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USAF AIRBORNE OPERATIONS WORLD WAR II
AND KOREAN WAR

Lee Bowen, et al

Department of the Air Force
Washington, D. C.

March 1962

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FOREWORD

The materials for this study were originally prepared to meet an urgent request from the Directorate of Operational Requirements, Headquarters USAF. Because of the continuing and growing interest in airborne operations, these materials have been refined and issued in the present form as a historical study. It is intended as a useful source of information for planners and others concerned with the relationship of past operations to the present and the future.

With the exception of the southern France operation in August 1944, the most important USAF airborne operations of World War II and the Korean War have been included. They represent, however, almost all of the USAF airborne effort in these wars, for such other airborne operations as occurred were of lesser size and consequence. Statistical information has been limited to the most significant aspects of the operations. The footnotes are a reliable guide to sources that will provide far more detailed information on these operations than could be included here. Deserving of special commendation to the reader who is interested in further exploration of the subject are the two USAF Historical Division studies by John C. Warren: No. 74, Airborne Missions in the Mediterranean, 1942-45, and No. 97, Airborne Operations in World War II, European Theater.

Because of the severely limited time allowed for the original study, it was organized as a collaborative effort by the following authors:

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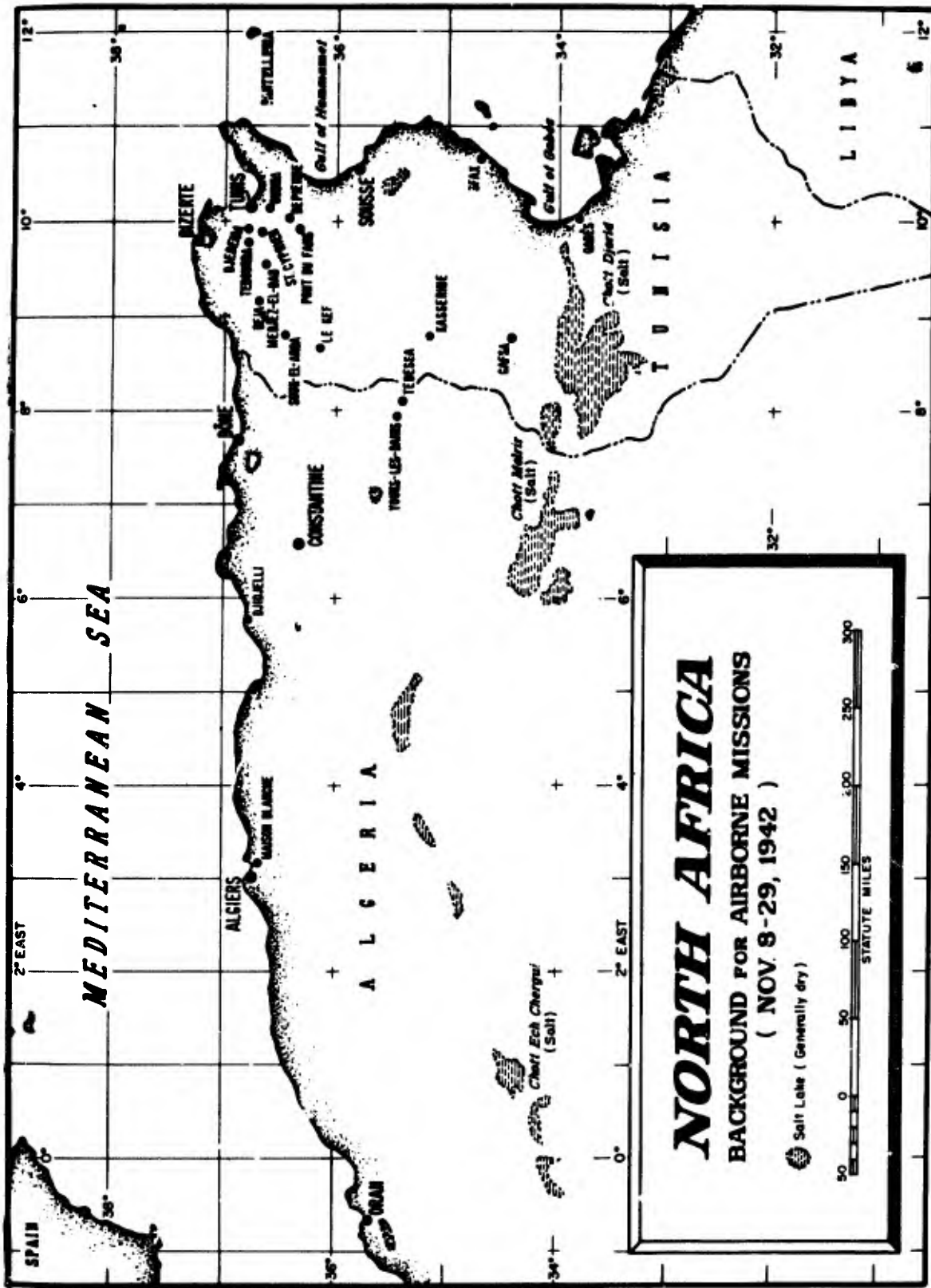
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Reprinted from USAF Historical Study 74, p. 15.

