and was preparing to join the parent unit in ENGLAND.

Training for D-Day. The Division embarked on 9-11 November 1943, and landed in the United Kingdom 24-26 November 1943.

After landing in North England, the Division was moved by train to TIDWORTH BARRACKS, in SALISBURY PLAIN, about a hundred miles from LONDON. The unit remained in this location until the invasion of FRANCE.

After the Division received all its necessary equipment, the inevitable training program began, stressing the following points:

1. Qualification of all personnel in individual and crew served weapons.
2. Combined arms combat firing exercises
3. Command Post exercises
4. Small unit problems at the platoon and company level
5. Division tactical maneuvers
6. Intensive Chemical Warfare instruction
7. Instruction in Engineer subjects
8. Night exercises for all infantry and reconnaissance units

Another important feature of this period was the daily parades of the Division, bringing to the personnel the snap and polish that only pride in a good unit can attain. The fact that it was the only armored unit in Europe that had seen combat caused interest in American armor to focus on the division. Prime Minister Churchill, General Eisenhower, General Montgomery, and Air Marshall Tedder were among the many notables

who visited the 2d Armored Division during this period.

In March 1944, General Gaffey was succeeded by Major General Edward H. Brooks, as division commander. Under him, invasion preparation increased in intensity throughout the spring of 1944. As D-Day neared, teamwork and individual efficiency was smoothed out and plans for the Division landing were completed under the strictest secrecy. During the latter part of May, units began to make their final secret moves to ports of embarkation along the southern coast of England. An advance party under Brigadier General Rose crossed the channel with the 9th Infantry Regiment of the 2d Infantry Division and landed on OMAHA BEACH on 7 June 1944. Meanwhile, the Division was loading on the boats which were to transport it to France.

Leading elements of the 2d Armored Division landed on OMAHA BEACH at noon on the 9th of June 1944. By 1700 hours, 10th of June, the Division was committed by the Commanding General, V Corps.

Combat Command B, under the command of Colonel I. D. White, and the Reserve Command under Colonel Sidney R. Hinds, debarked on 12th of June 1944, and moved inland to assembly areas in the vicinity of **LE MINE, LEMOLAY** and **LITTRY**, Normandy.

Combat Command A, led by General Rose, proceeded to the CARENTAN Sector on 12 June 1944, where the 101st Airborne Division had been isolated since D-Day. CCA and elements of the 101st Airborne immediately launched an attack at dawn on the 13th of June and took the unsuspecting enemy completely by surprise. The Germans had not the slightest knowledge of American armor in the vicinity.

During the next fortnight, the Division moved into the vicinity

of BALLERAY, Normandy, where plans and training were maintained and executed at peak efficiency. Local security was stressed and intensive patrolling was conducted. As a result of information received from reconnaissance patrols, General Brooks instituted a rigid training program throughout the Division, stressing hedgerow fighting, demolitions, mines and booby traps, and the means of detection of mines. These lessons were to prove valuable in the "big push" which followed.

The fight across France. On 25th of July, 1944, the Division moved into the VII Corps sector in preparation for the assault that was to crack Germany's ST LO-VIRE River line. CCA jumped off on the 26th of July, pushed through enemy lines north of ST GELLES, captured CANISY and early on the 27th of July, took its initial objective, **LE MESINAL HERMAN**. CCA continued the next day, neutralizing powerful counterattacking forces from the German 2d Panzer Division and the 116th Panzer Division.

The 2d Armored Division received many missions during the Normandy Campaign and it performed all of them admirably.

Between the time of the Normandy Campaign and the beginning of the Von Rundstedt counter-offensive, the "Battle of the Bulge", in December 1944, the Division was engaged almost constantly with the enemy. Many units received awards and citations for extraordinary valor and conduct in crushing the Germans. Major General Harmon returned and assumed command, relieving Major General Brooks on 12 September 1944.

The Battle of the Bulge. As Von Rundstedt launched his winter offensive in the **BELGIAN ARDENNES**, on the 16th of December 1944, the

2d Armored Division was placed on a double alert. A strict anti-airborne defense was established, special protection being provided by the Division for Corps Headquarters in HEERLEN, Holland. The Division had received an emergency order which switched the command from the US Ninth Army to the US First Army on the 2d of December 1944.

With only three hours notice, the entire Division packed up, turned its sector of the ROER River line over to the 29th Infantry Division, and staged an amazing forced march by night on the 21st-22nd of December, from Germany to the vicinity of JUY, Belgium. All combat elements covered the seventy-five miles over strange roads, within twenty-two hours, in spite of a shortage of maps and a minimum of reconnaissance. Von Rundstedt's spearheads were threatening LIEGE, DINANT, and NAMUR at the time. Other enemy units had penetrated within three miles of the MEUSE River at DINANT and were only six miles from the Belgium border at GRUET.

In the five day battle from the 24th of December to the 28th of December, in which "Hell on Wheels" gained the upper hand by unrelenting shock attacks, the division virtually destroyed the German 2d Panzer Division, which had led the enemy's sixty mile westward advance. The American VII Corps summarized the Division's smashing victory as one that may well be remembered as having one of the most far reaching effects of any action of World War II.

From the 29th of December through the remainder of the "Bulge", the 2d Armored Division continued to fulfill vitally important missions. The Division took a heavy toll of the enemy, knocking out many tanks and other vehicles, and capturing numerous prisoners. The losses for

the Division were also heavy; however the greater percentage of these casualties resulted from combat exhaustion, frostbite, and exposure, which was evidence of the most bitter weather and the hardest fighting of the war. General Harmon departed to assume command of the XXII Corps on the 19th of January and Brigadier General I. D. White assumed command of the Division.

The Division assembled during the latter part of January south-east of LIEGE, Belgium, where an extensive rehabilitation program was undertaken to refit the units.

The lull before GRENADE. Early in February, the Division moved secretly to new assembly areas in the GULPEN-AACHEN area, and reverted from control of the US First Army to the US Ninth Army. There a training and maintenance program was conducted in preparation for a new offensive to be launched east of the ROER River. This new operation was to be known as Operation GRENADE.

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#### NOTES FOR CHAPTER 2

Material gathered from:

1. History of the 2nd Armored Division, Albert Love Enterprises, Atlanta Georgia, 1946.
  2. After Action Reports from units of the 2d Armored Division.
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## CHAPTER 3

### THE CORPS ATTACKS

The XIX Corps, under its commander Major General Raymond S. McLain, surged from the breakthrough of the SIEGFRIED Line through the ARDENNES, only to halt abruptly at the ROER River. On the 16th of November, ARMOR (code name for the XIX Corps) started the ARDENNES offensive. This drive came to an abrupt stop when the German Army, attacking well to the south in the ST. VITH-BASTOGNE area, forced such a great penetration as to become a serious threat to the American offensive. During the XIX Corps drive, the 29th, 30th and the 2d Armored Divisions, old partners of previous fighting, together mauled such determined and desperate units as the 3d Panzer Grenadier Division, the 9th Panzer Division, the 15th Panzer Grenadier Division, the 363d Division, and elements of the 116 Panzer Grenadier Division. As an example the 2d Armored Division together with the XIX Corps Artillery and AT units knocked out 118 German tanks.<sup>1,2</sup> The violence of the drive carried General McLain's Corps to the ROER by the 28th of November. At this time there were only a few pockets of resistance still holding out. These were eliminated in a few days of fighting.

The Corps now faced a terrific hurdle. The ROER River, in itself a major obstacle, became more difficult in view of the potential flood threat of the URFTALSPERRE and the SCHWABENAUDEL dams backing up 45,500,000 cubic meters and 65,500,000 cubic meters of water respectively.<sup>3</sup> Should this quantity of water have been released at a time when the Corps was either crossing or across, the effect would have been



disastrous. Of a consequence, ARMOR, chafed at the bit, ready to get under way again, but anxious to hear that the dams had been captured intact. The Germans, knowing full well the threat that was being aimed at them, cleverly blew the discharge valves on the lower dam, then they destroyed the valves on the upper dam at the point where the penstock emerged from the hill downstream. In this way the Germans secured the maximum discharge for the longest time possible. The History of the Ninth Army describes what followed in this way:

Within a few hours after the destruction of the discharge valves, the river rose approximately five feet and attained a width, dependent on the terrain through which it coursed, of from 400 to 1200 yards. The velocity increased to an estimated ten and a half feet a second. This was no flash flood but a long term condition which the Army Engineer forecast would maintain from fourteen to seventeen days. The water stored in the two reservoirs, reinforced by the substantial run off of abnormal rain and snow, was a weapon of great value and was extremely well employed by the German Command.

All the results had been anticipated, since some time earlier one of the Corps military intelligence teams<sup>4</sup> had uncovered a complete plan for the military use of these dams in Aachen. These complete plans enabled the Army Engineer to estimate accurately within a fraction of an hour the runoff time and the duration of the flood stage as well as the optimum time at which a crossing could successfully be made.<sup>5</sup> Now that the dams had been blown and the water once run off, the threat was gone.

A series of postponements followed until on the 20th of February Corps prescribed D Day and H Hour as 0330 on 23 February 1945 (See Annex 1 to Ch. 3). The plan called for the 29th and 30th Infantry Divisions to force the initial crossing of the ROER. This team was to effect a breakthrough. The 2d Armored Division was to be held pending an opportunity to exploit.<sup>6</sup> During this period of preparation, Corps made every

effort to secure surprise. The 30th Division was screened from identification.<sup>7</sup> When the big punch was to be delivered, Corps Artillery, supplemented with the guns of the 83d and 2d Armored Divisions in reserve, had over 500 guns smashing the German lines with four tons of steel in each volley covering an 8000 yard front.<sup>8</sup> The assault bridges were thrown across by 0310 on the 23d. The 30th and 29th Divisions flooded across and by 2300 that night had reached NEIDERZIER on the far side of the HAMBACH Forest. During the second phase the Germans were pushed back so violently they never got a chance even to see the Corps' bridges.<sup>9</sup> The Corps smoke generator companies screened the engineer work so well that by midnight of the 23d the treadway bridges were in and operating.<sup>10</sup> Bitter fighting followed with the German 363d and 9th Panzer Divisions catching the brunt of the infantry assault. On the clearance of STEINSTRASS an organized defensive line no longer existed.<sup>11</sup> Haphazard defenses provided the only resistance. On the 28th, the surge of exploitation was started when the 2d Armored "Hell on Wheels" jumped off on its line of departure at GARZWEILER between the 29th and 30th Divisions. The drive to the RHINE at NEUSS was completed by 2 March 1945.

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### NOTES FOR CHAPTER 3

<sup>1</sup>XIX Corps After Action Report

<sup>2</sup>"The Tomahawk Strikes" (Appendix XIX Corps After Action Report, Publisher: Engineer, XIX Corps)

<sup>3</sup>Conquer, the History of the Ninth Army (Infantry Journal Press, April 1947 Edition) p 161

<sup>4</sup>XIX Corps After Action Report

**THIRD U.S. ARMY**  
**OPERATIONS**  
 XVI Corps      XIX Corps  
 1st AF      1st AF  
 2nd AF      2nd AF  
 3rd AF      3rd AF  
 4th AF      4th AF  
 5th AF      5th AF  
 6th AF      6th AF  
 7th AF      7th AF  
 8th AF      8th AF  
 9th AF      9th AF  
 10th AF      10th AF  
 11th AF      11th AF  
 12th AF      12th AF  
 13th AF      13th AF  
 14th AF      14th AF  
 15th AF      15th AF  
 16th AF      16th AF  
 17th AF      17th AF  
 18th AF      18th AF  
 19th AF      19th AF  
 20th AF      20th AF  
 Army Reserve  
 AFHQ

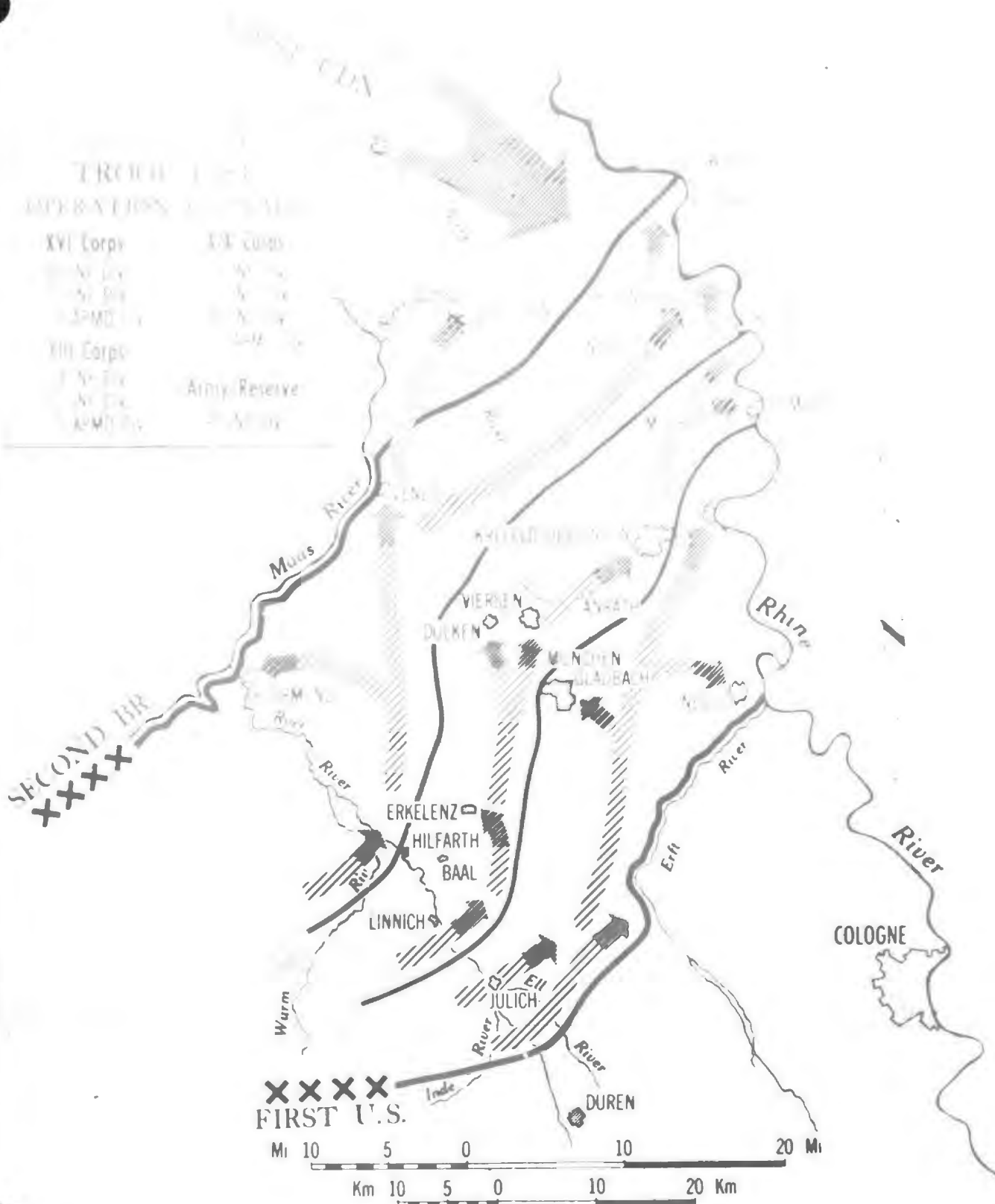


FIGURE 2.

R-243

<sup>5</sup>Op cit, Conquer p 162

<sup>6</sup>Op cit, XIX Corps After Action Report

<sup>7</sup>Ibid.

<sup>8</sup>The History of the 30th Division, Robert L. Hewitt, p 215, 216

<sup>9</sup>Ibid, p 221

<sup>10</sup>Ibid, pp 221, 222

<sup>11</sup>Ibid, p 225

ANNEX 1 TO CHAPTER 3

S E C R E T  
HEADQUARTERS XIX CORPS  
APO 270

091030A Feb 45

SUBJECT: Letter of Instruction No. 108

TO : See Distribution

1. Co A, 739 Tank Bn is relieved from attachment to 78 Inf Div and is attached to 1115 Engr C Gp effective 8 February 45.

