Operation Market Garden

Summary: Operation Market Garden was an Allied military operation during the Second World War fought in the German-occupied Netherlands from 17 to 25 September 1944. Its objective was to create a salient spanning 64 miles (103 km) into German territory with a bridgehead over the Nederrijn (Lower Rhine River), creating an Allied invasion route into northern Germany. This was to be achieved by two sub-operations: seizing nine bridges with combined American and British airborne forces ("Market") followed by...

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The airborne operation was undertaken by the First Allied Airborne Army with the land operation by the British Second Army, with XXX Corps moving up the centre supported by VIII and IX Corps on their flanks. The airborne soldiers, consisting of paratroops and glider-borne troops numbering around 35,000, were dropped at sites where they could capture key bridges and hold the terrain until the land forces arrived. The land forces

consisted of ten armoured and motorised brigades with a similar number of soldiers. The land forces advanced from the south along a single road surrounded by flood plain on both sides. The plan anticipated that they would cover the 103 km (64 miles) from their start to the bridge across the Rhine in 48 hours. About 100,000 German soldiers were in the vicinity to oppose the allied offensive. It was the largest airborne operation of the war up to that point.

The operation succeeded in capturing the Dutch cities of Eindhoven and Nijmegen along with many towns, and a few V-2 rocket launching sites. It failed in its most important objective: securing the bridge over the Rhine at Arnhem. The Germans slowed and then halted the armoured brigades advancing from the south before they reached the Rhine. The British 1st Airborne Division was unable to secure the bridge and was withdrawn from the north side of the Rhine after suffering 8,000 dead, missing, and captured out of a complement of 10,00

0 men. When the retreat order came there were not enough boats to get everyone back across the river. The Germans subsequently rounded up most of those left behind, but some of the British and Polish paratroopers managed to avoid capture by the Germans and were sheltered by the Dutch underground until they could be rescued in Operation Pegasus on 22 October 1944. Historians have been critical of the planning and execution of Operation Market Garden. Antony Beevor said that Market Garden "was a bad plan right from the start and right from the top".

The Germans counterattacked the Nijmegen salient but failed to retake any of the Allied gains. Arnhem was finally

captured by the Allies in April 1945, towards the end of the war.

Geography

Highway 69 (later nicknamed "Hell's Highway") leading through the planned route was two narrow lanes, partly raised above a surrounding flat terrain of polder or floodplain. The ground on either side of the highway was in places too soft to support tacti

cal vehicle movement and there were numerous dikes and drainage ditches. Dikes tended to be topped by trees or large bushes, and roads and paths were lined with trees. In early autumn this meant that observation would be seriously restricted.

There were six major water obstacles between the XXX Corps' jumping-off point and the objective of the north bank of the Lower Rhine River: the Wilhelmina Canal at Son en Breugel 100 feet (30 m) wide; the Zuid-Willems Canal at Veghel 80 feet (20 m); the Maas River at Grave 800 feet (240 m); the Maas-Waal Canal 200 feet (60 m); the Waal River at Nijmegen 850 feet (260 m); and the Rhine at Arnhem 300 feet (90 m). The plan was for airborne forces to seize bridges across all these obstacles nearly simultaneously any failure to do so would result in delay or defeat. In case bridges were demolished by the Germans, XXX Corps had plans to rebuild them. To this end, a vast quantity of bridging material was collected, along with 2,300 vehicles to carry it

and 9,000 engineers to assemble it.

Although the area is generally flat with less than 30 feet (9 m) of variation in altitude, Lieutenant-General Brian Horrocks, commander of XXX Corps, recalled that "The country was wooded and rather marshy, which made any outflanking operation impossible." Two important hill areas, 300 feet (90 m) high, were some of the highest ground in the Netherlands: one northwest of Arnhem and one in the 82nd Airborne Division's zone, the Groesbeek ridge. Seizure and defence of this elevated terrain was considered vital to holding the highway bridges.

Background

In August 1944, following the Allied breakout from Normandy and the closure of the Falaise Pocket, the allied armies pursued the retreating German army, expelling it from nearly all of France and Belgium. On 1 September, the Supreme Allied Commander General Dwight D. Eisenhower took over command of ground forces, while continuing as Supreme Commander. Montgomery resented this change, although the US an

d UK had agreed to it before the Normandy invasion. He had been the commander of ground forces and the change resulted in his former subordinate, Omar Bradley, becoming his equal. Montgomery continued to command the 21st Army Group, consisting mainly of British and Canadian units.

Logistics

By late August the allied armies were running out of petroleum gasoline. Several allied divisions and corps were forced to halt their advance temporarily to replenish supplies. To Eisenhower fell the task of responding to competing demands for fuel and other supplies for the armies under his command. There was no shortage of fuel in the makeshift ports in Normandy; the difficulty lay in transporting sufficient quantities from Normandy to the armies in Belgium and northern France. Most arrived at the front in five gallon jerry cans after being transported hundreds of kilometres by trucks, known as the Red Ball Express, from makeshift ports in Normandy. A potential solution to the logistics problem w
as to capture a large port more accessible to the advancing allied armies. On 4 September, Montgomery's troops did just that, capturing the massive port of Antwerp in Belgium virtually intact, but the Scheldt Estuary leading to it and preventing its use was still under German control. Neither Eisenhower nor Montgomery initially made opening the port of Antwerp a top priority and Antwerp was not used by allied supply ships until 28 November after the Battle of the Scheldt. The allied failure to win access quickly to the port of Antwerp has been called "one of the greatest tactical mistakes of the war". Winston Churchill later acknowledged that "clearing the Scheldt Estuary and opening the port of Antwerp had been delayed for the sake of the Arnhem thrust. Thereafter it was given first priority."