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I. AIRBORNE ASSAULT OPERATIONS IN NORTH AFRICA
NOVEMBER 1942

The first Allied airborne assault of World War II was planned and executed as a part of Operation Torch, the Anglo-American invasion of North Africa on 8 November 1942. The Torch invasion force of 107,000 men, under the command of Lt. Gen. Dwight D. Eisenhower, was divided into three task forces--Western, Center, and Eastern. The Western, launched from the United States, was to take Casablanca; the Center and Eastern, both launched from England, were to take Oran and Algiers respectively. Control of these key points in French Morocco and Algeria and their surrounding military installations would give the Allies control of these countries. It was hoped that the Eastern Task Force would be able to drive eastward immediately and take Tunisia. It was essential that the defending French forces, consisting of about 105,000 men operating strong coastal defenses and about 350 aircraft, be persuaded to welcome the invaders or make only a token defense, or that they be quickly overwhelmed.¹

The two airfields near Oran--La Senia and Tafaraoui--were major objectives of the Center Task Force because they would be terminals for Allied aircraft flying in from England and Gibraltar, and these planes were essential to control of the air over Algeria. Since the two airfields were well shielded by the Oran fortifications, the Torch planners decided on an airborne attack, despite the 1,100-mile flight distance and other difficulties involved. Over the objections of Air Marshal William L. Welsh, ranking air member of the staff, they allocated

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half of the 1,000 paratroops available and 39 C-47's to this effort in support of the Center Task Force. The remainder of the available paratroops were conserved for the dash to Tunis after D-day.²

Two U.S. organizations, the 60th Troop Carrier Group and the 2d Battalion of the 502d Parachute Infantry Regiment, constituted the Parachute Task Force under the command of Col. William C. Bentley, a USAAF pilot. Bentley in turn received his orders from the Twelfth Air Force, newly created for the African operation. Once the landing was made, however, Col. Edson D. Raff, commander of the paratroop battalion, would assume full independent command pending contact with the Center Task Force ground commander.³

The combat mission of the battalion was to seize Tafaraoui airfield, 20 miles south of Oran, for use of the Allied air forces and then to dispatch a part of the force to neutralize La Senia airfield, 15 miles north. Takeoff from the southwest tip of England was set for 1700 hours, 7 November 1942, with the jump eight hours later, at 0100. An alternate plan, to become operative if prior word arrived that the French would not resist, provided for a peaceful landing by daylight at La Senia on the morning of the 8th. The remaining paratroops under Allied Force Headquarters, about 400 British, were to be flown to Algiers on D plus 1 by the 64th Troop Carrier Group of the Twelfth Air Force.⁴

At 1630 on 7 November the Parachute Task Force received word that Plan A, the war plan, was canceled and Plan B, the peace plan, was in effect. This was to prove a cardinal error, but it was not corrected before the takeoffs between 2105 and 2145, after which no

contact was possible. The force consisted of 39 officers and 492 men of the paratroop battalion and 122 officers and 73 men of the troop carrier group. During the early part of the flight, over the Bay of Biscay, a small number of Spitfires and Beaufighters provided escort.⁵

The operation, launched from bases in Cornwall, England, was the longest-range airborne assault of the war. Numerous other difficulties also beset the untried force. About half of the 1,100-mile distance had to be flown over Spain, a nation technically neutral but aligned with the enemy. The flight had to be made at night, and clouds at the required 10,000-foot flight level further lowered visibility. The navigators had only limited training in celestial navigation and at the last minute were issued unfamiliar equipment. Because of misunderstandings over times and frequencies, the two clandestine radio beacons provided near Oran proved useless. Fourteen of the pilots were able to obtain their planes only at the last minute, and they took off for the mission with inadequate rest and the most perfunctory briefing. Only the lead planes in the 10-plane formations had adequate charts.⁶

Under the circumstances it was remarkable that 33 of the 39 aircraft reached the vicinity of Oran, since most of the planes lost contact with each other during the flight and navigated by dead reckoning, only to be pulled miles off course by an unpredicted wind. A few planes actually reached La Senia and attempted to land but were fired on by anti-aircraft guns. Most wandered over the desert miles west of the objective, and by 0900, after 9 to 11 hours in the air, all had landed from shortage of fuel or had been forced down by French fighters.

Fortunately, the flat and treeless beds of dry salt lakes permitted both landings and takeoffs, though mud was a serious hazard. Some planes had discharged their loads of paratroopers in flight, and the largest concentration of these, headed by Colonel Raff, attempted to intercept a "French" armored column only to find it was American. Later, Raff assembled 250 of his men, but they were remote from any military objective, and they set off on foot for Tafaraoui. Many others, including Colonel Bentley, were taken into custody by French soldiers. Nevertheless, by noon, Tafaraoui airfield, the main objective, surrendered to American ground troops, and during the afternoon some 25 of the C-47's with two loads of paratroopers flew into the airfield only to receive an artillery bombardment when on the ground. At noon on 10 November, when Oran capitulated, 14 of the aircraft were considered operational and 150 of the paratroopers were reported fit for action within three days, but the number rose later as other planes and men straggled in.⁷