2. 554 Engr Hv Pon Bn having been attached to XIX Corps is further attached to 1104 Engr C Gp effective 8 Feb 45.

3. Flame thrower plat of 739 Tank Bn (M) Special is attached to the 29 Inf Div effective 9 Feb 45. This platoon will remain attached to the 29 Inf Div until capture of JULICH. After capture of JULICH and on Corps order it will be relieved from attachment to 29 Inf Div and attached to 2d Arm Div in place.

4. Radio silence imposed on 30 Inf Div, 2d Arm Div and 83 Inf Div Arty is lifted H-Hour.

5. Radio silence imposed on 2d Arm Div ( - Div Arty) and 83 Inf Div ( - Div Arty) lifted upon contact with any enemy.

6. Radio silence imposed on certain Corps FA and TD units lifted H - 20 minutes.

7. Corps command net (FC-1) opens H-Hour.

8. Use of regular telephone code names by all units resumed H - 6 hours.

McLAIN  
Commanding

(signed) SLOAN  
G-3

Distribution

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2d Armd Div 5

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ANNEX 2 TO CHAPTER 3

S E C R E T  
HEADQUARTERS XIX CORPS  
APO 270

091730A Feb 45

SUBJECT: Letter of Instruction No. 110

TO : See Distribution

1. Time of attack operation GRENADE postponed from 100530A Feb 45 until 110530A Feb 45. No other change.

McLAIN  
Commanding

(signed) SLOAN  
G-3

Distribution

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2d Armd Div 5

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ANNEX 3 TO CHAPTER 3

S E C R E T  
HEADQUARTERS XIX CORPS  
APO 270

101730A Feb 45

SUBJECT: Letter of Instruction No. 111

TO : See Distribution

1. Time of attack operation GRENADE postponed.
2. D-Day is expected to be on or after 14 Feb 45.
3. Further instructions to be announced 13 Feb 45.

4. Between now and time of attack efforts must be increased to prevent disclosure of the presence of new or old units in the area. All movement will be held to an absolute minimum. Circulation of personnel will be restricted. Installations normally bearing Red Cross displays are a sure means of spotting divisions from the air. These installations will use every feasible and appropriate means to prevent their location from being discovered until their unit is committed to action.

McLAIN  
Commanding

(signed) SLOAN  
G-3

Distribution

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2d Armd Div           5

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ANNEX 4 TO CHAPTER 3

S E C R E T  
HEADQUARTERS XIX CORPS  
APO 270

200930A Feb 45

SUBJECT: Letter of Instruction No. 113

TO : See Distribution

MAPS :

1. Reference FO No. 30, 062000A Feb 45, Letter of Instruction No. 110, 091730A Feb 45, and Letter of Instruction No. 112, 141245A Feb 45, all this Hq, time of attack operation GRENADE is prescribed as follows:

D-DAY 23 Feb 45  
H-HOUR 0330  
Artillery Preparation: 0245 - 0330

2. Corps left (NW) boundary is changed as shown on overlay.

McLAIN  
Commanding

(signed) SLOAN  
G-3

Distribution

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2d Armd Div 5

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ANNEX 5 TO CHAPTER 3

S E C R E T  
HEADQUARTERS XIX CORPS  
APO 270

231330A Feb 45

SUBJECT: Letter of Instruction No. 115

TO : See Distribution

1. Confirming verbal instructions, 33ORCT, 83 Inf Div (Co B, 308 Engr Combat Bn, Co B, 643 TD Bn, Co B, 309 Med Bn attached) is attached 29 Inf Div upon arrival in the HONGEN area.

2. Confirming verbal instructions Co B, 801 TD Bn, attached 29 Inf Div. 230700A Feb 45.

3. Annex 2 a to FO No. 30, XIX Corps FA Fire Plan is superseded by Annex 2 b to FO No. 30, XIX Corps FA Fire Plan.

4. 2d Armd Div will displace by combat commands from present location to vicinity AACHEN on 23 and 24 February 45.

5. 83 Inf Div ( - ) will displace from present location to assemble position vicinity SCHAUFENBERG-DURBOSLAR-KOSLAR as area is vacated by 29 Inf Div. Direct liaison with 29 Inf Div is authorized. Traffic clearance will be obtained from this headquarters.

McLAIN  
Commanding

(Signed) SLOAN  
G-3

Distribution

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2d Armd Div 5

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ANNEX 6 TO CHAPTER 3

S E C R E T  
HEADQUARTERS XIX CORPS  
APO 270

242130A Feb 45

SUBJECT: Letter of Instruction No. 116

TO : See Distribution

MAPS : GSGS 4507-1/50,000

1. New boundary between 29 Inf Div and 30 Inf Div effective immediately. Overlays.
2. 29 Inf Div, RCT 330 (83 Inf Div) attached, continue advance in new zone driving directly on MUNCHEN GLADBACH. Release RCT 330 to control of 83 Inf Div after securing line TITZ, GEVELSDORF.
3. 30 Inf Div continue attack in new zone in the direction of NEUSS. Protect Corps right flank.
4. 2d Armd Div: Corps reserve. Remain in present assembly area prepared to move on six (6) hours notice, pass through 29 Inf Div or 30 Inf Div. Continue attack in Corps zone.
5. 83 Inf Div ( - ) Corps reserve. Prepare to move on six (6) hours notice to:
  - a. Pass through 29 Inf Div or 30 Inf Div and continue attack in zone.
  - b. Attack in zone (to be prescribed) between 29 Inf Div and 30 Inf Div enveloping MUNCHEN GLADBACH from the E.
  - c. Protect Corps right flank after 30 Inf Div advanced.
6. Co B, 801 TD Bn relieved from attachment 29 Inf Div.
7. 801 TD Bn attached 113 Cav Gp (30 Inf Div) effective 242100A Feb 45.
8. a. Sqd, 1st Lothlan and Border Yeomanry attached 30 Inf Div effective 232400A Feb 45.

McLAIN  
Commanding

(signed) SLOAN  
G-3

Distribution

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2d Armd Div 5

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ANNEX 7 TO CHAPTER 3

S E C R E T  
HEADQUARTERS XIX CORPS  
APO 270

251750A Feb 45

SUBJECT: Letter of Instruction No. 117

TO : See Distribution

1. CCB 2d Armd Div will move commencing 260930A Feb 45 from vicinity of AACHEN to vicinity coordinate O557 via HANGEN, ALLENHAVEN, and JULICH; and upon arrival in 30 Inf Div area is attached to 30 Inf Div for operations only for purpose of securing Corps right flank in vicinity of STEINSTRASS and LICH.

2. Co C, 702 TD Bn (2 TD Gp) is attached 2d Armd Div at RJ 018584- at 260930A Feb 45.

3. 2d Armd Div FA ( - 14 Armd FA Bn) reverts to 2d Armd Div at RJ 018584 at 260930A Feb 45.

4. 14 Armd FA Bn is relieved from attachment 30 Inf Div and is attached in place to XIX Corps Arty 260930A Feb 45.

5. 65 Armd FA Bn relieved from attachment 2d Armd Div and attached 30 Inf Div effective 242000A Feb 45 present position.

6. 696 Armd FA Bn relieved from attachment 2d Armd Div and attached 30 Inf Div effective 242000A Feb 45, present position.

7. 83 Div Arty ( - 323 FA Bn) relieved from attachment 29 Inf Div and attached XIX Corps Arty effective when out of range from present position.

8. All bridges over ROER River in Corps Zone will pass to Corps control at 261200A Feb 45.

(signed) SLOAN  
G-3

McLAIN  
Commanding

Distribution

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2d Armd Div 5

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ANNEX 8 TO CHAPTER 3

S E C R E T  
HEADQUARTERS XIX CORPS  
APO 270

262000A Feb 45

SUBJECT: Letter of Instruction No. 118

TO : See Distribution

MAPS : GSO 84507-1/50,000

1. XIX Corps continues attack in zone to capture MUNCHEN GLADBACH, taking NEUSS and securing the W bank of RHINE River in zone.

a. 30 Inf Div

(1) Continue attack in zone securing SCARZWEILER (F1375) and road running NW thereof and exit to NE by 272400A Feb 45. Overlay.

(2) Facilitate passage of 2d Armd Div through elements of 30 Inf Div in new 2d Armd Div zone early 28 Feb 45. Overlay.

(3) Continue attack in new zone until pinched out, protecting Corps right flank. Overlay.

(4) Assist 2d Armd Div in neutralizing GREVENROICH.

b. 29 Inf Div

(1) Continue attack in zone securing OLZENRATH (F1175), road leading to GARZEILER and exit to NE prior to 272400A Feb 45. Overlay.

(2) Facilitate passage of 2d Armd Div through elements 29 Inf Div in new 2d Armd Div zone early 28 Feb 45. Overlay.

(3) Continue attack on MUNCHEN GLADBACH maintaining contact with 2d Armd Div on right.

c. 2d Armd Div

(1) Div - CCR (combat elements only) move 270630A Feb 45 to indicated initial assembly area. Overlay.

(2) Attack early 28 Feb in zone to secure Div objective and crossings of the NORD Canal. Prepare to exploit to the NE or NW. (Boundaries, objectives and line of departure: overlay)

2. 14 Armd FA Bn relieved from attachment Corps Arty and reverts to control 2d Armd Div 270700A Feb 45.

3. 702 TD Bn ( - ) relieved from attachment 2d TD Gp and reverts to control 2d Armd Div 270700A Feb 45.

4. CCB 2d Armd Div relieved in place from attachment 30 Inf Div and reverts to control 2d Armd Div 272400A Feb 45.

5. Flame-thrower platoon, 739 Tank Bn, relieved from attachment 29 Inf Div and attached 2d Armd Div in place 270700A Feb 45.

6. 86 Cml Smoke Gen Co is relieved from attachment to 29 Inf Div and is attached in place to 1104 Engr Combat Gp 261400A Feb 45.

7. 113 Cav Sq ( - ) having been released from US 9th Army reverts to 113 Cav Gp (30 Inf Div).

8. 330 RCT ( - 323 FA Bn) is relieved from attachment to 29 Inf Div and reverts to 83 Inf Div in place 270700A Feb 45. 323 FA Bn remains attached to 29 Inf Div.

9. 65 and 696 Armd FA Bns are relieved from attachment to 30 Inf Div and attached to 2d Armd Div in place effective 270700A Feb 45.

McLAIN  
Commanding

(signed) SLOAN  
G-3

Distribution

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2d Armd Div 5

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ANNEX 9 TO CHAPTER 3

S E C R E T  
HEADQUARTERS XIX CORPS  
APO 270

272015A Feb 45

SUBJECT: Letter of Instruction No. 119

TO : See Distribution

1. RCT 331, 83 Inf Div is attached to 2d Armd Div effective 272300A Feb 45.

2. 83 Inf Div Arty ( - 323 FA Bn which remains attached to 29 Inf Div) is relieved from attachment to 29 Inf Div and reverts to 83 Inf Div control effective 271800A Feb 45 in place.

3. 258 FA Gp consisting of 258 Hq and Hq Btry, 258 FA Bn, 959 FA Bn, and 658 FA Bn is attached to 2d Armd Div effective 271200A Feb 45 in place.

4. Par 6, Letter of Instruction No. 118, this hq is rescinded and the following substituted therefor:

6. Two (2) section, 83 Cml Smoke Gen Co are relieved from attachment 30 Inf Div and revert to 83 Cml Smoke Gen Co. 83 Cml Smoke Gen Co is relieved from attachment 29 Inf Div and is attached in place to 1104 Engr Combat Gp effective 261400A Feb 45.

5. Two (2) QM truck companies are attached to 2d Armd Div effective 271800A Feb 45 and will remain attached until RCT 331 is committed at which time they will pass to control of 29 Inf Div vicinity RODINGER.

6. 83 Inf Div ( - RCT 330 and RCT 331) will move by shuttling over Rte C to area indicated on reverse side, commencing 280500A Feb 45.

McLAIN  
Commanding

(signed) SLOAN  
G-3

Distribution

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2d Armd Div 5

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ANNEX 10 TO CHAPTER 3

S E C R E T  
HEADQUARTERS XIX CORPS  
APO 270

282200A Feb 45

SUBJECT: Letter of Instruction No. 120

TO : See Distribution

MAPS : GSGS-1/50,000

1. RCT 331 (less one Bn) is relieved from attachment to 2d Armd Div and reverts to control 83d Inf Div effective when 83d Inf Div assumes responsibility for new zone. Remaining Bn reverts to 83d Inf Div in place when crossings of NORD Canal are secured. Bn reverts with remainder of regiment if not required for crossings.

2. 83d Inf Div will relieve units of 2d Armd Div in new 83d Inf Div's zone at 011200A March 45 and will continue the attack for NEUSS and the west bank of the RHINE River in zone. Overlay.

3. 2d Armd Div continues the attack to the north.

4. Co A, 739 Tank Bn is relieved from attachment 1115th Engr Combat Group and is attached to 2d Armd Div effective 270900A Feb 45.

5. 323 FA Bn attached to 29th Inf Div reverts to control 83d Inf Div effective 280700A Feb 45 in place.

6. Co C, 92d Cml Bn is relieved from attachment to 30th Inf Div and reverts to control 92d Cml Mortar Bn effective 282000A Feb 45 in place.

7. 92d Cml Bn is relieved from attachment 29th Inf Div and is attached to XIX Corps Artillery effective 282000A Feb 45 in place.

8. 113th Cav Gp (less 125th Cav Sq) is relieved from attachment to 30th Inf Div and reverts to Corps control effective 010800A March 45 and will assemble general vicinity STEINSTRASS, LICH, and OBEREIBT in Corps reserve. 125th Cav Sq will be relieved by 30th Inf Div not later than 020800A March 45 and will revert to control of 113th Cav Gp.

9. 801st TD Bn will continue to support 30th Inf Div and will be prepared to assemble on six (6) hours notice.



McLAIN  
Commanding

(signed) SLOAN  
G-3

Distribution

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2d Armd Div           5

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## CHAPTER 4

### PREPARATION AND EMPLOYMENT FOR GRENADE

On 2d of February, 1945, the 2d Armored Division was ordered to move from SPRIMONT, Belgium to GULPEN, Holland. The same order brought the Division back to US Ninth Army control, since its mission with the US First Army in the ARDENNES had been completed.

The move from SPRIMONT to GULPEN was executed during the hours of darkness on 3d-4th of February, and all major elements closed in to their new assembly areas before first light on the 4th of February. In addition to the march under cover of darkness, other security measures included removal of unit markings from vehicles, removal of individual shoulder patches, and a black-out march over two routes. Only a minimum number of guides was provided along the route. Personnel for this task were provided from the Division Traffic Control Units and from the 82d Reconnaissance Battalion.<sup>1</sup> The only enemy contact during the move was in the form of an air strike on the 14th Armored Field Artillery Battalion. This incident occurred during the early hours of the 4th of February, near NERVIERS. Rockets killed four men, wounded two others, and destroyed three vehicles.

Upon arrival at their new assembly areas, units began making elaborate preparations for participation, as part of XIX Corps, in future operations. At the Division command post near GULPEN, Brigadier General I. D. White received, as a visitor, the commander of Twenty-first Army Group, Field Marshal Sir Bernard L. Montgomery, on the 12th of February. Again on the 18th of February, Lieutenant General Omar N. Bradley visited

the Division. On both of these occasions future Allied Army strategy was discussed.