Strategy

Eisenhower proposed a "broad front strategy" in which the allied armies of Montgomery in Belgium and Bradley further south in France advanced in parallel on a front several hundred mil
es wide into Germany. Montgomery and Bradley's aggressive subordinate, George S. Patton both desired a concentration of forces, a "single thrust" forward into Germany, but each man saw himself as the leader of a single thrust. Montgomery said the allied strategy should be "one powerful full-blooded thrust across the Rhine and into the heart of Germany backed by the whole of the resources of the Allied Armies". Such a policy would relegate Bradley's American armies to a "purely static role". On his part, Patton said that with 400,000 gallons of gasoline he could be in Germany in two days. War planners saw both men's proposals as tactically and logistically infeasible.

While agreeing that Montgomery's drive towards the industrial district of the Ruhr in Germany should have priority, Eisenhower still thought it was important to "get Patton moving again". This strategy was contested by Montgomery, who argued that with the supply situation deteriorating, he would not be able to reach t
he Ruhr, but "a relocation of our present resources of every description would be adequate to get one thrust to Berlin". Montgomery initially suggested Operation Comet, a limited airborne coup de main operation that was to be launched on 2 September 1944. Comet envisioned using British and Polish airborne forces to capture several bridges en route to the Rhine. However several days of poor weather and Montgomery's concerns over increasing levels of German resistance caused him to postpone the operation and then cancel it on 10 September.

Montgomery replaced Comet with Market Garden, a more ambitious plan to bypass the West Wall or Siegfried Line of

German defenses by hooking around its northern end and securing a crossing of the Rhine River, thereby gaining a path to the Ruhr. Another factor was the existence of V-2 sites in the Netherlands which were launching rocket strikes on London. On 10 September Dempsey, the British Second Army commander, told Montgomery that he had doubts about this plan. Montgomery replied that he had just received an order from the British government that the V-2 launch sites around The Hague should be neutralised and that the plan must therefore proceed.

That same day, angered by Eisenhower's reluctance to give his plan the priority he desired, Montgomery flew to Brussels to meet him. Montgomery tore a file of Eisenhower's messages to shreds in front of him, argued for a concentrated northern thrust, and demanded priority in supplies. So fierce and unrestrained was Montgomery's language that Eisenhower reached out, patted Montgomery's knee, and said, "Steady, Monty! You can't talk to me like that. I'm your boss."

Eisenhower allegedly told Montgomery why a "single thrust" toward Berlin was not feasible:

What you're proposing is this if I give you all the supplies you want, you could go straight to Berlin right straight (500 miles) to Berlin? Monty, you're nuts. You can't do it... If you try a long column like that in a single thrust y
ou'd have to throw off division after division to protect your flanks from attack.

Nevertheless, Eisenhower consented to Operation Market Garden, giving it "limited priority" in terms of supplies but only as part of an advance on a broad front. Eisenhower promised that aircraft and trucks would deliver an additional 1,000 tons of supplies daily to Montgomery for Market Garden.

Eisenhower was also under pressure from the United States to use the First Allied Airborne Army as soon as possible. After Normandy, most of the airborne forces had been withdrawn to England, re-forming into the First Allied Airborne Army of two British and three US airborne divisions and the Polish 1st Independent Parachute Brigade. Eighteen airborne operations had been proposed, then cancelled, when the rapidly moving Allied ground forces overran the intended drop zones. Eisenhower believed that the use of the airborne forces might provide the push needed for the allies to cross the Rhine.

The plan

The plan

of action consisted of two operations:

Market: airborne forces of Lieutenant General Lewis H. Brereton's First Allied Airborne Army to seize bridges and other terrain, under tactical command of I Airborne Corps under Lieutenant-General Frederick Browning, and

Garden: ground forces of the Second Army to move north spearheaded by XXX Corps under Lieutenant-General Brian Horrocks.

Market

Market would employ four of the six divisions of the First Allied Airborne Army. The U.S. 101st Airborne Division, under Major General Maxwell D. Taylor, would drop in two locations just north of XXX Corps to take the bridges north of Eindhoven at Son and Veghel. The 82nd Airborne Division, under Brigadier General James M. Gavin, would drop northeast of them to take the bridges at Grave and Nijmegen and the British 1st Airborne Division, under Major-General Roy Urquhart, with the Polish 1st Independent Parachute Brigade, under Major General Stanis aw Sosabowski, attached, would drop at the extreme north

end of the route, capturing the road bridge at Arnhem and the rail bridge at Oosterbeek. The 52nd (Lowland) Infantry Division would be flown to the captured Deelen Airfield on D+5.