Although the Center Task Force had succeeded in its mission, the Parachute Task Force had contributed virtually nothing, except to distract some small enemy forces. Some valuable lessons were learned from the failure, but half the parachute forces available to the Allies had been employed on a mission that had only the slightest prospect of success, with resulting serious losses of men and aircraft. These forces, if husbanded and added to the remaining parachute forces soon to be successfully employed, might have greatly shortened the campaign in North Africa. In aftermath it was obvious that Plan B, which provided for an unopposed landing at La Senia on the morning of D-day, was particularly illogical because little time would have been lost

by waiting until the landing fields had actually been secured. If this had been done, the paratroops would have been ready by 11 November for immediate action to seize Tunis or Bizerte. All that could be said in extenuation of Plan B was that Plan A, which called for the assault jump at night, from all indications would have been even more disastrous. The contention of Air Marshal Welsh that the paratroopers should be conserved for the subsequent dash for Tunis was shown to have been correct.⁸

The British paratroop force of about 400 men, together with the surviving elements of the American force, was now to be put to good service in a series of four extemporaneous drops after D-day. C-47's of the Twelfth's 64th Troop Carrier Group provided transport for the British troops. On 11 November, 34 of these planes landed the British force at Maison Blanche airfield outside of Algiers. That afternoon and the following morning the 25 surviving operational C-47's of the 60th Group arrived with 304 paratroops from Tafaraoui.⁹

Immediately after the arrival of the British paratroops, Lt. Gen. Kenneth A. N. Anderson, commander of the British First Army and in charge of the Allied advance into Tunisia, directed them to seize Bone airfield, about 275 miles to the east along the coast and near the border of Tunisia. At 0830 the following morning, 12 November, 26 aircraft of the 64th Group, escorted by about a dozen Spitfires, successfully dropped 312 British paratroops at the designated point, and they took possession of the field without opposition.¹⁰

On 13 November General Anderson directed the remnant of the American Parachute Task Force to capture the Algerian town of Tebessa,

about 110 miles south of Bone near the Tunisian border. On the basis of later information, Colonel Raff, commander of the paratroops, and Maj. Martin E. Wanamaker, ranking officer of the 50th Group, agreed to proceed by first capturing Youks-les-Bains airfield, 10 miles west of the town. Taking off from Maison Blanche at 0730 on 15 November in 20 planes, the more than 300 paratroops were escorted by a dozen Spitfires and Hurricanes. They dropped at 0945 and were cordially welcomed by the French regiment guarding the field. Colonel Raff did not stop at Tebessa, but secured permission by telephone to advance 80 miles to the southeast into Tunisia and seize Gafsa.¹¹

Meanwhile, additional British paratroop reinforcements had arrived at Algiers by sea and moved to Maison Blanche airfield. Within 24 hours of their arrival on 13 November, General Anderson ordered them to capture Souk-el-Arba. This town, about 70 miles southeast of Bone, was a major junction on the highway to Tunis and the site of a good airfield. The first attempt on 15 November was forced back by bad weather, but on the following day 32 planes dropped 384 British paratroops successfully. As at Youks the French greeted the newcomers as friends and derived from the drop the confidence they needed to turn against the Germans. Commandeering buses, the paratroops pushed ahead another 40 miles to seize Beja and hold it until the First Army ground troops arrived on the scene.¹²