#### Training and Rehabilitation Phase for Operation GRENADE

a. A training program was initiated immediately upon arrival in the GULPEN area and continued until the Division was committed to action in the latter part of the month. Every effort was exercised to restore superior combat efficiency after the recent participation in the ARDENNES Campaign of Eastern Belgium. Extensive training tests were conducted on small unit tactics, employment of crew-served weapons, and physical conditioning. The basic fundamentals of military courtesy and discipline, maintenance of clothing and equipment, and weapons instruction were stressed. Special emphasis was placed on the training of reinforcements returning to, or joining, the Division. All such personnel were given a three-day refresher course in basic and advanced subjects at the Division Reinforcement Training Center. All new personnel were acquainted with the unit history, tradition, and enviable combat record. Seventeen officers, one warrant officer, and 364 enlisted men processed through the training center<sup>2</sup>, brought all units up to T/O strength. The two Armored Regiments reached full strength in armor by delivery of new tanks (M24) and repair of damaged tanks in maintenance shops. The M24 was to prove a great improvement over the older M5 light tank.<sup>3</sup>

The final phase of training for all units was devoted to tank-infantry team problems at the battalion, combat command, and division levels. This training provided the means for tank crews to become familiar with the new M24 light tank, and, simultaneously, to perfect the necessary close coordination required of a combined arms team.

b. The rehabilitation phase consisted chiefly of tours and leaves. Passes were issued to personnel of the Division to rest camps and cities in France and England. LONDON and PARIS proved to be the most popular areas.

#### Specialized Training

Experiments developed a new and more satisfactory method of air-ground identification.<sup>4</sup> Previous use had proven the method of panel display for identification unsatisfactory. During this training period several tests were conducted with combat aircraft and a new method of panel display on vehicles was approved for use by the Division.

A detailed plan for air re-supply to combat elements was drawn up and rehearsals conducted to perfect coordination with supporting air units. It was anticipated that initially a limited number of bridges would be constructed across the ROER River and air supply might be required in the event of enemy interference at these crossing sites.<sup>5</sup>

#### Employment of the Division in Operation GRENADE

Shortly after arrival in the assembly area near GULPEN, Holland, Division Artillery and Tank Destroyer Units moved to prepared positions east of AACHEN, and were prepared to support the XIX Corps attack east of the ROER River. Corps placed two additional artillery battalions under control of Division Artillery for this operation. This move was completed on the 8th - 9th February and Division Artillery was assigned the specific mission of general support of 30th Infantry Division Artillery. The Tank Destroyer Units were then given the mission of general support of the 29th Infantry Division Artillery. The 29th and 30th Infantry Divisions had been earmarked as the initial assault

elements of XIX Corps, to cross the ROER River in the JULICH area.

The 2d Armored Division as a whole was employed in one full day of shock action on the last day of February, and continued the momentum of its attack through the first four days of March, which brought the unit to the Adolf Hitler Bridge across the RHINE River in the UERDINGEN Area. Simultaneously, Operation VERITABLE, from the north, advanced southeast to the same area.

On 23 February, CCB was moved from GULPEN, Holland to a new assembly area near AACHEN, Germany. Two days later the command was alerted by order of XIX Corps to move to an assembly area across the ROER River in the vicinity of JULICH. Upon arrival in the JULICH area, on the 26th of February, CCB was attached to the 30th Infantry Division, which had assisted in establishing a bridgehead across the ROER River during the past two days.

Meanwhile, remaining elements of the Division were moved from GULPEN into the city of AACHEN, Germany, on the 23d - 24th February. By the 27th of February all combat elements of the Division were assembled across the ROER River, east of JULICH, in preparation for an attack out of the bridgehead. CCB, which had crossed the river earlier, and was attached to the 30th Infantry Division, was relieved by the 113th Cavalry Group, and assembled in the vicinity of KIREHERTEN on 27th February. The Division Artillery, which had supported the initial crossing of the ROER, was now on the eastern side of the river. Thus, all combat and supporting elements of the Division were assembled and prepared to launch the offensive to the RHINE River. The operation jumped off in a full scale attack early on the 26th of February, when the Division

passed through forward elements of the 29th and 30th Infantry Divisions.

Combat Commands A and B attacked abreast with the joint mission of seizing the Division initial objective, which was the NORD CANAL,<sup>7</sup> about 11 miles to the northeast. During the day an advance was made along a six-mile front against stubborn resistance. The fighting was characterized by a series of tank-infantry team actions against stubbornly held pockets of resistance located in small villages and towns. By 2400 hours the leading elements of the Division had reached the Division objective and were preparing to continue the attack early the next day.

On 1 March, both leading combat commands forced crossings over the NORD CANAL and advanced six to eight miles. XIX Corps directed the attack to continue during the night and instructed CCB to drive to the ADOLF HITLER Bridge to the northeast and attempt to capture it intact. The attack continued during the night of 1st - 2d March against sporadic resistance. At daylight resistance stiffened and the enemy launched a small counter attack with tanks and infantry against the right flank of CCB. This attack was against the rear elements of the column, and penetrated to the supply elements, which were following closely behind the column. Artillery, tanks and air effectively repelled the attack and the enemy withdrew across the ERFT CANAL. At the end of the day, the Division had advanced to a position from which observed artillery fire could be brought on the ADOLF HITLER Bridge, the Division objective for Operation GRENADE.

On 3d March, CCB continued the attack to seize the west approaches to the ADOLF HITLER Bridge. CCA supported this attack by an advance

abreast of CCB on its left flank. During the day progress was slow against stubborn resistance in the houses and factories of the outlying districts of UERDINGEN. However, leading elements of CCB gained the western approaches to the Bridge at 1900 hours. Immediately patrols and engineers were sent across the span to locate and neutralize demolitions. Efforts to capture the bridge intact were fruitless in the face of direct fire from enemy positions on the east side of the river and German ingenuity in placing demolition charges. At 2000 hours the bridge was blown at the east end of the structure.

On 4th March the Division completed mopping-up operations and secured the western approaches of the Bridge. By late afternoon the only enemy resistance consisted of scattered fire from the east side of the RHINE River.

The next day CCB took up defensive positions along the west bank of the river, CCA moved into an assembly area, and Division Artillery again passed to control of XIX Corps for direct support missions east of the RHINE.<sup>6</sup>

Thus is shown the training and administrative preparations which were a necessary prelude for launching armor into a full scale battle. To the next chapter belongs the details of this action and the analysis of lessons learned and a test of existing doctrines.

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#### NOTES FOR CHAPTER 4

<sup>1</sup> See Strip Map of Movement, page 46a

<sup>2</sup> After Action Report, 2d Armored Division

<sup>3</sup>Lt Col F. M. Muller, The Armored School, Fort Knox, Ky., who was AC of S, G-4, 2d Armored Division during period indicated.

<sup>4</sup>See Annex on Panel Display, pp 45, 46

<sup>5</sup>Lt Col F. M. Muller, The Armored School, Fort Knox, Ky., who was AC of S, G-4, 2d Armored Division during period indicated.

<sup>6</sup>Letter of Instruction No. 116, XIX Corps, Annex 1, Ch 3.



ANNEX TO CHAPTER 4

R E S T R I C T E D

HEADQUARTERS 2ND ARMORED DIVISION  
OFFICE of the DIVISION COMMANDER

OPERATIONS MEMORANDUM)  
NUMBER-----10)

METHOD OF DISPLAY OF FLOURESCENT PANELS

1. Recent air observation tests of flourescent panels (AP-50-A) indicate that the methods of displaying and securing described below give maximum visibility. These methods of panel display will be employed by elements of this division. Necessary instruction will be initiated at once to insure strict compliance.

2. Panels will be displayed on different types of equipment as follows:

a. Medium Tank: Panels are left in normal width, but folded (not cut) in lengths of 36 inches. A panel of each color is placed over the equipment on the rear deck, and corners tied securely. When a change is required, this may be effected by overlapping half, or all, of the chosen color to achieve a combination or a complete change of colors. Panels are tied in place by means of tape or heavy cord and bedding rolls lashed down in order to avoid ground observation of panels. Equipment stowed on the rear deck will be rolled compactly and stowed in such a manner as to give a flat or slightly concave surface upon which to place the panels.

b. Light Tank M5: Panels are lashed end to end and the sides folded under to give a width of approximately twenty (20) inches. For a two-color display, the eyelets at the joint may be used for lashing to the deck. An additional aid in keeping the center down is the insertion of wooden rods in the edge folds. The ends of the display are folded under to conform to the width of the tank, and are secured by lashing bedrolls over them. Rolls are also strapped on at the rear to hide panels from ground observation. For a single panel display, the set is simply dragged to one side until the appropriate color extends across the tank, and the ends folded under. A rope tied across the center of the panel and secured on the ventilators will hold the center down.

c. Armored Car M8 or M20: Panels are folded to 36 inches by 30 inches and fastened over a prepared surface on rear wheel boxes. Panels are folded in such a manner as to employ their full width, thereby permitting use of their eyelets for securing to the vehicle. Stowage under the panels should be firm, flat, and should slope inward slightly to

minimize ground observation. By display of a single color, the panel not desired may be removed or covered.

d. Light Tank M24: Panels are displayed singly on the outer edges of the rear deck. Full width of panel is used to obtain maximum surface for observation. This also permits use of eyelets for securing to the deck. Stowage under the panels must be firm, flat, and with a slight slope inward to minimize ground observation. For a single color display, only one panel is used, the other being removed or covered with a non-flourescent material.

3. Under no circumstances will panels be cut to conform to desired dimension. Panels will be folded. Habitual folding on the same creases will lengthen panel life by restricting cracking to a limited area, and will also tend to preserve a flat surface for display.

BY COMMAND OF BRIG GENERAL WHITE:

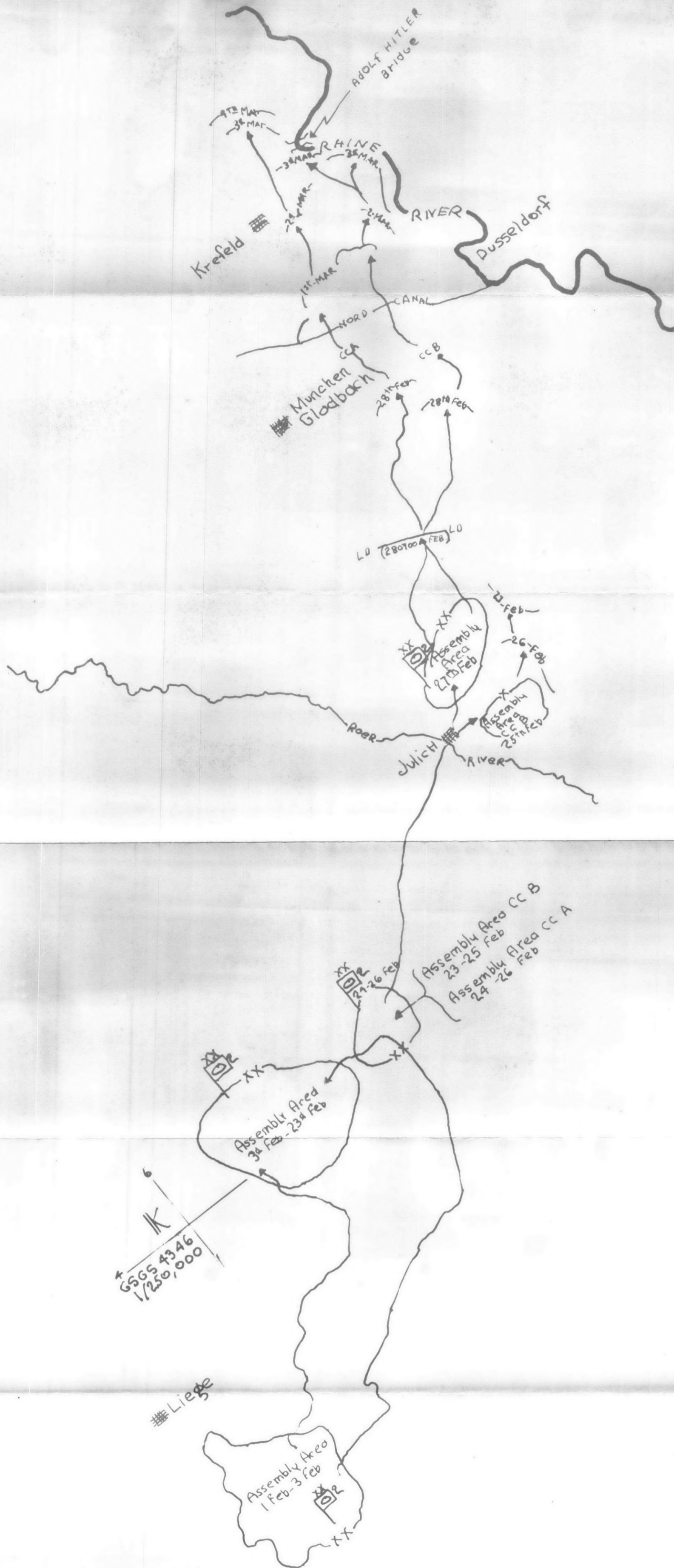
s/ G. W. West  
Colonel GSC  
Chief of Staff

OFFICIAL:

s/ Briard P. Johnson

Lt Col GSC  
AC of S G-3

Distribution B



## CHAPTER 5

### COMMITMENT TO ACTION

The initial phase of the 2d Armored Division in Operation GRENADE carries the Division to the NORD Canal. Having been in Corps Reserve for several days the 2d Armored Division was anxiously awaiting the order to strike directly at the enemy. By the fifth day of this operation the 29th and 30th Divisions had smashed the crust of the enemy defenses east of the ROER River and had established a sizeable bridgehead. The flanks of the penetration had been rolled back and the necessary security provided for the 2d Armored Division to move into the bridgehead and lead the assault on the enemy. Thus the stage was set for the 2d Armored Division's entrance into the COLOGNE Plain. The order was given for the attack to be launched at 0700 hours, 28 February. Initially, it was desirable that the 2d Armored Division advance as rapidly as possible to seize the bridges over the NORD Canal, which bisected the Division's zone. This was the most formidable barrier between the Division and its final objective--the ADOLPH HITLER Bridge--crossing the RHINE at UERDINGEN.

The entry of the 2d Armored Division into the battle is very ably described by Time correspondent Sidney Olds:

From the air in a Piper Cub the tank drive was a thing of sheerest military beauty. First came a long row of throbbing tanks moving like heavy dark beetles over the green cabbage fields of Germany in a wide swath--many tanks in a single row abreast. Then a suitable distance behind, came another great echelon of tanks even broader, out of which groups would wheel from their brown mud tracks in green fields to encircle and smash fire at some stubborn strongpoint. Behind this came miles of trucks full of troops, maneuvering perfectly to mop up by-passed tough spots. Then came the field artillery to pound hard

hard knots into submission....

And always overhead swung and looped the Thunderbolts keeping the tanks under absolute safety umbrellas and from time to time diving to knock out trouble points beyond the front....

This was one of the War's grandest single pictures of united and perfectly functioning military machines in a supreme moment of pure fighting motion.