The First Allied Airborne Army had been created on 16 August as the result of British requests for a coordinated headquarters for airborne operations, a concept approved by General Eisenhower on 20 June. The British had strongly hinted that a British officer Browning in particular be appointed its commander. Browning for his part decided to bring his entire staff with him on the operation to establish his field HQ using the much-needed 32 Airspeed Horsa gliders for administrative personnel, and six Waco CG-4A gliders for U.S. Signals' personnel. Since the bulk of both troops and aircraft were American, Brereton, a U.S. Army Air Forces officer, was named by Eisenhower on 16 July and appointed by SHAEF on 2 August. Brereton had no experience in airborne operations but had extensive command experience at t

he air force level in several theaters, most recently as commander of Ninth Air Force, which gave him a working knowledge of the operations of IX Troop Carrier Command.

Market would be the largest airborne operation in history, delivering over 34,600 men of the 101st, 82nd and 1st Airborne Divisions and the Polish Brigade. 14,589 troops were landed by glider and 20,011 by parachute. Gliders also brought in 1,736 vehicles and 263 artillery pieces. 3,342 tons of ammunition and other supplies were brought by glider and parachute drop.

To deliver its 36 battalions of airborne infantry and their support troops to the continent, the First Allied Airborne Army had under its operational control the 14 groups of IX Troop Carrier Command, and after 11 September the 16 squadrons of 38 Group RAF (an organization of converted bombers providing support to resistance groups) and a transport formation, 46 Group.

The combined force had 1,438 C-47/Dakota transports (1,274 USAAF and 164 RAF) and 321 con

verted RAF bombers. The Allied glider force had been rebuilt after Normandy until by 16 September it numbered 2,160 CG-4A Waco gliders, 916 Airspeed Horsas (812 RAF and 104 U.S. Army) and 64 General Aircraft Hamilcars (large cargo gliders). The U.S. had only 2,060 glider pilots available, so that none of its gliders would have a co-pilot but would instead carry an extra passenger.

Because the C-47s served as paratrooper transports and glider tugs and because IX Troop Carrier Command would provide all the transports for both British parachute brigades, this massive force could deliver only 60 percent of the ground forces in one lift. This limit was the reason for the decision to split the troop-lift schedule into successive days. Ninety percent of the USAAF transports on the first day would drop parachute troops, with the same proportion towing gliders on the second day (the RAF transports were almost entirely used for glider operations). Brereton rejected having two airlifts on the fi

rst day, although this had been accomplished during Operation Dragoon, albeit with slightly more daylight (45 minutes) and against negligible opposition.

17 September was on a dark moon and in the days following it the new moon set before dark. Allied airborne doctrine prohibited big operations in the absence of all light, so the operation would have to be carried out in daylight. The risk of Luftwaffe interception was judged small, given the crushing air superiority of Allied fighters but there were concerns about the increasing number of flak units in the Netherlands, especially around Arnhem. Brereton's experience with tactical air operations judged that flak suppression would be sufficient to permit the troop carriers to operate without prohibitive loss. The invasion of Southern France had demonstrated that large scale daylight airborne operations were feasible. Daylight operations, in contrast to those in Sicily and Normandy, would have much greater navigational accuracy and time-

compression of succeeding waves of aircraft, tripling the number of troops that could be delivered per hour. The time required to assemble airborne units on the drop zone after landing would be reduced by two-thirds.

IX Troop Carrier Command's transport aircraft had to tow gliders and drop paratroopers, duties that could not be performed simultaneously. Although every division commander requested two drops on the first day, Brereton's staff scheduled only one lift based on the need to prepare for the first drop by bombarding German flak positions for half a day and a weather forecast on the afternoon of 16 September (which soon proved erroneous) that the area would have clear conditions for four days, so allowing drops during them.

After one week preparations were declared complete. The planning and training for the airborne drops at Sicily and Normandy had taken months. One United States Air Force historian noted that 'Market' was the only large airborne operation of the war in which

the USAAF "had no training program, no rehearsals, almost no exercises, and a... low level of tactical training."

Gavin had doubts about the plan. In his diary he wrote, "It looks very rough. If I get through this one I will be very lucky." He was also highly critical of Browning, writing that he "... unquestionably lacks the standing, influence and judgment that comes from a proper troop experience... his staff was superficial... Why the British units fumble along... becomes more and more apparent. Their tops lack the know-how, never do they get down into the dirt and learn the hard way."

Garden

Garden consisted primarily of XXX Corps and was initially spearheaded by the Guards Armoured Division, with the 43rd Wessex and 50th Northumbrian Infantry Divisions in reserve. They were expected to arrive at the south end of the 101st Airborne Division's area on the first day, the 82nd's by the second day and the 1st's by the fourth day at the latest. The airborne divisions would then join X

XX Corps in the breakout from the Arnhem bridgehead.

Four days was a long time for an airborne force to fight unsupported. Even so, before Operation Market Garden started it seemed to the Allied high command that the German resistance had broken. Most of the German Fifteenth Army in the area appeared to be fleeing from the Canadians and they were known to have no Panzergruppen. It was thought that XXX Corps would face limited resistance on their route up Highway 69 and little armour. Meanwhile, the German defenders would be spread out over 100 kilometres (62 mi) trying to contain the pockets of airborne forces, from the Second Army in the south to Arnhem in the north.