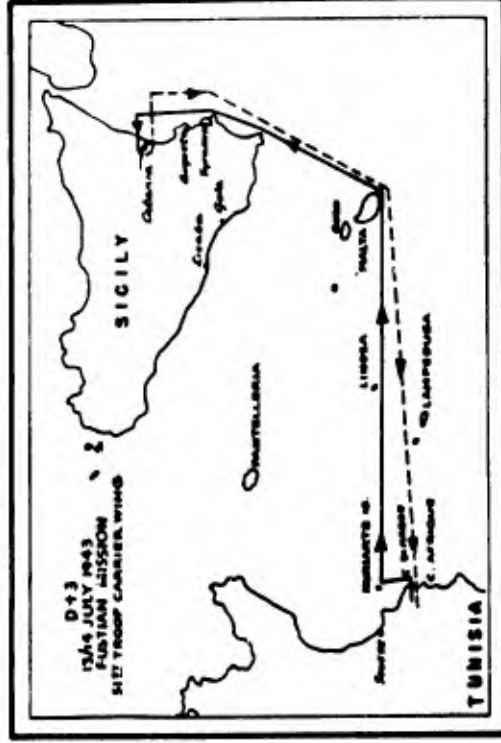
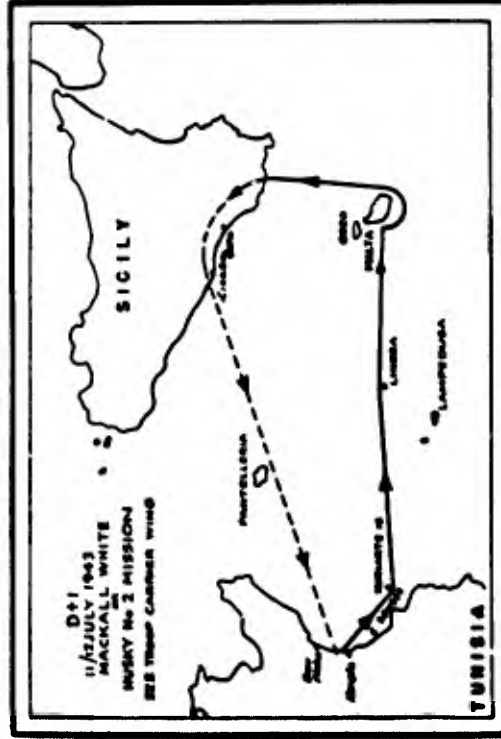
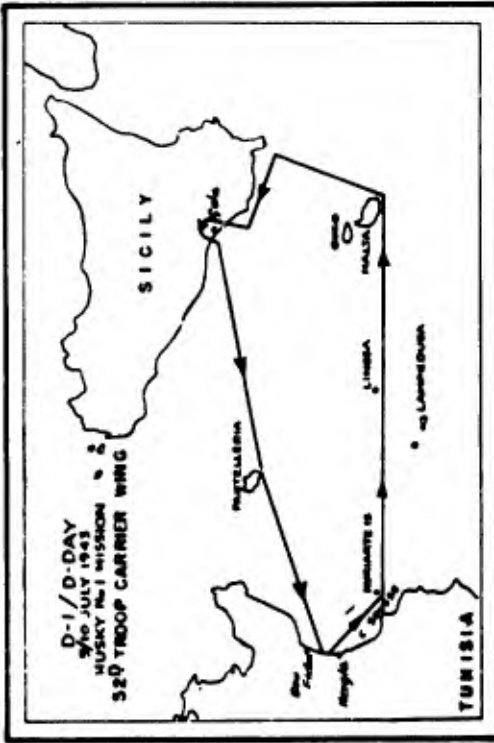
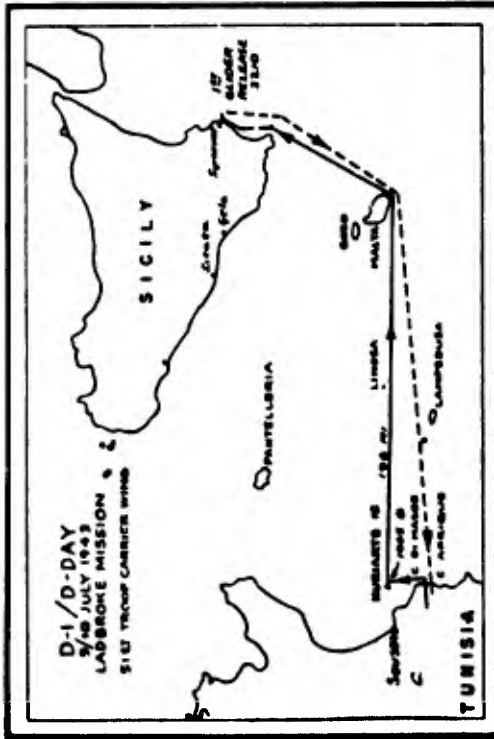
The fourth and last of these drops was the least successful. It came on 29 November, with the Allies driving on Djedeida, 25 miles from Tunis, and hoping to break through to capture the city before the winter rains set in. General Anderson of the First Army directed the

British 2 Parachute Battalion to capture and neutralize two airfields a few miles southwest of Tunis, then push west toward St. Cyprien to meet the advancing Allied forces. Since the enemy forces were still quite limited and were deployed to face the main Allied drive, a considerable opportunity existed.¹³

Forty-four planes of the American 62d and 64th Groups took off from Maison Blanche between 1130 and 1230 on 29 November, loaded with 530 paratroops under the command of Lt. Col. John D. Frost. The formation, headed by Col. Paul L. Williams, was escorted by 26 Hurricanes, P-38's, and Spitfires during the 400-mile flight. The drop was made over Depienne airfield, 25 miles southwest of Tunis, at 1450 from a height of 600 feet, and the force was scattered over an area one and a half miles long and a half mile wide. Fortunately the airfield was undefended, and at 2200 the paratroops moved on foot and by mule carts toward Oudna airfield, 15 miles northeast and only 10 from Tunis. They captured it the following day after a brief skirmish.¹⁴

Within less than an hour the Germans counterattacked with strafing planes and heavy tanks, pinning down the invading force on the airfield till night. The paratroops remained in possession of the field during the night, but learned at dawn by radio that the main Allied attack had been temporarily called off. To avoid capture Colonel Frost's force chose to attempt to run the enemy gantlet and join First Army forces at Medjez-el-Bab, 40 miles west of Oudna. Although their heaviest weapons were two antitank rifles, they fought off the enemy in four engagements while marching 60 miles over back trails during four nights to reach the Allied lines. There were 180 survivors.

This ended the airborne operations in North Africa, the paratroops being used during the winter and spring as ordinary infantry.¹⁵



AIRBORNE OPERATIONS. HUSKY

Reprinted from W. F. Craven & J. L. Cate, eds, The Army Air Forces in World War II (Chicago, 1949), Vol. II, p. 448.