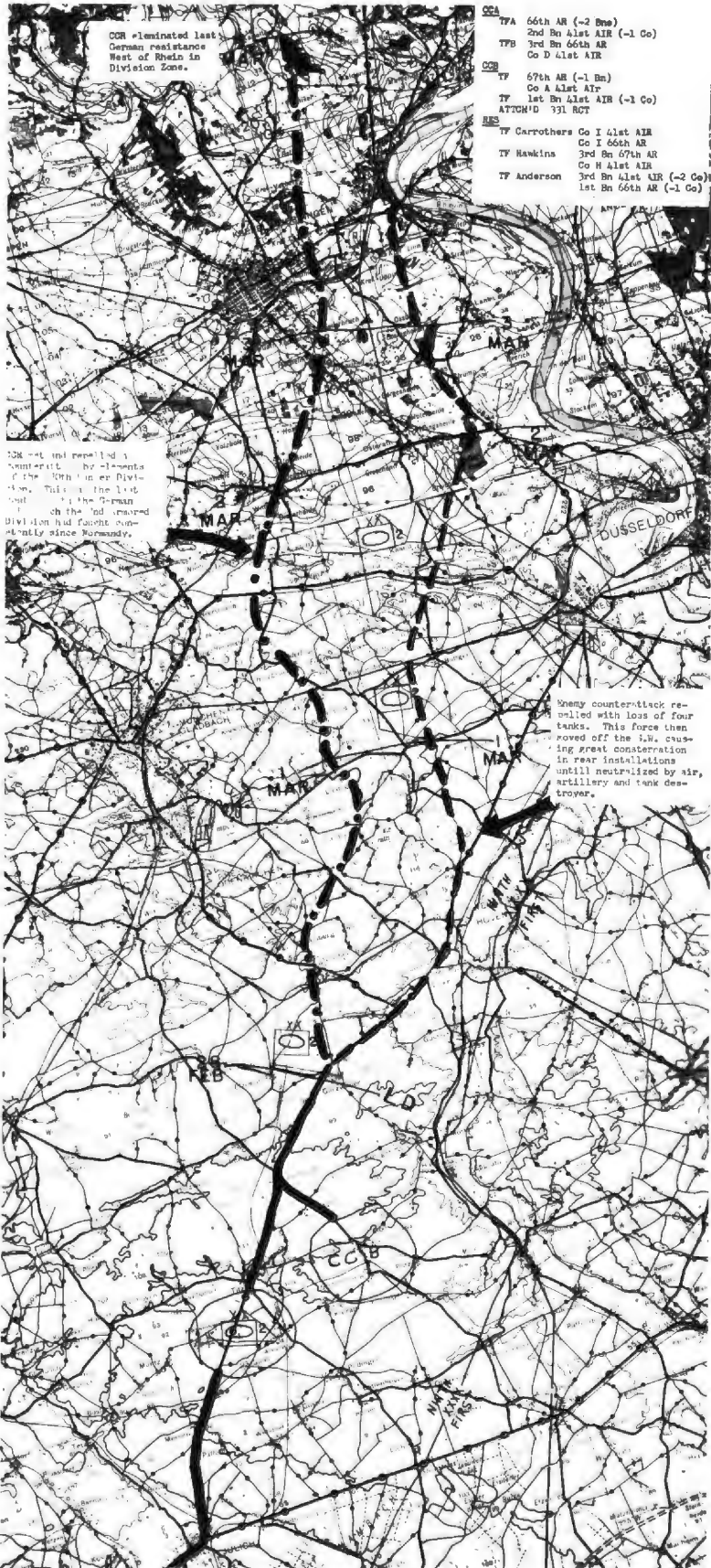
Following is a day by day description of the first phase of this operation as conducted by elements of the 2d Armored Division from the line of departure to the crossings over the NORD Canal.

#### 28 February

The 2d Armored Division entered Operation GRENADE with a full scale attack at 280700 February passing through the front lines of the 29th and 30th Infantry Divisions in the vicinity of GARZWEILER. The line of departure, which extended along the east-west road from GARZWEILER to OTZENRATH, was crossed with Combat Command A on the left and Combat Command B on the right. Both combat commands had a common mission of securing the Division's initial objective in the vicinity of the communication centers of KLEINENBROICH and BUTTGEN--approximately 11 miles north of the line of departure. After capture of this initial objective, combat commands were to be prepared to continue the attack to seize crossing over the NORD Canal and continue the attack northeast to the RHINE. During the first day's attack, advances were made along a six-mile front. By the end of this day the Division had advanced approximately eight miles to a line through HOPPERS-GLEHN on the west to GILVERATH on the east.

#### CCA

CCA attacked on the left in the Division zone, advancing steadily against considerable resistance. Enemy emplaced anti tank



CCR eliminated last German resistance West of Rhein in Division Zone.

- CCA  
 TPA 66th AR (-2 Bns)  
 2nd Bn 41st AIR (-1 Co)  
 TFB 3rd Bn 66th AR  
 Co D 11st AIR
- COB  
 TP 67th AR (-1 Bn)  
 Co A 11st AIR  
 TY 1st Bn 41st AIR (-1 Co)  
 ATTCH'D 331 RCT
- TFS  
 TF Carrothers Co I 11st AIR  
 Co I 66th AR  
 TF Hawkins 3rd Bn 67th AR  
 Co H 41st AIR  
 TF Anderson 3rd Bn 41st AIR (-2 Co)  
 1st Bn 66th AR (-1 Co)

CCR met and repelled a counterattack by elements of the 10th SS Panzer Div. This is the last time the German Division had fought since Normandy.

Enemy counterattack repelled with loss of four tanks. This force then moved off the line causing great consternation in rear installations until neutralized by air, artillery and tank destroyer.

U. S. ARMY PHOTOGRAPH

guns and infantry resisted stubbornly along the east-west railroad south of JUCHEN. Similar defenses were encountered, throughout the day, at the edges of practically all towns and villages. These strong points and road blocks, covered by fire from dug in infantry, had to be overcome before proceeding.

CCA's attack, at 0700 hours, was spearheaded by Task Force A. Crossing the line of departure in the vicinity of GARSWEILER, this force advanced almost two miles during the first hour. By 0825 hours the village of PRIESTERAN had been seized and the force was pushing north to cut the MUNCHEN-GLADBACH-GREVENBROICH railroad to pave the way for seizure of the town of JUCHEN. All underpasses and crossings at the railroad were strongly defended. Further, it was expected that resistance would be met throughout the town. Accordingly, it was deemed expedient to launch a coordinated attack against the town. This attack was preceded by heavy artillery fires. Upon lifting of the artillery fire the 2d Battalion of the 66th Armored Regiment at 0945 hours assaulted the town from the west. Concurrently, and covered by fire from two medium tank companies, the 2d Battalion of the 41st Armored Infantry Regiment attacked from the south. Final mopping up of the town was complete at 1130 hours.

At this point Task Force B passed through Task Force A. Force A then resumed the attack, jumping off at 1245 hours, and advanced northeast in the right half of the combat command zone toward HERBERATH. By 1520 hours the town of RATH had fallen. Approximately one hour later, after an artillery bombardment, the village of STESSEN was occupied. During the evening two more villages fell to Task Force A and at the



close of the first day Task Force A was firmly consolidated in the town of GLEHN, located on the south half of the Division's initial objective.

At 1230 hours Task Force B launched its attack north toward KELZENBERG, moving along the left of the combat command zone. Fifteen minutes after its jump off from JUCHEN, KELZENBERG was seized. By 1400 hours the village was cleared. Two hours later three more towns fell before Task Force B. The momentum of the Task Force pushed the attack. Advancing rapidly northeast it overran STEINFORTHE and RUBBELRATH. Late that night Force B occupied the town of SCHLICH. Along with Task Force A combat command positions were consolidated in the SCHLICH-GLEHN area preparatory to continuing the attack early the next morning to seize the NORD Canal crossings.

#### CCB

CCB, with the 331 RCT 83d Infantry Division attached, was to attack northeast along the axis ELFGEN-GREFRATH-BUTTGEN. Initially CCB was to drive to the RHINE at NEUSS. However, later this objective was withdrawn to allow CCB to expedite closing on the ADOLPH HITLER Bridge. In addition it had the mission of securing the Division's right flank and to block the town of GREVENBROICH. The attack was successfully launched at 0700 hours. ELFGEN quickly fell to the two-pronged thrust, north and south of the town, of the 1st Battalion, 67th Armored Regiment. By 0915 hours mopping up had been completed. The advance continued and by 1545 hours the ELSEN-ORKEN vicinity and that east to the ERFT River had been cleared. VIERWINDEN, two miles east of DAMM, was seized during the hours of darkness and positions were consolidated preparatory to the next day's action.

### CCR

CCR departed from the vicinity of JULICH at 1130 hours and followed Combat Command A to JUCHEN. During this movement they maintained contact with the 29th Infantry Division on the left and established roadblocks on the west flank of the Division's zone.

By midnight of the 28th the Division had advanced approximately eight miles and all elements were in position to continue the attack early on 1 March.

### 1 March

Short was the rest on the night of 28 February - 1 March. In order to keep the enemy on the run and not give him time to reform, Army ordered the attack continued throughout the night. Soon after the initial Division objective had been consolidated in the SCHLICH-GLEHN area, CCB renewed the attack and crossed the line of departure at 0150 hours to be followed later in the morning by CCA. Their mission--to force crossings over the NORD Canal, capture the railroad and highway net towns to the north, and be prepared to continue the attack to seize crossings over the RHINE River.

### CCA

CCA crossed its line of departure at 0700 hours, 1 March, with Task Force A on the right. The advance was rapid in its sector on the left of the Division's zone. The day's operation carried CCA nine miles against considerable opposition. However, by evening lateral communications between NEUSS on the RHINE and the large communication center of MUNCHEN-GLADBACH had been severed.

No sooner had Task Force A jumped off on the road to KLEINENBROICH.

it ran into fire from four enemy tanks. Air support was called for and fighter bombers knocked out three of the tanks. The fourth was last seen withdrawing rapidly. Soon after this skirmish, Force A pushing its advance, ran into the tail of a German column rapidly withdrawing to the north from WEILLERHOFE. However, this German column did not get away until it had suffered serious losses by direct tank fire from Task Force A. Two more towns then fell rapidly and in an excellently executed attack to the northwest the NORD Canal was reached at 1115 hours. After overcoming anti-tank opposition the bridge in the vicinity of BRESTER, just south of UNTERBRUCH, was seized intact. Task Force A secured its position and regrouped in preparation to renew the attack. Two hours later this force had advanced two and a miles to the woods in the vicinity of MOOSHEIDE, one mile east of WILlich. At 1700 hours the attack continued to seize OSTERRATH, where contact was to be made with CCB. OSTERRATH was not taken easily. It was occupied only after subduing considerable resistance. Positions were not firm and the town cleared until 2200 hours. Elements of Task Force A then pushed further north to the outskirts of SCHWEIN-HEIN where they were located at the end of their second day of fighting.

Task Force B jumped off simultaneously with Task Force A and carried its attack along the left of the combat command's zone. In a short time two towns had been overrun and the town of BUTTGERWALD, just south of the NORD Canal bridge was occupied. In a well executed surprise assault, this span was seized intact. Without halting, the force then rolled north through TYDIAN and just before noon occupied SCHIEFBAHN. A blocking force had been left behind to secure the captured span over the NORD Canal. Five hours later, after reorganizing

another attack was launched to seize the force's next objective in the vicinity of WILLICH-DEFESKREUZ. After neutralizing enemy direct anti tank fire, outskirts of the town were entered a half hour later. After consolidation of this position a limited advance to MOOSHEIDE was executed. Positions were reported secure at 2200 hours.

#### CCB

CCB, on the right of the division's zone, netted advances up to eight miles in this day's action. After only an hour or so of rest its attack was continued at 0150 hours with the mission of seizing approaches to the ADOLPH HITLER Bridge at UERDINGEN. If possible the bridge was to be captured intact and a bridgehead established east of the RHINE River. The 331 RCT, still attached to CCB, attacked northeast in the right of the combat command sector with the mission of seizing NEUSS.

The 67th Armored Regiment led out with two battalions abreast, the 1st on the right and the 2d on the left. This force advanced approximately three miles against small arms and anti tank fire during the hours of darkness. With the breaking of daylight this force was lodged in the town of GREFRATH. After first light, enemy resistance stiffened. Soon thereafter the enemy launched a counterattack of armor and infantry from the east. After slightly penetrating the right flank of the combat command, this counterattack was repelled and four enemy tanks were destroyed. After a short but brisk skirmish this enemy force then moved off toward the southwest, causing alarm in rear installations of the Division. Since the 1st Battalion, 67th Armored Infantry Regiment had already passed through this area in its attack on GREFRATH, it was erroneously assumed that the area had been cleared. Tank destroyers,

fighter bombers and artillery concentrated their efforts on this enemy force and soon neutralized it. Our loss amounted to only one half-track. The 1st Battalion continued its advance, reaching BUTTGEN two miles north of GREFRATH by midmorning, after bypassing an enemy strong point in the vicinity of LANZERATH. Fire was received from this strong point as the assault on BUTTGEN was launched. After clearing this village with a minimum loss of time, the attack was resumed north to the NORD Canal crossings. Having cleared the area south of the canal in its assigned zone, it was found that the bridge south of HINTERFELD had been blown by the retreating enemy. The force then consolidated positions preparatory to bridging operations and renewal of the attack on 2 March.

The 2nd Battalion, 67th Armored Regiment, reinforced with Company A of the 41st Armored Infantry Regiment attacked from the general vicinity of DAMM-SCHERFHAUSEN, driving northeast and reaching the village of LOTTENGLENN about 0900 hours. Then, swinging west of BUTTGEN this force continued the advance, against practically no resistance, reaching the NORD Canal at 1332 hours, in the vicinity of STACKERSEITE. The retreating enemy had blown the bridge at this point, momentarily slowing down the rapid advance. Before bridging operations could be started it was necessary to remove plastic mines which had been left covered in gravel piles at the bridge approaches. Two armored infantry companies were dismounted and immediately sent across the canal to establish a bridgehead and cover bridging operations of the 23d Engineer Battalion. By 1740 hours a 48-foot treadway bridge was constructed and the 2d Battalion of the 67th Armored Regiment attacked across the canal reaching positions north of KAARST by 2000 hours. Here

a halt was ordered for regrouping and resupply. After securing the bridgehead the 1st Battalion of the 41st Armored Infantry Regiment passed through the 2nd Battalion of the 67th Armored Regiment and launched a night attack to the northeast. By the end of this day the town of BOVERT had been seized and the KREFELD-NEUSS railroad had been cut.

The 331 RCT less its 3d Battalion, which had ably protected the right flank of CCB during the armored advance, reverted to 83d Division control at noon, this date.

#### CCR

During this period CCR followed CCA in the west sector of the Division zone, screening and establishing road blocks to protect the left flank. Contact was maintained with the 29th Infantry Division on the 2d Armored Division's left. Active combat with the enemy was not encountered until late in the afternoon when an advance party received sniper fire, wounding two company commanders entering the town of SCHIEFBahn. Shortly thereafter the main body of CCR moved in and occupied the town. A defense against a possible counterattack was immediately organized. This action proved most wise, for thirty minutes later the enemy did counterattack. This enemy tank-infantry force, estimated to be comprised of seven tanks and two hundred infantry attempted to infiltrate through positions of Task Force ANDERSON and Task Force CAROTHERS. Both forces were heavily engaged at the end of the period, with one company being isolated for several hours.

During this period the 82d Armored Reconnaissance Battalion

relieved CCR on roadblocks in the Division rear. As CCR advanced this battalion took over the security of the Division's left flank and swept the area west and north of the NORD Canal.

Division Artillery gave its usually dependable and effective close support. Positions were consistently maintained from 1000 to 3000 yards behind the leading elements. The 14th Armored Field Artillery Battalion displaced four times in support of CCA and ended the day by helping to repel the counterattack on CCR in the SCHLIEFBahn area. It was on this day that a field artillery battery supporting CCB went nautical by scoring direct hits to sink an enemy supply boat on the RHINE in the vicinity of NEUSS. The 258th Field Artillery Battalion placed harrassing fire on DUSSELDORF, east of the RHINE, during the night. Just before midnight this battalion brought the city of KREFELD under the fire of its 155mm guns.

To replace the 331 RCT, which had reverted to its parent division, the 379 RCT of the 95th Infantry Division was attached to the 2d Armored Division at 2030 hours. This RCT assembled in the vicinity of KLEINENBROICH, preparatory to relieving CCR in the Division zone.

Considerable enemy air activity was evident during this period. Five strafing reconnaissance raids occurred during the morning in the vicinity of GLEHN and SCHIEFBahn. There were also several night raids reported.

During this period the Division command post moved from GARZWEILER to GLEHN.

At the end of two days of fighting the 2d Armored Division had seized and secured the crossings over the NORD Canal. Having completed the first phase they were now firmly established across this barrier and in position to make the final drive to the ADOLPH HITLER Bridge.

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#### NOTES FOR CHAPTER 5

References used for general background but not specifically referred to in the chapter:

After Action Report, 2d Armored Division

Conquer, History of the Ninth Army; Infantry Journal Press, 1947

The War in Western Europe, US Military Academy

History of the 2d Armored Division, Albert Love Enterprises,  
1946.