German preparation

The rout of the Wehrmacht during July and August led the Allies to believe that the German army was a spent force unable to reconstitute its shattered units. During those two months the Wehrmacht had suffered a string of defeats with heavy losses. Between 6 June and 14 August it had suffered 23,019 kil

led in action, 198,616 missing or taken prisoner and 67,240 wounded. Many of the formations the Wehrmacht had at the beginning of the Normandy campaign had been annihilated or reduced to skeleton formations by the end of August. As the German armies retreated towards the German frontier, they were often harried by air attacks and bombing raids by aircraft of the Allied air forces, inflicting casualties and destroying vehicles. Attempts to halt the Allied advance often seemed fruitless as hurried counter-attacks and blocking positions were brushed aside and at times there seemed to be too few German units to hold anywhere. By early September the situation was beginning to change. Some 65,000 troops of the German Fifteenth Army were extricated from the area with 225 guns and 750 trucks by a flotilla of commandeered freighters, barges and small boats. From there they moved to the Netherlands.

Adolf Hitler began to take a personal interest in the apparent disintegration of Army Group B, wh

ich comprised the German armies in northern France, Belgium, and the Netherlands. On 4 September he recalled Generalfeldmarschall Gerd von Rundstedt, who had been in retirement since Hitler had dismissed him as Wehrmacht Commander-in-Chief West on 2 July, and reinstated him in his former command, replacing Generalfeldmarschall Walter Model, who had taken command just 18 days previously and would henceforth command only Army Group B. Rundstedt immediately began to plan a defence against what Wehrmacht intelligence judged to be 60 Allied divisions at full strength, although Eisenhower possessed only 49 divisions.

Model set out to stop the Allied advance. The German 719th Infantry Division, part of LXXXVIII Corps, was dispatched south to the Albert Canal and Model requested reinforcements from Germany, stating that he would require 25 infantry divisions and six armoured divisions to hold; he envisioned a line stretching from Antwerp via Maastricht to Metz and from there to follow the lin

e of the Albert Canal to the Meuse and the Siegfried Line. Meanwhile, Colonel General Kurt Student, commander of the Fallschirmjaeger, the German airborne forces, received orders from Alfred Jodl, Chief of the Operations Staff of the Oberkommando der Wehrmacht, to immediately move from Berlin and proceed to the Netherlands, where he would collect all available units and build a front near the Albert Canal, which was to be held at all costs. This front was to be held by the new First Parachute Army, a euphemistic name for a paper formation. Its units were scattered throughout Germany and the Netherlands and consisted either of units in the process of being formed or remnants cadred by survivors of previous units.

Though the situation seemed dire, the German front was starting to form into what Robert Kershaw terms "a crust". Leadership, initiative, and a good staff system were beginning to create an organised push-back out of the initial chaos. On 4 September, the 719th infantry divisio

n began to dig in along the Albert Canal and was soon joined by forces under the command of Lieutenant General Kurt Chill. Although Chill only officially commanded the 85th Infantry Division, which had suffered heavy casualties during the retreat from Normandy, he had assumed command of the remnants of the 84th and 89th Infantry Divisions en route. Initially ordered to take his command to the Rhineland for rest and reinforcements, Chill disregarded the order and moved his forces to the Albert Canal, linking up with the 719th; he also had "reception centres" set up at the bridges crossing the Albert Canal, where small groups of retreating troops were picked up and turned into ad hoc units. By 7 September the 176th Infantry Division, a Kranken division composed of elderly men and men with various medical complaints, had arrived from the Siegfried Line and elements of the First Parachute Army began to appear. At this stage the Army consisted of approximately seven Fallschirmjaeger regimen

ts composed of some 20,000 airborne troops along with a collection of anti-aircraft batteries and a mix of 25 self-propelled guns and tank destroyers. Kriegsmarine and SS units were also allocated to Student's command, and Hitler had promised Model that 200 Panther tanks would be sent straight from the production lines; he also ordered all Tiger tanks, Jagdpanther self-propelled guns, and 88 mm guns that were available in Germany to be transferred to the West.

On 5 September, Model's forces were bolstered by the arrival of the II SS Panzer Corps, which consisted of the 9th and 10th SS Panzer Divisions under the command of Lieutenant General Wilhelm Bittrich. The Corps had been reduced to approximately 6,000 7,000 men, 20 30% of its original strength in the course of continuous action since late June including in the Falaise pocket; losses in officers and NCOs had been especially high. Model ordered the two divisions to rest and refit in "safe" areas behind the new German line; these ar

eas coincidentally were to be Eindhoven and Arnhem. The 10th SS Panzer Division was to be restored to full strength in order to provide an armoured reserve and thus the 9th SS Panzer Division was ordered to transfer all of its heavy equipment to its sister division; it was intended that the 9th would then be transported to Germany for replenishment. At the time of Operation Market Garden, the 10th SS Panzer Division had an approximate strength of 3,000 men; an armoured infantry regiment, divisional reconnaissance battalion, two artillery battalions, and an engineer battalion, all partially motorised. However, Bittrich said after the war that he only had five tanks at Arnhem. Other formations were appearing to strengthen the German defences. Between 16 and 17 September, two infantry divisions from Fifteenth Army assembled in Brabant, under strength but well-equipped and able to act as a reserve. Near Eindhoven and Arnhem a number of scratch formations were being assembled. Several SS un
its, including an NCO training battalion and a panzergrenadier reserve battalion, were being prepared to enter combat and Luftwaffe and Kriegsmarine personnel were being grouped into Fliegerhorst and Schiffstammabteilung formations. There were also a number of training battalions that were being equipped, several depot battalions from the Panzer Division Hermann G ring and various artillery, anti-aircraft, and field police units scattered throughout the north of the Netherlands.