II. AIRBORNE OPERATIONS IN SICILY

9-14 JULY 1943

The Allied plan to invade Sicily, decided on at the Casablanca Conference in January 1943, presupposed the use of airborne troops. These troops would be used in both the American and British operations to help neutralize beach defenses and prevent the Germans from pinning down the invaders before they could gain a foothold. The seaborne operation would consist of a landing by the British Eighth Army on the east coast of Sicily below Syracuse and around the southeast corner of the island and two landings by the American Seventh Army on the southern coast--one near Gela and the other near Licata farther to the west. So important were the airborne operations considered that they largely determined the date of D-day, 10 July. The paratroops needed dim light in which to make a night drop, and this condition was expected on the night of 9-10 July, when a quarter moon would set half an hour after midnight.¹

There were four separate airborne operations in the Sicilian invasion: (1) Husky I, a parachute drop about five miles northeast of Gela on 9-10 July, (2) Husky II, a parachute drop three miles east of Gela on 11-12 July, (3) Ladbroke, a glider mission to a point just south of Syracuse on 9-10 July, and (4) Fustian, a parachute mission reinforced by gliderborne artillery, five miles south of Catania (north of Syracuse) on 13-14 July. The Twelfth Air Force furnished the 51st Troop Carrier Wing to transport elements of the British 1 Airborne Division and the 52d Troop Carrier Wing to carry troops of the American 82d Airborne Division. All

missions took off from fields in the Enfidaville-Kairouan-Sousse area south of Tunis, assembled over the Kuriate Islands, and flew around the southeastern end of Malta on their route to Sicily. They had fighter cover during daylight.

The Sicilian airborne operations took place under severe handicaps caused by the late arrival of units and equipment and a lack of training and experience. Gliders arrived late in northwest Africa, and most of the crates in which they were shipped--five crates for a glider--landed at widely separated places. The great difficulty in assembly helped produce what came to be known as the "glider crisis." Once settled in Tunisia, the combat units found that there was not enough time to obtain training that would acquaint them with combat conditions.²

Husky I, 9-10 July 1943

The first Husky operation would drop paratroops northeast of Gela around midnight of 9 July. The force would consist of the 505th Parachute Infantry Regiment reinforced by the 3d Battalion of the 504th, two batteries of 75-mm. pack howitzers, a company of engineers, and sundry small detachments--3,405 men in all. Commanded by Col. James M. Gavin, this combat team would assist the American 1st Division, scheduled to land on the beaches around Gela at 0245, 10 July, by barring the roads leading into Gela from the north and east against German reserves. After junction with the 1st Division, the paratroops were to help capture the important airfield of Ponte Olivo, five and a half miles north-northeast of Gela.

Husky I employed 226 C-47's from five groups of the 52d Troop Carrier Wing. The planes got off by 2045, 9 July, but because of darkness, high

winds, and lack of experience in night navigation, the formations broke up and the planes became widely scattered before reaching Sicily. Eight aircraft were lost to hostile fire, but all of them had dropped their troops before being hit, and about half the crews survived. Ten other planes received slight damage, and three returned without dropping their troops because they could not find the drop zone.³

This was the first major paratroop operation carried out at night and by far the largest undertaken before the invasion of Normandy. The results were sadly disappointing. Troops were dropped at widely scattered points over southern Sicily, some in the southeast corner 50 to 65 miles from their objective. Some were able to cooperate with the British, and others were close enough to the intended zone to help the troops who had landed on the beaches. The guerrilla activities of many of the widely dispersed paratroops doubtless helped confuse and demoralize the enemy, but this was a severe waste of crack troops. Many men were captured by the enemy.

Less than one-sixth of the paratroops supposed to arrive in the drop zone landed in or near it. These men--one company and part of another--achieved the primary mission of seizing and holding the junction of the Niscemi road with the coastal highway, but so small a force could not have succeeded if there had been effective opposition. Two other small groups performed tasks roughly in accordance with their mission.

Husky I was deemed a qualified success since it hastened the Seventh Army's advance, but it revealed serious weaknesses in troop carrier performance. The AAF could not as yet put down a large force reasonably close to a chosen zone at night. Troop carrier units needed better

navigational aids, more training in night formation flying, and experience in pathfinder techniques.⁴

Husky II, 11-12 July 1943

Mounted in an effort to assist the hard pressed American troops around Gela, who were striving to repulse a sharp German counterattack, the second Husky operation was not finally decided upon until the very day of its execution--11 July. The operation had as its immediate objective the seizure of Farello, an abandoned airfield three miles east of Gela. Troop carriers were to drop the 504th Parachute Infantry Regiment, less one battalion; the 376th Parachute Field Artillery Battalion; and a company of engineers--about 1,900 men in all. The troops were to be flown in by 144 C-47's from four groups of the 52d Troop Carrier Wing.

At first all went well; the troop carriers rounded Malta and approached Sicily in good formation. The first flight or two made their drops over Farello airfield at about 2240 on 11 July without difficulty, but succeeding flights ran into heavy fire from friendly troops and ships. Because of the haste in mounting the operation, neither the Allied ships along the route nor the troops on the battlefield had received sufficient warning. Incessant fire from friendly ships and troops scattered the troop carrier formations. Except for eight pilots who gave up and went home with full loads, the crews dropped their loads as best they could. But they were inclined to drop them prematurely, miles east of Farello.⁵

The total plane loss in Husky II reached 23 lost and 37 badly damaged out of the 144 dispatched. Casualties in the 52d Troop Carrier Wing totaled 7 dead, 30 wounded, and 53 missing. Six planes were shot down before they could drop their troops, and others were under fire for

30 miles after they left Sicily. Probably a majority were shot down by Allied naval fire. One plane fell to enemy fire, but even close to the front the heaviest fire came from Allied guns.