## CHAPTER 6

### THE ADVANCE TO THE ADOLPH HITLER BRIDGE<sup>1</sup>

The seizing and crossing of the NORD Canal ended the first phase of the 2d Armored Division in Operation GRENADE. The second phase, as discussed in this chapter, portrays the action from the NORD Canal to the ADOLPH HITLER Bridge located just east of KREFELD-UERDINGEN. It was anticipated that by a rapid advance and quick seizure this crossing of the RHINE would give the Allies an intact bridge across the last formidable barrier into Germany.

Actually there was no let up between the two phases in keeping the enemy under pressure. The momentum of the attack never slackened until the final action on 4 March.

#### 2 March

The enemy was to have no rest. The Division's attack continued through the early hours of 2 March. A more desperate enemy was faced and overcome on this day. The large communications center of KREFELD was to feel the thrusts of the 2d Armored Division.

#### CCA

CCA started a night attack at 0130 hours with Task Force A, moving dismounted, astride the OSTERATH-KREFELD road. The wisdom of eliminating the noise of vehicles was soon evidenced. Advancing in silence and by stealth, under the cover of darkness, a number of German sentries dozing at their post and large numbers of sleeping infantrymen were captured without a shot being fired. The attack proceeded for three hours in this manner until the early morning light gave evidence

to the enemy of the presence of this force. Resistance stiffened considerably at day break in the heavily built-up section of KUTTERHEIDE-STEINRATH, which was defended by a strong concentration of troops. However, with the assistance of the tanks which were then brought forward the infantry cleared this stronghold by 0900 hours and thirty minutes later were marching on FISCHELN. Soon direct fire was received from one enemy tank and from emplaced 88's which had to be neutralized. By noon FISCHELN and the next village of NIEDERBRUCH had been cleared. Positions were then consolidated and Task Force A regrouped for a new attack that night.

Task Force B of CCA, after being relieved by CCR in the town of WILLICH, advanced to the vicinity of STEINRATH, crossed Task Force A's axis, by-passed FISCHELN to the east and attacked north toward KREFELD-OPPUM. About two miles south of this community, determined resistance in the form of rocket launcher teams and dismounted infantry was encountered. No sooner had this pocket of resistance been overcome, an enemy counterattack was launched in this area, however it was soon contained and the enemy withdrew at 2030 hours.

#### CCB

CCB continued its night operations in the vicinity of BOVERT and had seized the village within the first hour of this day. Mopping up was completed by 0345 hours. Soon afterwards contact was made with CCA in OSTERATH.

After reorganizing, the 1st Battalion of the 41st Armored Infantry Regiment sent patrols to the vicinity of STRUMP, where enemy tanks were located. No action was taken against these tanks at this

time. At daylight this battalion resumed the attack, clearing the MEERBUSCH woods north of the OSTERATH-LATUM road. Before clearing these woods it was necessary to overcome several enemy strongpoints and anti tank guns. Roads leading into BOVERT were then blocked. Contact was established with the 83d Infantry Division on the right and soon thereafter the 3d Battalion, 331 Infantry, reverted to its parent unit.

Simultaneously with the attack of the 41st, the 67th Armored Regiment jumped off from the same vicinity. The 1st Battalion bypassed STRUMP to the west and drove straight north against enemy anti tank fire and infantry. BOSINGHOVEN and OSSUM were overrun and by 1800 hours positions were consolidated on the southeast outskirts of KREFELD-OPPUM. The 2d Battalion swung to the northeast to assault LANK-LATUM. This attack was made with guns of both tanks and armored personnel carriers placing fire on suspected enemy positions. Mopping up operations were complete by 1800 hours.<sup>1</sup>

The 3d Battalion, 379th Infantry was attached to CCB during this period, and assisted in clearing out the south portion of the MEERBUSCH woods. It then moved to an assembly area in the vicinity of STUMP, preparatory to the next days operation. Task Force HAWKINS (3d Battalion, 67th Armored Regiment and Company H, 41st Armored Infantry Regiment) from CCR also was attached to CCB late in the evening. They were then assembled in the vicinity of BOSINGHOVEN.

#### CCR

CCR was heavily engaged at the beginning of the period with the enemy attack in the vicinity of SCHIFFBAHN. A company of infantry and a company of engineers were cut off by the enemy force retreating east

from the vicinity of MUNCHEN-GLADBACH. Through radio contact with this cut off force it was possible to ascertain their status and eventually to extricate them. Positions in the town were held by skillful adjustment of artillery fire which boxed off the enemy. Also the fierce resistance by a platoon of tanks, outposting the town, greatly contributed to holding off the enemy. At one time the situation looked so grave that headquarters personnel of the 41st Armored Infantry Regiment, armed with bazookas and what other weapons that were available, occupied fox-holes in the vicinity of the command post to fight off a possible breakthrough. However the enemy threat did not materialize and the enemy withdrew to the northwest at daybreak. Five of our tanks and three personnel carriers were burned or disabled. After this engagement CCR was alerted for possible employment in the sector of CCB in event of the seizure of the bridge at UERDINGEN. Task Force HAWKINS was attached to CCA and later in the day to CCB for this mission. Task Force CAROTHERS moved to HOXHOFE. Task Force ANDERSON was relieved by elements of the 379 Infantry Regiment.

The 82d Reconnaissance Battalion continued to maintain road blocks and cover the Division's left flank. They also patrolled to the northwest to contact the 102 Infantry Division and the 5th Armored Division of the XIII Corps on the 2d Armored Division's left. Company A relieved CCR in SCHIEFBAHN. Company B remained on the job of contacting friendly elements on the left. Company C, along with elements of the 702d Tank Destroyer Battalion moved to temporary positions in the vicinity of GLEHN, to assist in blocking a German breakthrough in that

direction from east of the river ERFT. However the threat was reduced before this force became involved. Company D was attached to the 2d Battalion, 379 Infantry Regiment, under CCA control, preparatory to a projected attack on the DIESSEN area, a suburb of KREFELD.

The Division Artillery fired over 5000 rounds of ammunition in 87 missions during this period. Positions had been pushed forward to within range of the ADOLPH HITLER Bridge and observed fire was placed on it. Another ferry was sunk on the RHINE and two locomotives west of the RHINE were incapacitated.

The Division Command Post moved forward from GLEHN to the vicinity of HEIDE.

### 3 March

During this period the Division closed in on KREFELD and the approaches to the ADOLPH HITLER Bridge. The fighting on this day was probably the most severe since the commitment of the Division on 28 February. The enemy stubbornly resisted at all points, causing our heaviest single day's casualties of the operation. Every effort was made to pinch off the retreating enemy in front of the 2d Armored Division and those withdrawing from the north before escape across the ADOLPH HITLER Bridge.<sup>2</sup>

### CCA

CCA maintained its steady advance north against increasing resistance. The 2d Battalion, 379 Infantry, which had been attached to CCA the previous day, attacked north at 0315 hours from the vicinity

of KREFELD-OPPUM. In less than an hour the railroad had been reached. Then, driving through the marshalling yards, the main KREFELD-UERDINGEN highway was cut at daybreak. Task Force B's armor followed this force, employing an underpass to the marshalling yards. After clearing the marshalling yards the advance was continued, seizing ROTT, and then pushing to KREFELD-VERBERG, just north of KREFELD proper, which was occupied at 1230. From here the attack proceeded northeast to VENNIKEL, which was occupied by 1700 hours. This advance was not without incident. Increasing tank and anti tank fire was encountered as the advance progressed. In the advance from ROTT seven enemy 88's and artillery pieces were destroyed. After mopping up in the village had been completed, Task Force B consolidated its position for the night.

At 0800 on this day Task Force A was relieved from attachment to CCA and reverted to division reserve in the vicinity of FISCHELN.

#### CCB

CCB resumed its attack to clear the ADOLPH HITLER Bridge approaches at UERDINGEN. This attack, jumping off at 0205 hours from the vicinity of BOSKINGHOVEN-OSSUM, was spearheaded by the 3d Battalion, 67 Armored Regiment and Company H of the 41st, passing through the 1st Battalion, 67 Armored Regiment. Heavy resistance was encountered from enemy artillery, anti-tank guns, bazookas, and automatic weapons at the southeast edge of KREFELD-OPPUM. This fire knocked out two of our tanks. However by 0730 hours the railroad underpass west of KREFELD-LINN had been seized. By early afternoon the 3d Battalion, after overcoming enemy parachute infantry and neutralizing several emplaced tanks, reached positions just west of a cellulose factory. This position was

approximately two-thirds of a mile southwest of the west end of the bridge.

The 1st Battalion, 67 Armored Regiment remained in the vicinity of BOSHINGHOVEN-CSSUM during this period.

The 2d Battalion, 67 Armored Regiment, with Company A of the 41st Armored Infantry Regiment, did not jump off from its last position in LANK-LATUM until 1405 hours. From here they attacked north to seize their objective in the vicinity of the boat docks southeast of KREFELD. The enemy resisted from houses and factories along the entire route. In addition to this fire, heavy fire from permanent fortifications east of the RHINE impeded the progress. By 1440 hours this force had advanced approximately three miles and now occupied a position just south of the bridge ramp.

About this time CCB's attack was assisted by the 1st Battalion, 379 Infantry under division control, attacking from the west along the north edge of the KREFELD-UERDINGER autobahn in order to reach the bridge. This attack was countered by stiff resistance. House to house fighting was employed in overcoming elements of the German 23 Parachute Regiment which had arrived, only the previous day, from ARNHEIM, Holland.

When this attack bogged down, another attack was launched with two companies from the 41st coordinating in a drive to seize the west approach to the bridge. This attack was screened by smoke from the Division artillery. After extremely hard fighting the attack was successful only in occupying the south slope of the road leading into the bridge. The enemy still held the north slope of this road. At this time a dismounted reconnaissance was made, under enemy fire, across the

bridge span in an effort to neutralize demolitions and seize the span intact. However this attempt was unsuccessful as it was almost impossible to locate any planted explosives. In order to clear the enemy from the west end of the bridge the 3d Battalion, 379 Infantry, attacked at 1900 hours. After overcoming the infantry, which resisted stubbornly from dug-in positions, and pill boxes at the entrance to the ramp, the west approach to the bridge was secured.

However the hopes of securing the bridge intact were short lived. Almost immediately a terrific explosion erupted from the east end of the bridge. Fragments of bridge and masonry showered down on the west bank. In order to assay the damage a patrol was immediately dispatched to cross the bridge as far as possible. Members clambered onto the bridge under the cover of darkness. Intensive search was made for explosives and demolitions; however none were located. The patrol made its way, in face of artillery and direct fire, to a point on the bridge above the east bank. Further advance was blocked by burning tar which shot flames and dense smoke up from the bridge surface. In crossing it was necessary at times for the men to crawl over connecting girders since the flooring of one sector had complete collapsed. However at this time the bridge was still intact and had it been possible to secure it, it could be used after minor repair.

#### CCR

CCR's fighting on this day was particularly fierce. The day's action was to carry this force approximately ten miles distance. CCR, with CCA, marched at daylight through WILLICH and OSTERATH to converge on FISCHELN. From there they launched an attack on KALDENHAUSEN on



the main highway five miles northeast of KREFELD. The column passed through the east outskirts of KREFELD and launched its attack at 1430 hours from a line just north of the bridge highway. KALDEHAUSEN was fiercely defended by enemy tanks, anti-tank guns and aggressive infantry. The resistance was too much, and after a four hour struggle, in which nine tanks were lost, operations were temporarily suspended, on order. All around security was then established in the woods southwest of KALDENHAUSEN.

The 82 Reconnaissance Battalion continued to maintain contact with the 84th Infantry Division on the left. One company provided flank guards for the left elements. Another company outposted the NORD Canal bridges, while the other company patrolled roads south of KREFELD.

Division Artillery was particularly active this day. A total of 8480 rounds were fired in 99 missions. Many of the missions brought the ADOLPH HITLER Bridge under fire. One battalion, the 14th, knocked out 18 guns in one area. Another ferry was sunk on the RHINE.

The Division Command Post moved again to a vicinity just south of KREFELD preparatory to starting the next day's action.

#### 4 March

This was the final day of active offensive action for the 2d Armored Division in Operation GRENADE. It consisted primarily of mopping up and clearing the last few pockets of resistance.

#### CCA

CCA finished its mopping up in the left of the Division zone.

Task Force B cleared the woods north of VIERTELSHEIDE, eliminating the few scattered pockets remaining. Friendly units were contacted on the left. The line of final advance was the canal just north of the woods. Much enemy material had been captured or destroyed. Company A of the Reconnaissance Battalion continued to cover its left flank.

#### CCB

Action for CCB on this day started by sending a second patrol from the 379 Infantry across the bridge. They reached the far end of the bridge at 0345 hours but like the previous patrol were checked by the blazing tar. Upon returning they reported the bridge still intact. However any hopes of using the bridge intact vanished, when soon after day break the center and east spans were blown. Wide gaps were left where the spans had sunk to the river bottom, making the bridge unusable. General White personally decorated all members of both patrols, with the Silver Star, on the spot that morning. Since the mission of getting the bridge intact was no longer a possibility, the Combat Command turned to cleaning out remaining enemy resistance in the vicinity. Hardly had this task begun when enemy parachute infantry launched a counter-attack. After a two hour battle the enemy was repulsed with heavy loss. Mopping up was resumed at mid morning. It was necessary to resort to considerable house-to-house fighting to route the defenders. The area around the rim of factories on the west bank of the RHINE was also cleared of the enemy. At 1330 hours the mopping up in this area was completed. Mopping up of the RHINE bend area east of STRUMP and LANK-LATUM was finished by 1500 hours.

### CCR

CCR resumed its attack on KALDENHAUSEN at 0830 hours. The town was reached at 0900 hours and reported cleared 30 minutes later. Enemy tanks and forces which had so strongly defended the area on the preceding day had withdrawn during the night. This eliminated the last German resistance west of the RHINE in the Division's zone.

Near the end of the day elements attached to the Division for this operation began reverting to control of their parent organizations. The team formations of the division began dissolving and units were moving into assembly areas for a few days of well deserved rest.

### 5 March

After five days and nights of continuous fighting, this was the first day in which conflict with the enemy did not materialize. The Division was relieved in the north by the 95 Infantry Division. Task Forces were dissolved. Elements reverted to parent units in assembly areas for a few days of rehabilitation. CCA closed in its assembly area at 1920 hours that evening near KORSCHENBROICH. Elements of CCB continued to defend the river line in its zone from UERDINGEN south to ILVERICH where contact with the 83 Infantry Division was maintained. Movement of those elements of CCB not guarding the RHINE began at 1730 hours. Once during the day the command post of CCB was bombed by enemy aircraft, wounding eight.

Division Artillery battalions were placed under control of the XIX Corps artillery soon after noon. Their fires were then placed on targets east of the RHINE. The daily barge was set afire and sunk.

## 6 March To Crossing Of The RHINE

During this period the Division maintained its defense along the RHINE in its assigned zone and entered upon an intensive training and rehabilitation program. A strong interior guard and security patrol system was inaugurated to round up enemy stragglers suspected of discarding uniforms for civilian clothes. All bridges and important roads were guarded. Division Artillery continued to harass the enemy east of the RHINE.

The close of another successful campaign was brought to an end. Having recouped from the initial setback of the "Bulge", Operation GRENADE was the running start for the big jump off across the RHINE which was to carry the 2d Armored Division into BERLIN.

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### NOTES FOR CHAPTER 6

<sup>1</sup> The After Action Report, 2d Armored Division, interchanges action of the 1st and 2d Battalions, 67th Armored Regiment on this date. This is substantiated by Maj J F Smith of CCB who was present. A check on the previous night's positions further verifies this fact.

<sup>2</sup> Major J. F. Smith, CCB, 2d Armored Division, interview  
18 February 50

References used for general background but not specifically referred to in the chapter:

After Action Report, 2d Armored Division

Conquer, History of the Ninth Army; Infantry Journal Press 1947

The War in Western Europe, US Military Academy

History of the 2d Armored Division, Albert Love Enterprises 1946.