Intelligence

German

Rundstedt and Model suspected that a large Allied offensive was imminent, having received many intelligence reports that described a 'constant stream' of reinforcements to the right wing of the British Second Army. Anthony Blunt is accused of passing information from MI5. The senior intelligence officer of Army Group B believed the Second Army would launch an offensive in the direction of Nijmegen, Arnhem and Wesel with a primary objective of reaching the industrial area along the Ruhr rive
r. He was convinced that airborne troops would be used in this offensive but was unsure where they would be deployed, suspecting areas along the Siegfried Line north of Aachen or possibly even near the Saar. Second Army would assemble its units at the Maas-Scheldt and Albert Canals. The right wing of the Army would be the assault force, composed primarily of armoured units, which would force a crossing of the Maas and attempt to break through to the Ruhr industrial area near Roermond. The left wing would cover the Army's northern flank by moving up to the Waal near Nijmegen and isolating the German 15th Army situated on the Dutch coast.

Allied

A number of reports about German troop movements reached Allied high command, including details of the identity and location of German armoured formations. The UK Government Code and Cypher School at Bletchley Park which monitored and decrypted German radio traffic produced intelligence reports codenamed Ultra. These were sent to senior

Allied c

ommanders, but they only reached army headquarters level and were not passed down any lower. Ultra reports revealed the movement of the 9th SS and 10th SS Panzer Divisions to Nijmegen and Arnhem, creating enough concern for Eisenhower to send his chief of staff, Lieutenant General Walter Bedell Smith, to raise the issue with Montgomery on 10 September. However, Montgomery dismissed Smith's concerns and refused to alter the plans for the landing of 1st Airborne Division at Arnhem. Aerial photographs of Arnhem taken by a photo-reconnaissance Spitfire XI from RAF's No. 16 Squadron showed tanks in the area. However, most of the original photos have disappeared and this cannot be verified. The only tanks partly visible in the remaining images are probably a Panzer IV and a Panzer III, both of which were unlikely to be from the 9th and 10th SS, who had Tiger I and Panther tanks. There was also information from members of the Dutch resistance that the SS Divisions were in the area, although t

hey did not specify if there were tanks. Fearing that 1st Airborne Division might be in grave danger if it landed at Arnhem the chief intelligence officer of the division, Major Brian Urquhart, arranged a meeting with Browning and informed him of the armour present at Arnhem. Browning dismissed his claims and ordered the division's senior medical officer to send Urquhart on sick leave on account of "nervous strain and exhaustion".

The 9th SS and 10th SS Panzer Divisions actually had very few tanks with them. Bittrich, commander of the two divisions, later said that he had almost no tanks left during the Battle of Arnhem as they had mostly been destroyed during the battle at Falaise. In fact, no German tanks were involved in the battle on the first day, and the two which engaged the British on 18 September were destroyed. Field Marshal Walter Model was, coincidently, in Oosterbeek and it was he who ordered all available armoured vehicles to the area. It was this rapid reaction by a high

-ranking officer that resulted in large numbers of Axis armour at Arnhem, rather than the presence of the SS Divisions.

Battle

Day 1: Sunday, 17 September 1944

Early successes

Operation Market Garden opened with Allied success all round. In the first landing, almost all troops arrived on top of their drop zones without incident. In the 82nd Airborne Division, 89% of troops landed on or within 1,000 metres (3,300 ft) of their drop zones and 84% of gliders landed on or within 1,000 metres (3,300 ft) of their landing zones. This contrasted with previous operations where night drops had resulted in units being scattered by up to 19 kilometres (12 mi). Losses to enemy aircraft and flak were light; German flak was described in reports as "heavy but inaccurate". By the end of the first day all water crossings were 100 percent in allied hands, or German troops prevented from using the crossings, except for the large Nijmegen bridge.

In the south, the 101st met little resistance and captured f

our of five bridges assigned to them. After a brief delay caused by four 88 mm guns and a machine gun post, the bridge

at Son was blown up by the Germans on approach. Later that day several small attacks by the German 59th Infantry Division were beaten off. Small units of the 101st moved south of Son, towards Eindhoven. Later that day they made contact with German forces. Elements of the 44th Royal Tank Regiment who were advancing in the VIII Corps sector assisted the 101st.

To their north, the 82nd arrived with a small group dropped near Grave securing the bridge. They also succeeded in capturing one of the vitally important bridges over the Maas-Waal canal, the lock-bridge at Heumen. The 82nd concentrated their efforts to seize the Groesbeek Heights instead of capturing their prime objective, the Nijmegen bridge. The capture of the Groesbeek Heights was to set up a blocking position on the high ground to prevent a German attack out of the nearby Klever Reichswald and to deny the heig

hts to German artillery observers. Browning, the commander of the 1st Airborne Army agreed with the assertions of Gavin, the commander of the 82nd, that Groesbeek Heights were the priority. Gavin wanted to occupy the Grave and the Maas (Meuse)-Waal canal bridges before Nijmegen bridge. He would attempt to seize the Nijmegen bridge only when these were secure, thus releasing troops for Nijmegen.