Obviously, the paratroops were scattered widely, and some of them were fired on by men of the 45th Division, which was new to combat. Even the experienced 1st Division fired on descending troops, mistaking them for a German parachute regiment. More than 400 paratroops were casualties; 44 died in crashes, 4 were found dead in planes, and many more were wounded in planes. Of the 5,307 paratroops who took part in Husky I and Husky II, 3,024 could be reassembled for action on 14 July. But from the military point of view, the tragedy lay in the dispersal of a crack combat unit just when it was badly needed. Husky II proved to be a costly and demoralizing failure, but before being fired on by friendly forces it had appeared to be well on the road to success.⁶

Ladbroke, 9-10 July 1943

Ladbroke had the job of taking and holding the Ponte Grande bridge, over which Highway 115 crossed two canals about one and a half miles southwest of Syracuse. This was the route over which the British Eighth Army would approach the city, and Gen. Bernard L. Montgomery believed capture of the bridge would greatly assist his drive. In this mission, 109 planes of the 51st Troop Carrier Wing plus 35 British planes were to tow 136 American-made Waco gliders and 8 British Horsas* loaded with approximately 2,000 members of the British 1 Airborne Division. Most of the gliders had British pilots.

*The Waco was a 15-place glider carrying a military load of 3,750 pounds, and the Horsa was a 30-place glider carrying 6,900 pounds.

A total of 137 of the 144 planes got off with their gliders between 1842 and 2020, 9 July, and more than 90 percent of the planes reached the shores of Sicily. Two planes turned back before reaching Sicily, two turned back when they were unable to orient themselves over land, one Waco was accidentally released, and one Horsa broke loose from its tow ship. An additional 11 or 12 gliders were released 15 miles south of their objective, and 1 was released 15 miles north of Syracuse. Actually, so many gliders landed in the sea or disappeared, probably at sea, that it is impossible to say how many reached the Syracuse area. Probably between 109 and 119 planes towing more than 1,200 fighting men released their gliders within what would have been, in daylight, full sight of their landing areas and of Syracuse.⁷

But, near as they were, not 1 out of 15 of the men were able to reach their objective that night. Flak was too light to cause much damage, but the lights, flares, and smoke confused the pilots. Formations overran each other to such an extent that it seemed the air was full of planes and gliders coming from all directions. As many as 30 percent of the intercom sets, supposed to maintain contact between planes and gliders, worked poorly or not at all.

Although all of the 137 planes that left Tunisia had returned safely to friendly territory by dawn of 10 July, the situation back in Sicily was tragic. Probably not more than 54 gliders landed in Sicily. At least 69 Wacos came down at sea. Seven Wacos and three Horsas, missing with all hands, may have come down at sea. In those which hit the water, on an average of three men per glider were drowned. About 605 men were lost, 326 of them missing and probably drowned.

It seems unwise to have expected success when gliders were released both over water and at night--occupants of 56 ditched gliders testified that they had been released at least 3,000 yards from shore. Also, most of the gliders were released too low to glide to their objectives--they should have been released over the shore or 1,000 feet higher. Of 49 gliders that landed within 10 miles of their goal, only 2 landed in their proper zone. Twenty got within a mile of the Waco zone, and two Horsas came down within a mile of their zone.

Although the terrain of the drop zones was flat and appeared suitable for glider landings, the surrounding country was checkered with orchards and vineyards and the small fields were bounded by stone walls. When the Wacos hit obstacles the hinged nose doors usually jammed shut. Seven Wacos hit trees, and six Wacos and two Horsas crashed into stone walls. With one exception, casualties from crashes were surprisingly low, but most of the heavy equipment was damaged or jammed within gliders.

Probably less than 100 men reached the Ponte Grande bridge by morning, and they could not hold it against enemy troops. By 1530, 10 July, only 4 officers and 15 men remained unwounded, and they surrendered after being driven from the bridge. Before the Germans could plant fresh charges and blow up the bridge, however, patrols of the British 5 Division arrived, retook the bridge, and freed the surviving paratroops.

Although local action at many widely scattered points damaged enemy communications and morale, and General Montgomery said taking of the bridge saved him seven days, the mission proved costly and inefficient.

Only about 5 percent of the airborne troops reached their objective and went into action against the Ponte Grande bridge.⁸

Fustian, 13-14 July 1943

Operation Fustian had as its mission capture of the Primasole bridge crossing the Simeto River about five miles south of Catania. Success would enable the British Eighth Army to pass quickly over the river in its rush for Catania, which it hoped to seize before the Germans could consolidate their defenses.

This was a parachute mission reinforced by gliderborne artillery. A total of 135 planes would provide the airlift. First, 105 C-47's and 11 Albemarles would carry 1,856 men of the British 1 Parachute Brigade plus some engineers and medical personnel. These would be followed by 12 Albemarles and 7 Halifaxes towing 8 Waco and 11 Horsa gliders. The gliders would carry their pilots, 77 artillerymen, 10 six-pound guns, and 18 vehicles.