## CHAPTER 7

### DISCUSSION OF THE EXPLOITATION PHASE

The sixth day of the XIX Corps' operation, the last day of February, may well be considered the "break through" day in Operation GRENADE. It is difficult, in any operation, to put the finger on the exact moment and the exact place when the tide of battle turns. The action of the XIX Corps' 2d Armored Division, with the 331st Regimental Combat Team of the 83d Division attached, in driving eight miles to the northeast on the Army right flank to carry its forward elements within seven miles of the RHINE, definitely determined that the back of German resistance along the approaches to the RUHR was broken. It was apparent that soon the Nazi high command would find its forces in the west divided.<sup>1</sup>

It was toward this "breakthrough" that efforts of Corps headquarters had been exerted. Infantry units had crossed the ROER and had expanded the bridgehead to such size as to allow the necessary maneuver room for the 2d Armored Division. GRENADE's second day, February 24, was particularly a build-up day during which the infantry forces in the bridgehead were increased to 38 battalions, and supporting troops. This was made possible by the completion of a total of seven Class 40 bridges in addition to 12 lighter bridges. But the main build up was in supplies. Initial crossings by infantry elements had been made, of course, with only those supplies that attacking echelons could hand carry. It was imperative after these initial crossings to get unit and supply trains across to support further operations, especially those of armored

units. By the end of the second day sufficient supplies had been placed in the bridgehead and sufficient tactical bridges had been erected across the ROER to eliminate the Germans' capability of isolating the XIX Corps' forces on the east bank of the river.

There was no doubt now that the XIX Corps, with problems of supply and traffic well in hand, was firmly established on the broad plain east of the ROER and was headed for the RHINE. For the time being the Ninth Army and the XIX Corps could only watch for signs of a hole in the enemy's line and pray that the weather, which had been good so far but now threatened to change, would not deny the opportunity for the quick armored thrust.

During preliminary operations which set the stage for succeeding days activities, General Simpson and General McLain were conferring, plotting, and planning the breakthrough toward NEUSS. The major decision required was the order of commitment of the 2d Armored Division and the 83d Infantry Division. It had to be only one of the two divisions. There was not sufficient capacity over the ROER bridges and on the roads leading east to permit simultaneous movement of both divisions. The solution hinged on the belt of German defenses, particularly trenches and anti-tank ditches, which stretched southeast from RHEYDT to GREVENBROICH on the ERFT River. The problem was whether the armor could get through these defenses or must the infantry lead the way.

There was a strong argument for spearheading this force with the 83d Infantry Division, since it was acknowledged that if the defenses were strongly held the infantry division would be the most suitable force to cope with them. On the other hand, should the defenses prove reasonably soft, it was the armor that was best suited to punch through and exploit the golden opportunity offered. Because of the road space required by the heavy-type armored division, a decision to move the 2d Armored Division first meant a two

day delay before the infantry division could be moved and committed. If the infantry division were moved first, however, and then the armored division were found to be needed, only one day's delay would be introduced. The decision could not be postponed; it had to be made then. After a careful consideration of all factors, General Simpson determined to take the risk and decided in favor of the armor. Orders were therefore issued to concentrate the entire 2d Armored Division east of the ROER in position for a drive through to NEUSS.<sup>2</sup>

Thus the 2d Armored Division was committed through the bridgehead created by the combined efforts of the 29th and 30th Infantry Divisions. The movement was not by any means a wild dash by the armor out of the bridgehead and an uninterrupted move to the RHINE. In the strictest sense of the word the activities of the 2d Armored Division were not an exploitation, but rather a modified exploitation with a limited objective.

In view of the fact that an exploitation is the development phase of either a penetration or an envelopment, the 2d Armored Division's action in Operation GRENADE cannot be considered an exploitation in the accepted concept as presently taught at The Armored School for the following reasons:

1. There was no clear cut breakthrough by the armor even after passing through infantry elements. The 2d Armored Division continued to meet resistance in the form of well organized strongpoints composed of forces covering the withdrawal of main German elements west of the RHINE. Resistance was not by-passed when met. Each combat command cleared its zone of action as it advanced.

2. The Division activities on a broad front, created by operating with combat commands abreast and each confronted with considerable resistance, precluded the bypassing of the major portion of the Division while opposition was engaged by one combat command. This broad front

activity slowed down the advance considerably and greatly increased the problem of control.

On the other hand certain characteristics of the operation did conform to exploitation concepts in that:

1. Pressure was continuous. Once the 2d Armored Division was committed its efforts and drive did not diminish. Minimum time out for rest and resupply was taken. Attacks continued throughout the hours of darkness and troops were pushed to the limit of their endurance.

2. Large numbers of enemy prisoners were taken and great quantities of material were destroyed or captured.

3. Although resistance was continuous it did diminish as the advance to the objective continued.

Thus the decision of General Simpson and General McLain to commit the 2d Armored Division in advance of the 83d Infantry Division in a drive through to NEUSS proved to be sound strategy. Although resistance and terrain could have been negotiated by the infantry division, the extra fire power, weight and mobility of the armored division was available when needed to sustain constant pressure on a disintegrating enemy. The broad front on which the operation was conducted again justified the use of armor in preference to an infantry division.

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#### NOTES FOR CHAPTER 7

<sup>1</sup>Conquer, The Story of the Ninth Army (Washington: Infantry Journal Press, April 1947), passim.

<sup>2</sup>Ibid; p



## CHAPTER 8

### DISCUSSION AND SUMMARY

In final summary the action in Operation GRENADE can best be demonstrated by a discussion of the principles of armor and their application by the 2d Armored Division.

a. Mobility. Once the 29th and 30th Infantry Divisions had broken the crust of the enemy resistance, the 2d Armored Division broke through and advanced rapidly until intermittently stopped by strong points. As soon as these points of resistance were overcome the mobility was immediately resumed. The axis assigned to the combat commands, while generally astride the best road net, did not restrict elements to the roads and movement cross-country was frequently made. The combat formations employed provided capable and prompt commitment. That all elements, combat and service, were mounted insured a tremendous amount of mobile, armor-protected fire power.

b. Fire power.

The tank gun is a direct-fire weapon and not an artillery piece. As a result the closer it gets to its target, the greater will be its effect. Artillery and other supporting weapons provide the covering fires which enable the tanks and armored infantry to close with and destroy the enemy.<sup>1</sup>

In this operation tanks and armored infantry were combined into task organizations commensurate with their mission of maneuvering to attack the enemy physically with the maximum fire in the most advantageous place. However, the artillery provided the supporting fires which greatly contributed, on several occasions, closing with and destroying or causing the enemy to evacuate wherever he was found. This

was particularly true when artillery practically neutralized the enemy force which had gotten in the rear area on 1 March.

Conversely, the elements of stealth and surprise, as exercised by CCB on the morning 2 March precluded the use of fire power. However when called upon for fire power it was always there in great amounts as demonstrated by the large quantities of ammunition expended during the operation.

c. Mass shock effect. Because of the terrain, flat and well road-netted in the XIX Corps zone, mutual support between CCA and CCB could have been effected if necessary. Reserve Command and the Infantry Regiment could have reinforced either combat command if the situation had so demanded. If column of combat commands had been employed in Operation GRENADE, either the east or the west axis alone would have been feasible, but crossings along the NORD Canal would have been free from attack by elements of the 2d Armored Division, thereby diminishing the number of crossings or increasing the time-distance involved in arriving at certain crossings. Furthermore, with the aid of infantry elements to seize crossings, the NORD Canal in effect became a limited objective for the armored division.

There was no piecemeal effort by the armor in the decision to attack with combat commands abreast. Rather this was a normal situation which called for the armored division to attack in line formation, concentrating its efforts at decisive points to obtain the maximum shock effect. Furthermore, by using line formation the 2d Armored Division shortened its columns, enabled itself to advance on a broad front and converge on its final objective--the RHINE River.

d. Flexibility. Regardless of the best laid plans, unforeseen contingencies always occur in combat. Quite frequently events dictate reorganization and regroupings to perform most advantageously the job at hand. It is also often necessary to make an abrupt change in direction.

Initially the composition and task organizations of the combat commands were sound and required practically no changes during the first few days after commitment.

However, when closing on the ADOLPH HITLER Bridge and in the vicinity of the KREFELD-UERDINGEN area, it was propitious to attach task forces from one combat command to another. This entailed no break off with the enemy and no time-consuming arrangement. Abrupt changes in direction were demonstrated by the Division jumping off in an easterly direction and then turning practically due north. Further, when CCB's initial objective of NEUSS was changed, no difficulty was encountered in making this change of direction.

All of these measures are designed to point out that the task organization of the armored division is flexible.

e. Mission-type orders. The 2d Armored Division was assigned a limited objective (crossings over the NORD Canal) as well as the XIX Corps final objective--the bridges over the RHINE River in zone. There was a minimum of control measures and restrictions. One change of direction was ordered when Combat Command B was turned north in the vicinity of NEUSS.

f. Offense. In Operation GRENADE, the 29th and 30th Infantry Divisions created the opportunity for the employment of the 2d Armored Division, by seizing the critical bridgehead across the ROER River--

which controlled the axes selected by the armored division. Then, on Corps order, the 2d Armored Division was thrust against the enemy opposition, with the mission of seizing relatively close-in crossings over the NORD Canal, prepared to continue on to the Corps objective deep into the enemy rear. When CCA and CCB were involved in action in the vicinity of KREFELD-UERDINGEN, CCR maintained the momentum of the attack, and continued the offense by pushing forward five miles to eliminate the last German resistance then remaining west of the RHINE at KALDENHAUSEN.

g. Momentum.

Once the momentum of the attack is attained, it should be allowed to run its course.<sup>1</sup>

In the main, this principle was adhered to by the 2d Armored Division during the operation. Changing direction of the attack, continuing the attack at night and exploitation of success with minimum delay were certainly applied. However in the majority of cases by-passing enemy resistance, where possible, was not done. Although this slowed or stopped the advance several times momentarily, as soon as the resistance was overcome the momentum of the attack was immediately resumed. This was particularly true during the first three days when rapid advances were made by overrunning the enemy before he could adequately organize his position. The momentum of the attack itself caused subduing of the resistance without halting.

h. Deliberate planning. Initially, the 2d Armored Division was assembled in the XIX Corps rear area, preparing for an attack through infantry elements of the Corps. As soon as the armored division was assigned the mission of attacking to seize and secure crossings over the NORD Canal, and of preparing to continue the attack on Corps order to

seize crossings over the RHINE River, the division commander and his staff made a careful estimate of the situation and arrived at their plan for the execution of the assigned mission. This phase of the operation portrays the DELIBERATE PLANNING essential to VIOLENT EXECUTION. Careful coordination and teamwork was worked out, not only within the Division, but also with the other elements of the Corps, and especially with the forward infantry elements through which the armor was to attack.

i. Air cooperation.

The capabilities of the armored division are enhanced greatly when combat aviation is available to assist the division in all types of action, particularly in the attack and exploitation.<sup>1</sup>

Several times during the operation the air cover over the column attacked and destroyed enemy elements which would have otherwise adversely affected the offensive action of the Division. This was particularly true when the force which had counterattacked CCB slipped off to the southwest and marched on the rear elements of the Division.

j. Supply and maintenance. The importance of logistical support was pointed out during the planning stage of this operation when ample supplies were stocked before launching the attack. In order to maintain the momentum continuous supply and maintenance support is paramount. The use of mobile Class V and Class III supply points, close behind the combat elements, during this action assured adequate and readily available resupply for fire power and mobility. Class V alone consisted of twenty-two truck loads.<sup>2</sup> The need for the best and latest equipment is well brought out in General White's letter<sup>3</sup> to General Eisenhower. No doubt the new tanks, with their improved armor

and armament, had they been available at this time, would have been very beneficial in overcoming the German resistance.

The principles of armor, as applied by the 2d Armored Division in Operation GRENADE, were sound. These basic principles, not new in concept, will continue to be the basis for employment of armor in the future. Armored employment in future operations will be changed only by changes in armor, armament and mobility--the basic principles will apply as they do now and as they did in Operation GRENADE.

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#### NOTES FOR CHAPTER 8

<sup>1</sup> FM 17-100

<sup>2</sup> Lt Col F. M. Muller, AC of S, G-4, 2d Armored Division, during Operation GRENADE.

<sup>3</sup> Letter from General White to General Eisenhower, 20 March 1945, Annex to Chapter 8.

ANNEX TO CHAPTER 8

A. P. O. 252  
20 March 1945

Supreme Commander  
Supreme Headquarters  
Allied Expeditionary Force

My dear General Eisenhower:

In this letter I am setting forth my personal convictions as to the quality of our tanks and certain other items of equipment in comparison with the German, as you requested in your letter of 18 March 1945.

I have enclosed a separate document giving a digest of the opinions of officers and enlisted men who have had much experience and in whom I have great confidence. I have also included a large number of the actual statements made by them. Allowing for the traditional enthusiasm displayed by the American soldier when he is given (or takes!) the opportunity to express himself in regard to any possible shortcomings in his rations, clothing and equipment, I think they are sincere, reasonably factual, indicate considerable thought and knowledge of the subject, and above all, they are most refreshing. I have not edited them in any way and I believe they are a true cross-section of opinion of the command.

I feel that many criticisms made by tank crews would not appear had we been equipped with a larger proportion of M4A3E8 tanks for operation "Grenade". Only two or three tanks of this type actually saw combat. During this operation only 29% of our medium tanks mounted 76mm guns, and only four rounds of HVAP ammunition per 76mm gun was available. Incidentally, rounds of this type expended in this operation have not been replaced. However, the 76mm gun, even with HVAP ammunition, is not effective at the required ranges at which we must be able to effectively engage enemy armor.

The following are my personal convictions pertaining to the items listed:

1. ORDNANCE EQUIPMENT.

The major items of ordnance equipment are sound in design from a mechanical standpoint, particularly with the changes in suspension of the M24 light tank and M4A3E8 and M26 tanks. Any increase in armor plate thickness would decrease speed and maneuverability and it is felt that these highly desirable characteristics should not be sacrificed. The main armament of our tanks, including sights, is not comparable to that of the Germans.

a. Tank, Light.

The M5 light tank should be replaced with the M24 light tank as soon as practicable. The latter is a highly satisfactory tank in every respect. Every effort should be made to improve the gun, sights and ammunition. The M5 light tank is obsolete in every respect as a fighting tank.

b. Tank, Medium.

The M4A3E8 has comparable speed and maneuverability to any German tank. The 76mm gun is reasonably satisfactory, provided sufficient HVAP ammunition were available. If it were possible to design and substitute a long barrel piece with muzzle brake and approximately 3400-3500 f/s muzzle velocity, similar to the German 75mm HV tank gun, this tank would be equal to anything our enemies have to offer.

The M26 medium tank has not as yet been issued to this division and consequently no comments can be made. Experience with the M36 TD with 90mm gun indicates that this should be a highly effective tank when HVAP ammunition becomes available. Its issue to this division is eagerly awaited.

c. Tank Destroyer, M36.

Has not lived up to expectations, but when HVAP ammunition becomes available it is hoped that it will be more effective. Fighting compartment precludes efficient service of the piece and available ammunition is not effective at required long range.

d. M4A3E8 Assault Tank with 105mm Howitzer.

An ideal weapon for purpose for which designed. Turret should have power traverse.

e. Armored Car, M8.

Not as effective as the so-called "Staghound" manufactured in the United States for the British. A full track reconnaissance vehicle is desirable. However, on the battlefield, in meeting German armored cars of all types, the M8 has invariably come off the winner.

f. Car, Half-Track.

This vehicle is far superior to any equipment of like type encountered. All designs except the M3 should be eliminated for simplicity's sake, since this type is adaptable to all demands made for a half-track vehicle.

g. General Purpose Vehicles.

All vehicles of this type are far superior to any type now in use by any army encountered in the field by this division. The 2½-Ton 6x6 truck and the 1¼-Ton 4x4 truck are the outstanding vehicles of this war.

h. Mortars.