Before the operation on 15 September Gavin verbally ordered Lt-Col Linquist of the 508th Parachute Infantry Regiment to send a battalion to the Nijmegen bridge after landing. He had decided that there were enough troops for the other objectives. Linquist later said he understood he should send a battalion after his regiment had completed their earlier assigned targets. Linquist's battalion approached the bridge that evening delaying the seizure of the bridge. The battalion was stopped by a SS unit that had driven south from Arnhem. A part of the SS unit returned to Arnhem but found the northern

end of the Arnhem bridge occupied by the British 1st Airborne. In an attempt to cross the bridge most of the SS unit was killed, including the commander.

The 508th was tasked with taking the 600-metre (2,000 ft) long Nijmegen highway bridge if possible but because of miscommunication they did not start until late in the day. General Gavin's orders to Colonel Lindquist of the 508th were to "move without delay" onto the Nijmegen road bridge. Lindquist's 508th started jumping at 13:28 with 1,922 men. The jump was perfect with the regiment 90% assembled by 15:00. The commander of 3rd Battalion wrote later that..."we could not have landed better under any circumstances". The 508th was still sitting around when Gavin asked them at 18:00 if they had got to the bridge yet.

They faced the same disadvantage as the British at Arnhem in dropping many miles from their objective. If they had attacked earlier they would have faced only a dozen German bridge guards. By the time the 508th attacked, tro

ops of the 10th SS Reconnaissance Battalion were arriving. The attack failed, leaving the Nijmegen bridge in German hands.

Capturing this bridge was vital. Unlike some of the bridges to the south which were over smaller rivers and canals that could be bridged by engineering units, the Nijmegen and Arnhem bridges crossed two arms of the Rhine that could not

be bridged easily. If either of the Nijmegen or Arnhem bridges were not captured and held, the advance of XXX Corps would be blocked and Operation Market Garden would fail.

British landings

The 1st Airborne Division landed at 13:30 without serious incident but problems associated with the poor plan began soon after. Only half of the division arrived with the first lift and only half of these (1st Parachute Brigade) could advance on the bridge. The remaining troops had to defend the drop zones overnight for the arrival of the second lift on the following day. Thus the division's primary objective had to be tackled by less than half a

brigade. While the paratroopers marched eastwards to Arnhem, the Reconnaissance Squadron was to race to the bridge in their jeeps and hold it until the rest of the brigade arrived. The unit set off to the bridge late and having traveled only a short distance the vanguard was halted by a strong German defensive position; the squadron could make no further progress.

This had grave consequences. Five hours after the initial landing, feeling that the British were tied down in Arnhem, the Reconnaissance Battalion of the 9th SS Panzer Division was able to cross the Arnhem bridge and drive to Nijmegen and the bridge over the Waal branch of the Rhine. No British airborne unit was at the bridge.

Arnhem veteran Tom Hicks of 1st Parachute Squadron of the Royal Engineers described the problems the paratroops faced: "They (the Germans) had guns that out-ranged ours. We had no artillery with us so they could just lay off and pick you off kind of thing. If we wanted to get a gun out of action we had

to send a patrol out, do it man to man kind of thing."

Two of the three battalions of the 1st Parachute Brigade were slowed down by small German units of a training battalion which had quickly established a thin blocking line covering the obvious routes into Arnhem. Lieutenant-Colonel John Frost's 2nd Parachute Battalion, advancing eastwards along the southernmost road into Arnhem near the Rhine, found its route largely undefended. They arrived at the bridge in the evening and set up defensive positions at the north end. They were joined by Brigade HQ, led by Major Tony Hibbert, which was the brigade's only other unit to reach the bridge.

Two attempts to capture the arched steel bridge and its southern approach failed. Of the other battalions, the 3rd Parachute Battalion had covered only half the distance to the bridge when they halted for the night, the rear of their column being under attack and needing time to catch up. The 1st Parachute Battalion was similarly fragmented, yet push

ed on around the flank of the German line throughout the night. Frequent skirmishes resulted in their making little more progress. The 3rd Battalion under Captain James Cleminson, KBE, MC, ambushed a German staff car and killed the commander of Arnhem's garrison, Major-General Friedrich Kussin, as well as his aide and his driver.

Communication breakdown

Some loss of communication between the bridge and divisional headquarters in one of the drop zones was expected, because 13 km (8.1 mi) separated them and the main radio was the Type 22 set, with an effective range of 5 km (3.1 mi). The British radios did not function at any range; some had difficulty receiving signals from just a few hundred metres and others received nothing at all. It was found after landing that the radios had been set to different frequencies, two of which coincided with German and British public broadcasting stations. Other theories have been advanced to explain the greatly reduced range of the 1st Airborne Divis

ion radio sets. Thus communication between 1st Airborne units was poor while German defences were being coordinated and reinforced. John Greenacre's study points out that radio communications failures were experienced by the division before, were warned about prior to the operation and provided for by bringing extra field telephone wire. The more powerful WS19HP set was used by the 1st Brigade on D+1.