Takeoff occurred between 1920 and 2200, 13 July. One C-47 and one Albemarle carrying troops had to turn back. The force flew a complicated course—five overwater turns—in an attempt to avoid friendly convoys, but failed to do so. The formations ran into real trouble as they approached Cape Passero at the southeast corner of Sicily, with more than half the planes encountering friendly fire over the 40 miles where their route bordered the naval zone. About 30 planes were fired on by Allied ships at points 8 to 23 miles offshore. Only two were shot down, but nine were turned back by injury to planes or pilots; six more gave up and went home without receiving much damage.

The planes that pushed on to the Catania area encountered moderate to heavy enemy fire, and nine were shot down. All had made at least partial drops and four limped out to sea for successful emergency landings on water. In all, 14 planes, about 10 percent of the force, were shot down and 35 were damaged, one by a barrage balloon. Casualties to plane crews totaled 1 dead, 14 wounded, and 35 missing. Twenty-five planes had turned back to Africa after passing Malta.

Only 39 plane-loads of men, plus a few men from three other planes, came down within a mile of the four drop zones, which were located in flat, heavily ditched fields along the Simeto River. Twenty-two planes dropped men within five miles of the drop zones. All but four of the rest dropped their troops within 10 to 11 miles of the objectives, but these four dropped them on the slopes of Mt. Etna, 20 miles away.⁹

By 0100, 14 July, 75 to 100 men who had gathered on Drop Zone (DZ) 2 advanced to the bridge where they joined 50 paratroops from DZ 1 already fighting. Although the Italians defending the bridge were joined by German parachutists of the Goering Division, the British had taken the bridge by 0400. Thirteen plane-loads of men, dropped on DZ 3, set up defensive positions in the surrounding hills. Only 4 gliders, all Horsas, of the 16 that left Africa played any significant part in the operation; 4 were probably shot down, 3 made disastrous crash landings, 4 landed in strong enemy defenses several miles away, and 1 was accidentally released over the water. Men from the gliders did have three 6-pound guns in position around the bridge at dawn, by which time 250 paratroops had assembled at the bridge.

Germans from Catania counterattacked the bridge about noon and by 1800 had forced the British to join their comrades in the hills to the

south. There, assisted by fire from a cruiser, they stood firm. The paratroops were joined by the advanced guard of the Eighth Army on 15 July, but it was not until shortly after dawn on the 16th that they were able to retake the bridge. The paratroop brigade had lost 27 men killed, 78 wounded, and 314 missing.

A total loss of 14 planes and about 500 men would not have been a heavy price to pay for breaking the German defenses, but the Germans succeeded in holding a line in front of Catania until early August, when they were outflanked by Allied operations in the Sicilian interior. If the operation had been successful, the paratroops could have held the bridge and the Eighth Army would have crossed the Simeto on the 15th rather than the 16th. Whether the exhausted troops could have broken through the German defenses and taken Catania is doubtful. Although the British believed that Operation Fustian enabled them to cross the Simeto a week sooner than would otherwise have been possible, the operation bore little fruit.¹⁰

Conclusions

Airborne operations in Sicily taught the Allies several important lessons: (1) the great need for beacons and signals set up by pathfinder units to guide troop carriers to their objective, (2) the necessity for simple routes, sound navigation, and close formation flying, especially at night, (3) the need for extensive training in night flying, (4) the folly, demonstrated in Ladbroke, of releasing gliders over water in the dark, (5) the advisability, also shown in Ladbroke, of having large landing zones, (6) the need for improvements in the Waco glider, the cargo door

of which tended to jam in a rough landing, and (7) the need, painfully demonstrated during Husky II and Fustian, to avoid concentrations of friendly AA or to secure absolute control over its fire.

The shortcomings of the Sicilian airborne operations convinced many American military leaders that large airborne operations were too costly to be of value, but commanders of the airborne divisions and troop carrier wings were not convinced.¹¹

Forces Employed in
Sicilian Airborne Operations

Husky I

1. Paratroops--82d Airborne Div
 - 505 PIR
 - 3d Bn of 504th PIR
 - 2 btry 75-mm pack howitzers
 - 1 company of engineers
 - Sundry small detachments
 - Total strength--3,405 men

2. Aircraft--226 C-47's of 52d TCW--
planes from 5 gps

Ladbroke

1. Troops--British 1 Airborne Div
(Airlanding Brigade)
Total strength--2,000 men

2. Aircraft--51st TCW

C-47's	--109
Albemarles	-- 28
Halifaxes	-- 7
	<u>144</u>

3. Gliders

Wacos	--136
Horsas	-- 8
	<u>144</u>

Husky II

1. Paratroops--82d Airborne Div
 - 504th PIR (less 1 bn)
 - 376th Prcht Field Art Bn
 - 1 company of engineers
 - Total strength--1,902

2. Aircraft--144 C-47's of 52d TCW--
planes from 4 gps

Fustian

1. Paratroops--British 1 Prcht
Brigade
A few engineers & medical pers
Total strength--1,856 men

2. Gliders

Wacos	--8
Horsas	--11

3. Aircraft

C-47's	--105
Albemarles	-- 23
Halifaxes	-- 7

SOURCE: USAF Historical Study 74; MAAFCC, Report of Operations and Activities, 18 May-31 Jul 43; Brit War Cabinet, Chiefs of Staff Committee Report on Employment of Airborne Forces (Lessons of Husky).