Compare equally or better than the Germans. A larger mortar of approximately 120mm could well be used in armored elements where the mortar is habitually fired from the vehicle and greater range is desirable and considerations of weight are not a factor. Consideration should be given to converting M5 light tank to a mortar carrier.

i. Small Arms.

All US types definitely superior from standpoint of accuracy and reliability, especially the submachine gun and the .50 caliber machine gun. The carbine is not generally liked by personnel who have ever used the submachine gun in combat.



j. Bazooka.

The German bazooka is definitely superior, with greater penetrating effect and concussion. It is more accurate and has a greater effective range. The Panzerfaust is an effective and simple weapon to operate. It is highly effective against armor and also against personnel. We have equipped our infantry and reconnaissance units with captured German bazookas and they have great confidence in them. Since we habitually carry them on vehicles, their greater weight than the US type is not a factor.

2. QUARTERMASTER EQUIPMENT.

Items of quartermaster clothing and equipment as now issued in the European Theater of Operations are satisfactory under ordinary conditions of weather and terrain. The specialized winter clothing is adequate, provided it reaches the using troops in time to be of benefit. Lack of uniformity is detrimental to appearance, but the reason for this condition is understood. The quality exceeds that of any Allied or enemy troops encountered.

The following changes in design, material and authorized substitution would be of benefit to armored troops:

a. Jacket, Combat, Winter.

This is a highly satisfactory item, particularly for tank crews. The quality of material has suffered in mass production. The outer material should be the same as the jacket, field, M1943, with no change in the inner blanket lining. The knitted waistband should be eliminated and a buckle type waistband of the same material substituted. The cuffs should be modified to a straight faced cuff with a knitted cuff forming a windbreak inside the outer cuff.

b. Trousers, Combat, Winter.

Very satisfactory. If material of jacket is changed, a like change should be made in this item.

c. Poncho, Lightweight (Nylon).

This is very durable, satisfactory and of sound design. It should replace the raincoat, dismantled, which has proven unsatisfactory.

d. Boots, Service, Combat.

This item would be more satisfactory if smooth surface of leather were outside.

e. Overcoat.

This is an unsatisfactory garment for crews of armored vehicles, being too bulky and hard to stow. The mackinaw type coat is more practical.

f. Headgear.

Some type of cap, hat or beret which can be worn inside the steel helmet and presents a satisfactory appearance should be issued for wear when the helmet is not required to be worn. None of the present type issued are satisfactory and it is difficult to prevent their being worn independently of the helmet.

- g. Shelterhalf.  
Not satisfactory. Leaks, changes color and tears readily.
- h. Sleeping Bags.  
Highly satisfactory in every respect.

\* \* \* \* \*

I sincerely feel that my personal convictions as stated above more nearly express the convictions of the officers and men of the Division than their comments appear to indicate. If it were possible for me to talk with every officer and enlisted man and explain and reason things out, I doubt if there would be much difference from my own convictions.

The most important point, and upon which there is universal agreement, is our lack of a tank gun and anti-tank gun with which we can effectively engage enemy armor at the required range. The correction of this deficiency has made progress, but the problem has not as yet been satisfactorily solved.

I would like to express my sincere appreciation for this opportunity to write you informally on these matters which are of such immediate concern and importance.

Sincerely yours,

/s/

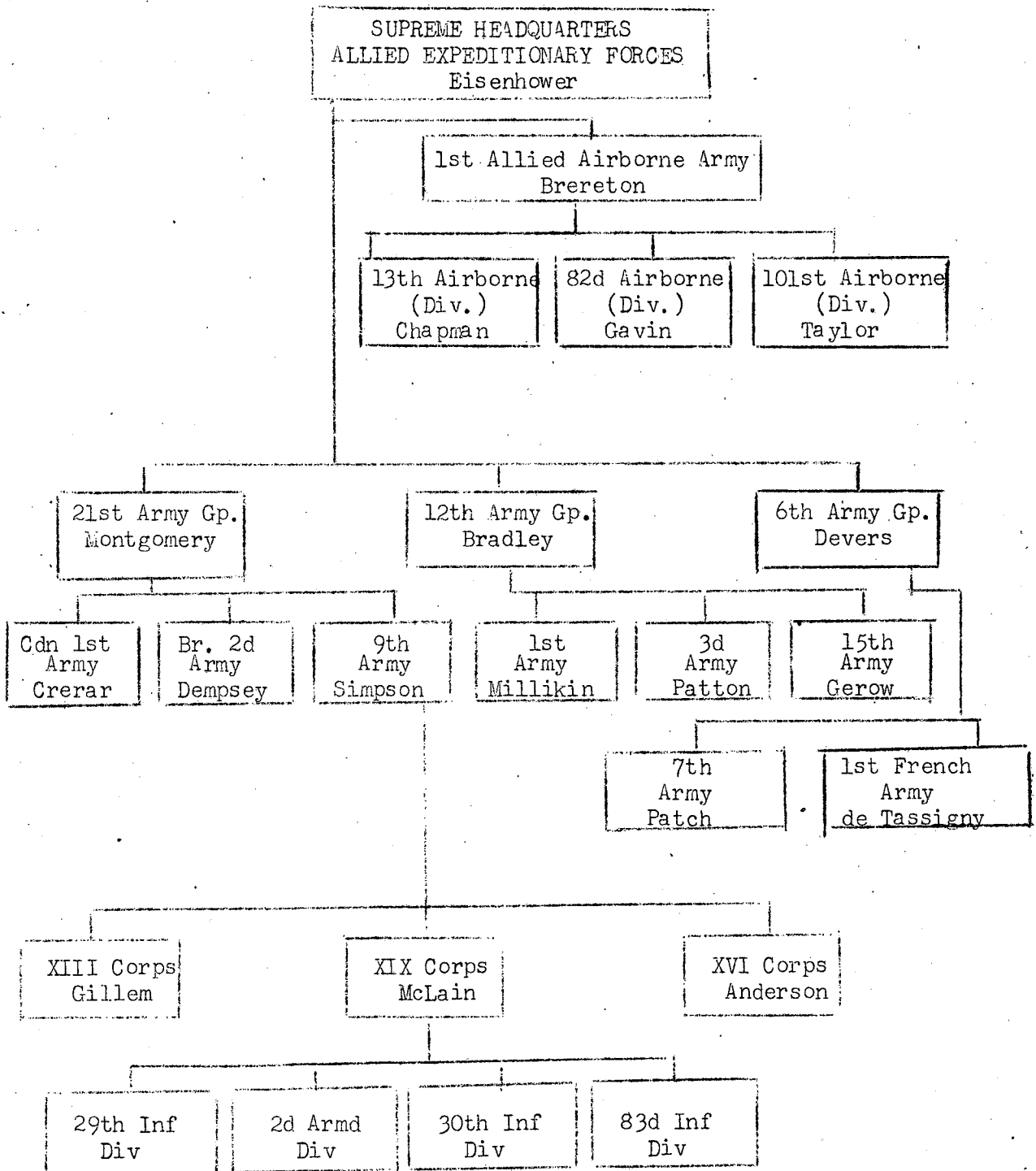
I. D. WHITE

APPENDIX 1

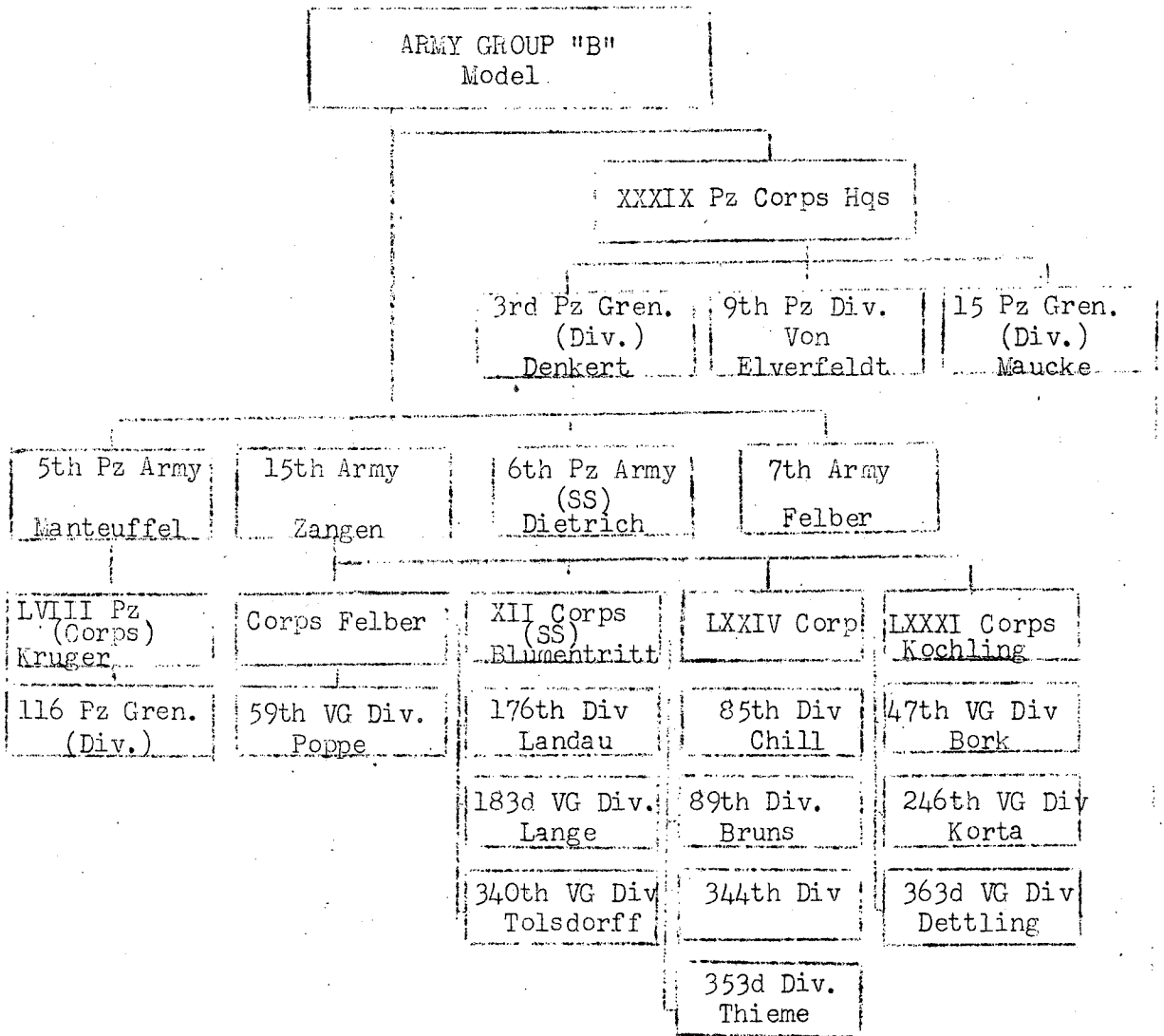
ORDER OF BATTLE

- A. Chart, Allied Armies (order of battle)
- B. Chart, German Order of Battle
- C. Troop List--2d Armored Division
- D. Task Force Organizations

ALLIED ORDER OF BATTLE  
23 February 1945



GERMAN ORDER OF BATTLE  
February - March, 1945



TROOP LIST - 2D ARMORED DIVISION - OPERATION GRENADE

Combat Command A

Brig Gen John H Collier Cmdg

Hq. CCA

66th Armd Regt (-1st Bn)

2d Bn 41st AIR

\* Elms 379th Inf Regt

14th Armd FA Bn w/ atchd AAA

Co A 17th Armd Engr Bn

Co A 702d TD Bn (SP)

Co A 48th Armd Med Bn

Det Maint Bn 2d AD

2d Plat Btry C 195th AAA AW Bn (SP)

1st Plat Co A 739th Tk Bn (M)

(Spec Mine Exploder)

\*Atchd temporarily 2-3 March 1945

Combat Command B

Col Sidney R. Hinds Cmdg

Hq, CCB

67th Armd Regt (-3d Bn)

1st Bn 41st AIR

\* 331st Inf Regt w/908th FA Bn atchd

78th Armd FA Bn w/ atchd AAA

92d Armd FA Bn w/ atchd AAA

Co D 17th Armd Engr Bn

Co C 702d TD Bn (SP)

Co B 48th Armd Med Bn

Det Maint Bn 2d AD

1st Plat Btry B 195th AAA AW Bn (SP)

1st Plat Co A 739th Tk Bn (M)

\*\*Elms 379 Inf Regt

\*331st Inf (-3d Bn) reverted to  
83d Div control 1 March 1945

3d Bn 331st Inf reverted to

83d Div control 2 March 1945

\*\*Atchd temporarily 2-4 March 1945

Combat Command R

Lt Col Russell W. Jenna Cmdg

41st AIR (-1st & 2d Bn)

1st Bn 66th AR

3d Bn 67th AR

Co C 17th Armd Engr Bn

Co B 702d TD Bn (SP)

Det Co C 48th Armd Med Bn

Det Maint Bn 2d AD

Division Control

Hq & Hq Co 2d AD w/ atchd AAA

142d Armd Sig Co

195th AAA AW Bn (SP) (-)

702d TD Bn (SP) (less Cos A, B & C)

82d Armd Rcn Bn

17th Armd Engr Bn (less

Cos A, C & D) w/atchd elms

739th Bn (M)

Division Trains

Col Louis C. Friedersdorff

Hq & Hq Co Div Tns

Maint Bn 2d AD (-dets)

48th Armd Med Bn (-)

Supply Bn 2d AD

Btry A 195th AAA AW Bn (SP)

Division Artillery

Col Carl I. Hutton Cmdg

Hq Div Arty

65th Armd FA Bn (D/S CCA)

696th Armd FA Bn (G/S)

258th FA Gp. (G/S)

258th FA Bn (155 SP)

666th FA Bn (155 How)

959th FA Bn (4.5 gun)

TASK FORCE ORGANIZATION-OPERATION GRENADE

Combat Command A

Task Force A

66th AR (-) 1st & 3d Bns  
(Rcn., Serv. & Maint. Cos.)  
2d Bn. 41st AIR (-Co D)  
Plat. Co A, 702d TD Bn (SP)  
Plat. Co A, 17th Armd Engr Bn

Task Force B

3d Bn 66th AR  
Co D, 41st AIR  
Plat Co A 702d TD Bn (SP)  
Plat Co A, 17th Armd Engr

CCA Reserve

Rcn Co 66th AR  
Plat Co A 702d TD Bn (SP)  
Plat Co A 17th Armd Engr Bn

CCA Control

Hq CCA  
14th Armd FA Bn w/Btry C  
195th AAA AW Bn (SP)  
Co A 702d TD Bn (SP) (-)  
Co A 17th Armd Engr Bn (-)  
Plat Co A 739th TK Bn atchd  
Maint Co 66th AR w/det  
Maint Bn 2d AD and Plat  
Btry C 195th AAA AW Bn (SP)  
Co A 48th Armd Med Bn

Combat Command B

No Task Force Organizations

Combat Command R

Task Force Carrothers

Co I 41st AIR  
Co I 66th AR  
Plat Co C 17th Armd Engr Bn  
Plat Co B 702d TD Bn (SP)

Task Force Hawkins

3d Bn 67th AR  
Co H 41st AIR  
Plat Co C 17th Armd Engr Bn  
Plat Co B 702d TD Bn (SP)

Task Force Anderson

3d Bn 41st AIR (-Cos H & I)  
1st Bn 66th AR (-Co I)  
Co C 17th Armd Engr Bn (-2 Plats)  
Co B 702d TD Bn (SP) (-2 Plats)

CCR Trains

Serv Co 41st AIR  
Det Co 448 Armd Med Bn

## APPENDIX II

### TACTICAL STUDY OF THE TERRAIN AND WEATHER<sup>1</sup>

#### 1. Purpose And Other Limiting Considerations.

To study the probable effect of the terrain and weather on an armored attack in the area JULICH-LINNICH-MUNCHEN-GLADBACH-DUSSELDORF (ROER River to RHINE River).