The only means of calling for air support was through two special American units dropped with the 1st Airborne Division. These units were equipped with "Veeps": jeeps having Very High Frequency SCR-193 crystal sets. It was found impossible to communicate with aircraft on the higher of two frequencies for this and the sets could not be tuned to the lower frequency. Despite efforts to re-tune them, one set was soon destroyed by mortar fire and the other abandoned the next day, cutting the only possible link with RAF fighter-bombers. The pilots were under orders not to attack on their own in

itiative, since from the air there was no easy way to distinguish friend from foe; together with poor weather, this led to a lack of air support. After the war it was found that the Royal Corps of Signals was either unaware or failed to tell divisional signals of the communication problems identified in November 1943 due to sun spots by the Scientific Advisor's Office to the 21st Army Group. Urquhart ordered the 4-metre (13 ft) aerials to be used, which were useless due to the physics of radio propagation. The wrong frequencies were part of the same problem due to signals personnel not knowing the science of radio communications.

XXX Corps advance

On the morning of 17 September Horrocks was given confirmation that the operation was to take place that day. At 12:30 hours Horrocks received a signal that the first wave of the airborne forces had left their bases within the United Kingdom and set the time for the ground attack to start at 14:35 hours. At 14:15 hours 300 guns of the Corps

artillery opened fire, firing a rolling barrage in front of XXX Corps start line that was 1 mile (1.6 km) wide and 5 miles (8.0 km) in depth. The barrage was supported by seven squadrons of RAF Hawker Typhoons firing rockets at all known German positions along the road to Valkenswaard.

The advance was led by tanks and infantry of the Irish Guards and started on time when Lieutenant Keith Heathcote, commanding the lead tank, ordered his driver to advance. The lead units of the Irish Guards Group had broken out of XXX Corps bridgehead on the Maas-Schelde canal and crossed into the Netherlands by 15:00 hours. After crossing the

border the Irish Guards were ambushed by infantry and anti-tank guns dug in on both sides of the main road. Portions of the artillery barrage were refined and fresh waves of Hawker Typhoons were called in. The Guardsmen moved forward to clear the German positions, manned by elements from two German parachute battalions and two battalions of the 9th SS Panzer Divisi

on, and soon routed the German forces flanking the road. Interrogation of captured German soldiers led to some of them willingly, others after being threatened, pointing out the remaining German positions. The fighting soon died down and the advance resumed. By last light the town of Valkenswaard had been reached and occupied by the Irish Guards Group.

Horrocks had expected that the Irish Guards would have been able to advance the 13 miles (21 km) to Eindhoven within two-three hours; however, they had only covered 7 miles (11 km). The operation was already starting to fall behind schedule. In Valkenswaard engineers were moved up to construct a 190 foot (58 m) Class 40 Bailey bridge over a stream, which was completed within 12 hours.

German reactions

On the German side, it was soon clear what was happening. Model was staying at the Tafelberg Hotel in Oosterbeek, a village to the west of Arnhem, when the British began to land in the countryside to the west of Oosterbeek. He rapidly dedu

ced the likely focus of the attack and after evacuating his headquarters, organised a defense. Bittrich sent a reconnaissance company of the 9th SS Panzer Division to Nijmegen to reinforce the bridge defenses. By midnight, Model had gained a clear picture of the situation and had organised the defense of Arnhem. The confusion usually caused by airborne operations was absent at Arnhem and the advantage of surprise was lost. During the operation, the Germans allegedly recovered a copy of the Market Garden plan from the body of an American officer, who should not have carried it into combat.

Day 2: Monday 18 September

Allied weather forecasters correctly predicted that England would be covered in fog on the morning of 18 September. The Second Lift was postponed for three hours and thick low clouds began to develop over the southern part of the battle zone, spreading during the day over the area, hampering supply and air support (Seven of the next eight days had poor weather and all air o

perations were cancelled on 22 and 24 September).

1st Airborne zone

The 1st and 3rd Parachute Battalions pushed towards the Arnhem bridge during the early hours and had made good

progress but they were frequently halted in skirmishes as soon as it became light. With their long and unwieldy columns having to halt to beat off attacks whilst the troops in front carried on unaware, the Germans delayed segments of the two battalions, fragmented them and mopped up the remnants.

Early in the day the 9th SS Reconnaissance Battalion (sent south the day before) concluded it was not needed in Nijmegen and returned to Arnhem. Though aware of the British troops at the bridge, it attempted to cross by force and was beaten back with heavy losses, including its commanding officer, SS-Hauptsturmf hrer Viktor Gr bner.
By the end of the day the 1st and 3rd Parachute Battalions had entered Arnhem and were within 2 km (1.2 mi) of the bridge with approximately 200 men, one-sixth their original strength. M
ost of the officers and non-commissioned officers had been killed, wounded or captured. The Second Lift was delayed by fog and jumped onto a landing zone under heavy attack but landed at full strength (the 4th Parachute Brigade consisting of the 10th, 11th and 156th Battalions of the Parachute Regiment, commanded by Brigadier-General John Winthrop Hackett) and C and D Companies of the 2nd South Staffordshire Regiment.

82nd Airborne zone

Grave proved to be well defended and German forces continued to press on the 82nd deployed on the Groesbeek heights to the east of Nijmegen. The 505th Parachute Infantry Regiment defended against German attacks in Horst, Grafwegen and Riethorst. Early in the day, German counterattacks seized one of the Allied landing zones where the Second Lift was scheduled to arrive at 13:00. The 508th Parachute Infantry Regiment attacked at 13:10 and cleared the landing zone by 14:00, capturing 16 German Flak pieces and 149 prisoners. Delayed by weather in Britain,
the Second Lift did not arrive until 15:30. This lift brought in elements of the 319th and 320th Glider Field Artillery battalions, the 456th Parachute Field Artillery battalion and medical support elements. Twenty minutes later, 135 B-24 bombers dropped supplies from low level.

101st Airborne zone

Faced with the loss of the bridge at Son, the 101st unsuccessfully attempted to capture a similar bridge a few kilometres away at Best but found the approach blocked. Other units continued moving to the south and eventually reached the northern end of Eindhoven. At 06:00 hours the Irish Guards Group resumed the advance while facing determined resistance from German infantry and tanks. Around noon the 101st Airborne were met by the lead reconnaissance units from XXX Corps. At 16:00 radio contact alerted the main force that the Son bridge had been destroyed and requested that a Bailey bridge be brought forward. By nightfall, the Guards Armored Division had established itself in the Eindhoven
area. However, transport columns were jammed in the packed streets of the town, and they were subjected to German

aerial bombardment during the night. XXX Corps engineers, supported by German prisoners of war, constructed a class 40 Bailey bridge within 10 hours across the Wilhelmina Canal. During the day the British VIII and XII Corps, supporting the main attack, had forged bridgeheads across Meuse-Escaut Canal while facing stiff German resistance; the 50th (Northumbrian) Infantry Division was transferred from XXX Corps to VIII Corps so to relieve XXX Corps from having to secure the ground gained thus far. Throughout the day German attacks were launched against XXX Corps and against the newly gained bridgeheads over the Meuse Escaut Canal, all without success.

Day 3: Tuesday 19 September

Arnhem

At 03:00 the commanders of the 2nd Battalion and the 1st and 11th Parachute Battalions met to plan their attack. At 04:30, before dawn, the 1st Parachute Brigade began its attack towards Arnhe

m Bridge, with the 1st Battalion leading supported by remnants of the 3rd Battalion, with the 2nd South Staffordshires on the 1st Battalion's left flank and the 11th Battalion following. As soon as it became light the 1st Battalion was spotted and halted by fire from the main German defensive line. Trapped in open ground and under heavy fire from three sides, the 1st Battalion disintegrated and what remained of the 3rd Battalion fell back. The 2nd South Staffordshires were similarly cut off and, save for about 150 men, overcome by midday. The 11th Battalion, (which had stayed out of much of the fighting) was then overwhelmed in exposed positions while attempting to capture high ground to the north. With no hope of breaking through, the 500 remaining men of these four battalions withdrew westwards in the direction of the main force, 5 km (3.1 mi) away in Oosterbeek.

The 2nd Battalion and attached units (approximately 600 men) were still in control of the northern approach ramp to the Ar

nhem bridge. They had been ceaselessly bombarded by enemy tanks and artillery from two battle groups led by SS-Sturmbannf hrer Brinkmann and one commanded by Major Hans-Peter Knaust. The Germans recognised that they would not be moved by infantry attacks such as those that had been bloodily repulsed on the previous day so instead they heavily shelled the short British perimeter with mortars, artillery and tanks; systematically demolishing each house to enable their infantry to exploit gaps and dislodge the defenders. Although in battle against enormous odds, the British clung to their positions and much of the perimeter was held.

Oosterbeek

To the north of Oosterbeek, the 4th Parachute Brigade led an attempt by the 1st Airborne Division to break through the German lines, but communication difficulties between British paratroopers and General Frederick Browning and the Americans, and enemy resistance, caused the attack to fail with heavy losses. The 1st Airborne Division, scattered far and wide and hard pressed by the enemy on all sides, had lost its offensive capability. Unable to help Lt.-Col. Frost,

who commanded the only battalion that had made it to the Arnhem bridge, the remaining soldiers attempted to withdraw into a defensive pocket at Oosterbeek and hold a bridgehead on the north bank of the Rhine after overwhelming German resistance.

At 16:00 hours the British 4th Parachute Brigade's withdrawal was supported by the arrival of 35 gliders containing a portion of the 1st Polish Independent Parachute Brigade and its anti-tank battery, who were deployed in a Landing Zone still controlled by the enemy, which killed all but a small contingent of the reinforcements. While the drop of the remainder of the Polish paratroopers was postponed due to dense fog, its commander General Sosabowski was parachuted into Driel.

Nijmegen

At 08:20, the 504th Parachute Infantry Regiment made contact with the Grenadier Guards of XXX Corps advancing north at Grave. This enabled the

regiment to move on to other missions and place the 3rd Battalion in division reserve. XXX Corps were eight miles (13 km) from Arnhem with six hours in hand, "The earlier delays had been made up" Control of all troops now fell to XXX Corps whose prime objective was to seize the Nijmegen bridge having two companies from the Guards Armoured Division assisted by the US 2nd Battalion, 505th Parachute Infantry Regiment. The attack got within 400 metres (440 yards) of the bridge before being halted; skirmishing continued throughout the night. A plan was made to attack the south end of the bridge again with support from the 3rd Battalion, 504th Parachute Infantry Regiment, who would cross the River Waal in boats 2 km (1.2 mi) downstream of the bridge and then attack the north end. The boats were requested for late afternoon, however they did not arrive as requested.

The 1st and 5th Battalions, Coldstream Guards, were attached to the division. A supply attempt by 35 C-47s (out of 60 sent) was