#### 2. General Description of the Area

a. Climatic or Weather Conditions--Throughout the period the temperature varies from an average minimum of 34.7°F. Average precipitation in this area in February-March is 1.6 inches. The rain is generally accompanied by light winds.<sup>2</sup>

#### b. Topography

(1) Relief and drainage--The two major streams drain the area, the ROER on the west and the RHINE to the east. The ROER flows northwest and is characterized by wide valleys, and bordering steep cliffs in many places. The RHINE River presents the most formidable natural obstacle in Western Europe, with the possible exception of the Normandy beaches. Flowing generally north, it varies in width from 700 to 1200 feet and in some places widens to 2000 feet. It frequently overflows its artificial banks and may spread a mile or more to the levees or flood banks on either side.<sup>3</sup>

The ROER and some of its tributaries are unfordable. The entire ROER valley can be flooded by the destruction of two large dams approximately 20 miles upstream from JULICH.

The entire area between the ROER and the RHINE is gently rolling, with a gradual decrease in elevation except in the immediate



vicinity of the two river valleys and their major tributaries. Some of these valleys have very steep slopes, dropping almost vertically for as much as 100 feet. These steep banks are especially true of the ROER valley. Certain portions of the area could be considered almost flat, the terrain varying very little in elevation for distances up to 1000 yards.

(2) Vegetation--The forest areas consist mostly of small wooded lots and long rows of trees bordering the numerous ditches. Most of the towns and villages have wooded areas surrounding them. The trees vary in size, none of which can be considered an obstacle to armor. The remainder of the countryside is devoted to agriculture.

(3) Surface Materials--The surface of the soil is clay which is considered satisfactory for tanks under good weather conditions. During periods of average or more rainfall, certain parts of the area are not able to support tanks. Armored movement is restricted to the roads under these conditions.

(4) Cultural Features--Many small rural villages (1000-2000 pop.) dot the area. A comparatively good road net is available.

### 3. Military Aspects of the Area

#### a. Critical Terrain Features

(1) The ROER Valley--The river has a steep gradient, approximately 14 feet per mile until it reaches the area between DUREN and JULICH. Low check dams have been installed in the river, approximately one per kilometer. During normal water stages the velocity of the river is moderate and can be forded by foot troops at many points. Two major reservoirs have been constructed by the Germans on the river.

The first and older of the two, the URFT Dam, has a storage capacity of 1,600 million cubic feet. It is a large concrete and masonry dam. Between 1935 and 1940, the SCHWAMMENUAEL Dam, with a capacity of 3,500 million cubic feet was constructed. Attempts have been made by Allied aircraft to destroy these dams by aerial bombs, but without satisfactory results. The bombardment did result in lowering the water levels in the dams, by the Germans. As the drive to capture the dams was about to succeed, the outlet gates were opened to the obviously pre-determined amount required to obtain a maximum velocity of the stream. The river level rose 7-10 feet initially, then dropped about one and a half feet and remained constant. Velocities rose to 12 miles per hour in a few places. The width did not increase to any great amount, but for the most part it rose over the low banks and inundated areas on both sides of the river. It reached a maximum height about 9 February; thereafter the elevation and velocities remained constant for a period of 10 days.<sup>4</sup>

(2) JULICH--A critical communications center.

(3) All towns throughout the area--The towns control the road net. They are strong points by virtue of the construction of the houses, namely the walls and cellars.

b. Observation and Fields of Fire

(1) Observation--Generally favors the attacking forces, or forces moving east. There are certain valleys and draws in which the enemy can operate unobserved mostly in the ROER Valley.

(2) Fields of Fire--This is an agricultural area and as such has excellent fields of fire except in the towns and villages. There, of course, the observation is limited by the houses and wooded areas.

c. Obstacles--A few canals exist in the area but present no major obstacle. In certain parts of the area the soils will not support armor during periods of rainfall. The steep banks of the major rivers and tributaries are obstacles but can be avoided.

d. Concealment and Cover--Concealment is offered by the small wood lots and towns. Cover is almost non-existent throughout the area to the attacker.

e. Avenue of Approach--The road net will determine the avenues of approach. There are very few or no limitations to the number of directions in which an attack can be launched, insofar as the terrain is concerned.

#### 4. Tactical Effect of The Terrain

Effect on Types of Operations Required to Accomplish our Mission--Enemy capability of making each town a strong point exists. This will necessitate a combined arms assault on each individual town or village by varying sized teams. The enemy is in a good position to defend the ROER Valley from the high ground to the east.

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#### NOTES FOR APPENDIX II

<sup>1</sup> FM 101-5 (Draft) Form 15, pp 257-258

<sup>2</sup> Climate of Continents, W. G. Kendrew, Oxford, The Clarendon Press, 1937.

<sup>3</sup> The Rhine Crossing--12th Army Group Operations, General P. H. Timothy, Ft. Belvoir, 1946.

<sup>4</sup> Engineer Operations, by VII Corps in the ETO - Vol. VI, Fort Belvoir, 1948.

## APPENDIX III

### PERSONALITIES

#### Major General Isaac D. White

General White joined the 2d Armored Division in July of 1940, as a Major. He activated the 2d Reconnaissance Battalion to be later designated the 82d Reconnaissance Battalion. By 4 July 1942, he had been promoted to the grade of Colonel and was commanding the Sea Train for the landing at SAFI, North Africa. By the time the Division left Africa Colonel White had taken over command of CCB where he remained through the SICILIAN Campaign and the invasion of NORMANDY. He was promoted to Brigadier General on 28 May 1944. General White assumed command of the Division on 19 January 1945, where he remained until the end of the war. He was promoted to Major General on 23 March 1945.

General White has been awarded the Distinguished Service Medal, the Legion of Merit with two Oak Leaf Clusters, the Silver Star with Oak Leaf Cluster, the Bronze Star with Oak Leaf Cluster. He was designated a Chevalier of the Legion of Honor by France, a Grand Officer of the Order of Orange Nassau by Belgium. He was awarded the French Croix de Guerre with palm, the Fourragere of the Croix de Guerre by Belgium, and the Order of the Red Banner by Russia.

General White is a graduate of Norwich University in the class of 1922, The Cavalry School class of 1928, and the Command and General Staff College in 1939.

Brigadier General John H. Collier

Colonel Collier, the Commander of the 66th Armored Regiment, took over Combat Command A on the departure of Brigadier General Maurice Rose. General Collier remained in command of CCA for the balance of the war. He was promoted to the grade of Brigadier General on 12 November 1944.

General Collier graduated from the US Military Academy in 1918. He is a graduate of the Cavalry Advanced Course 1937, and the Command and General Staff College in 1942.

General Collier has been awarded the Distinguished Service Medal, the Legion of Merit, the Silver Star Medal with two Oak Leaf Clusters, and the Bronze Star Medal with Oak Leaf Cluster.

Brigadier General Sidney R. Hinds

Colonel Sidney R. Hinds assumed command of Combat Command B when General White took over the Division. He was promoted to Brigadier General on 21 March 1945. He remained in command of CCB to the end of the war.

General Hinds graduated from The Citadel in 1915, and the US Military Academy in 1920. He was graduated from the Tank School in 1928 and the Command and General Staff College in 1929.

General Hinds is a Distinguished Marksman, a Distinguished Pistol Shot. He has been awarded the Distinguished Service Medal, the Legion of Merit, the Silver Star with three Oak Leaf Clusters, the Bronze Star Medal with Oak Leaf Cluster, The Commendation Ribbon, the Purple Heart and the Combat Infantryman's badge. He was awarded the Belgian Croix de Guerre, the Order of Orange Nassau by Holland, the Order of Nevsky by Russia, the French Legion of Honor and the French Croix de Guerre.

Colonel Russell W. Jenna

Lt. Col. Russell W. Jenna assumed command of the 41st Infantry Regiment when Colonel Hinds left to take over CCB. He commanded the 41st Infantry until the end of the war. During Operation GRENADE Colonel Jenna was the Commander of CCR. He was promoted to Colonel on 13 May 1945.

Colonel Jenna was graduated from the US Military Academy in 1934, the Infantry School in 1938, and the Command and General Staff College in 1942.

Colonel Jenna was awarded the Legion of Merit, the Silver Star Medal, the Bronze Star Medal with three Oak Leaf Clusters, and the Combat Infantryman's Badge.

APPENDIX IV

SUPPLY STATISTICS\*  
 2d ARMORED DIVISION  
 OPERATION GRENADE  
 28 Feb-4 March 1945

ITEM	CONSUMPTION	WEIGHT (TONS)
Gasoline- - - - -	112,500 gals- - - - -	422.5
Oil (all types) - - - - -	4,500 gals- - - - -	22.5
Ammunition, 105mm - - - - -	33,935 rds - - - - -	831.5
Ammunition, all other - - - - -	- - - - -	125.0
Rations, all types - - - - -	225,000 - - - - -	607.5
<hr/>		
Vehicles Destroyed - - - - -	- - - - -	16

\*Statistics compiled from:

1. After Action Report, 2d Armored Division
2. Lt. Col. Frank M. Muller, AC of S G-4, 2d Armored Division during Operation GRENADE



CASUALTY STATISTICS\*  
OPERATION GRENADE  
23 Feb-5 March 1945

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2d ARMORED DIVISION

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Killed in action- - - - -	86
Wounded in action- - - - -	295
Captured - - - - -	0

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ENEMY CASUALTIES  
Operation GRENADE, 28 Feb-4 Mar, 1945

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Killed - - - - -	900
Captured - - - - -	2500

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ENEMY MATERIEL, CAPTURED OR DESTROYED

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Tanks - - - - -	37
Vehicles, Miscellaneous - - - - -	135
Guns, Miscellaneous Large Calibers- - - - -	225
Weapons, Miscellaneous- - - - -	1116

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ENEMY TOWNS AND VILLAGES CAPTURED - - - - -	150
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SQUARE MILES ENEMY TERRITORY CAPTURED - - - - -	140
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\*Statistics compiled from:

1. After Action Report, 2d Armored Division
2. Lt. Col. Frank M. Muller, AC of S, G-4, 2d Armored Division during Operation GRENADE

APPENDIX V

PICTORIAL SECTION



10-6 tanks of the 2nd Armored Division, 3d  
U. S. Army, cross the Rear River over a lucky  
pontoon bridge at Jülich, Germany  
28 Feb 1945





This American assault boat succeeded in reaching the east bank of the Rher, but none of the five occupants lived to see it. Germany, 23 Feb 45





ATTACK OF THE ROER RIVER LINE. No. 9. Abandoned bridge and assault boats are seen on the Roer River, Germany, on the afternoon of Feb. 23rd, following the successful surprise crossing of the river by Infantrymen of the U. S. Ninth Army, early that morning.  
2/23/45.

U. S. ARMY PHOTOGRAPH

103



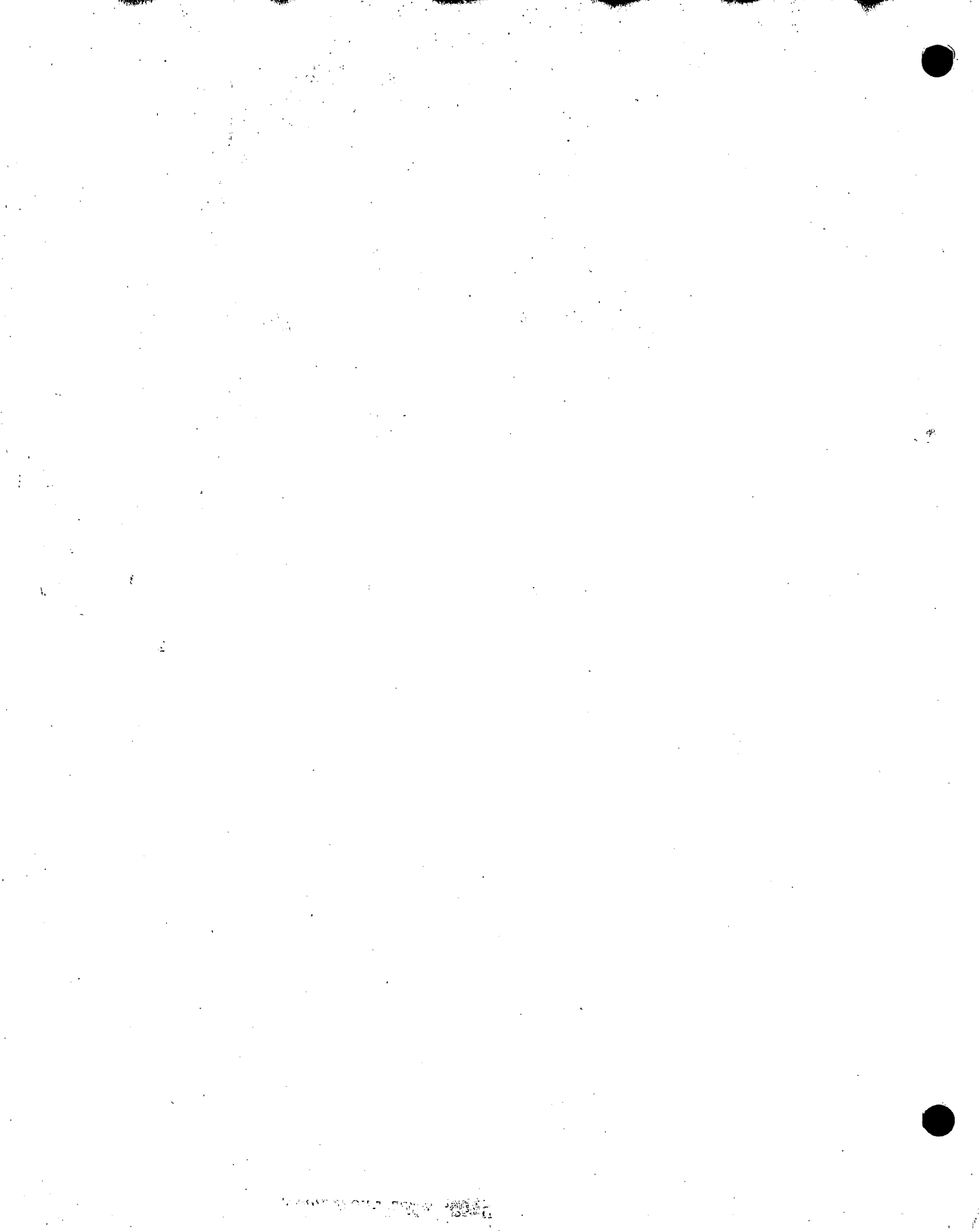


Tank soldiers of a tank battalion attached to the 83d Division investigate the litter of empty shell containers which testify to the heavy amount of rounds fired during the drive into newly captured Netze, Germany, opposite Düsseldorf, on the Rhine River. U.S. Ninth Army, Russ. 3/3/45.

U. S. ARMY PHOTOGRAPH



Civilians of Juchen, Germany, crowded into the town square for investigation and interrogation by officers of the U.S. Ninth Army. 2/26/45





DESTRUCTION IN GERMANY. No. 7 - Krefeld. Members of the 2d Armored Division, U. S. Ninth Army, move through the town of Krefeld, Germany. Co. D, 41st Regiment, 2/5/45.





ATTACK OF THE ROER RIVER LINE. No. 17. Assault boats and equipment litter the banks of the Roer River in Germany, following the U.S. Ninth Army's push across into German-held ground. 2/23/45.







Scuba demolished the Adolf Hitler Bridge spanning  
the Rhine River, connecting the town of Verdingen  
on the west bank and the town of Mandelheim on the  
east bank. Germany, 5/12/45.

U. S. ARMY PHOTOGRAPH

100



Aerial view of the German town of Jülich, Germany showing the damage done by American artillery fire and aerial bombardment. 1 Dec 1944

U. S. ARMY PHOTOGRAPH



Large structures were destroyed at this Canal near  
Havana, Germany, by allied bombardments. The town was  
taken by units of the U.S. Ninth Army 3/22/45.