Experiences of Troop Carriers
in Sicilian Airborne Operations

<u>Husky I</u>				<u>Husky II</u>		
Planes used	--	226	C-47's	Planes used	--	144 C-47's
Lost	--	8		Lost	--	23
Damaged	--	10		Damaged	--	37
Returned with troops	--	3		Returned with troops	--	8
Personnel Missing	--	25		Personnel Killed	--	7
				Wounded	--	30
				Missing	--	53
<u>Ladbroke</u>				<u>Fustian</u>		
Planes used	--	144		Planes used	--	135
Taking off	--	137		Lost	--	14
Returned with gliders	--	4		Damaged	--	35
Lost	--	0		Returned with troops	--	25
Damaged	--	0				
Missing	--	0				
Gliders Used	--	144		Gliders Used	--	19
Taking off	--	137		Taking off	--	16
Returned	--	4		Missing	--	16
Missing	--	133				
				Personnel Killed	--	1
				Wounded	--	14
				Missing	--	35

SOURCE: USAF Historical Study 74; NAAFTCC, Report of Operations and Activities, 18 May-31 Jul 43; Brit War Cabinet, Chiefs of Staff Committee Report on Employment of Airborne Forces (Lessons of Husky).

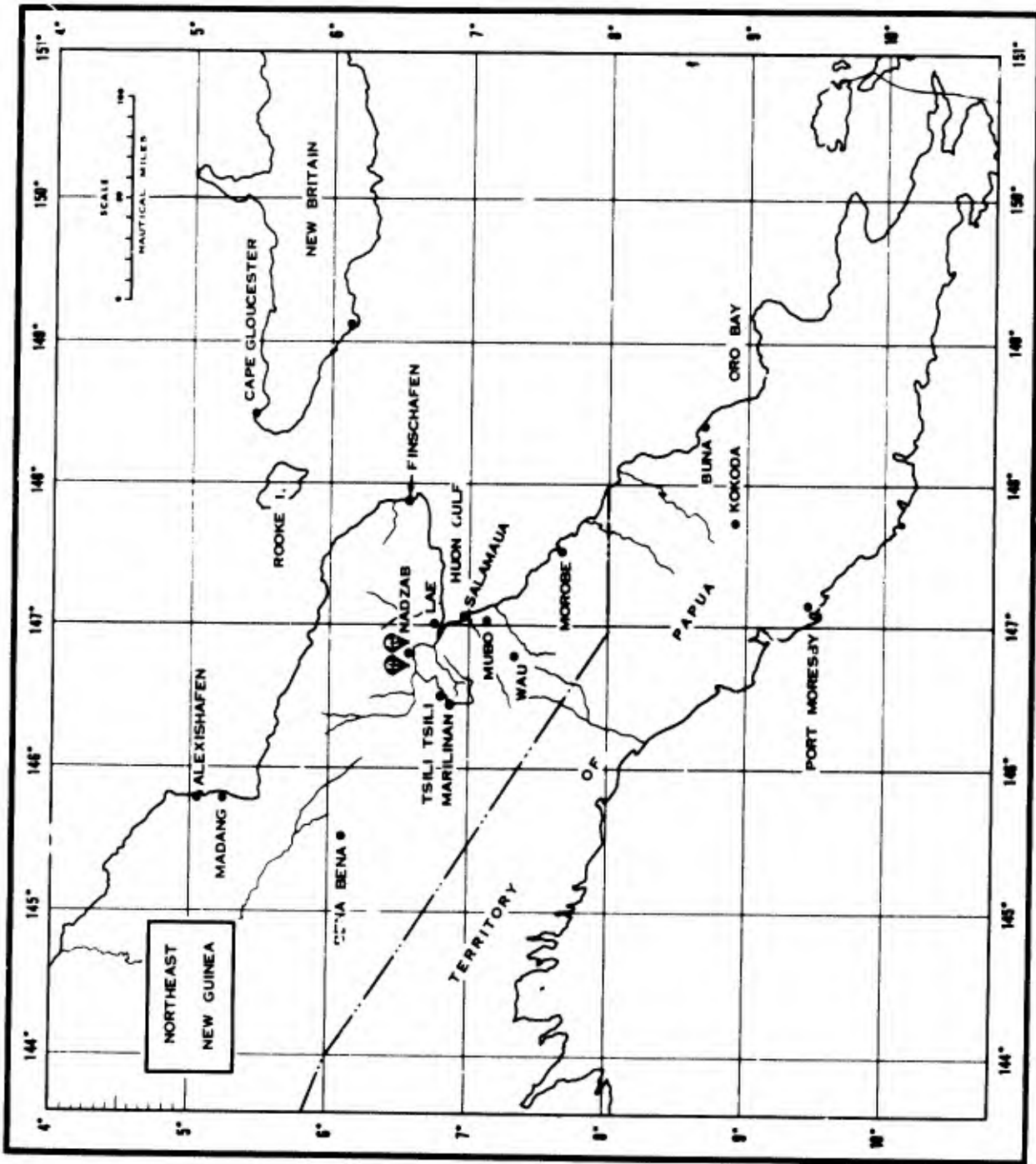
Casualties in Sicilian Airborne OperationsU.S. 82d A D (Husky I & II)

Killed in Action	--	190
Died of Wounds	--	$\frac{6}{196}$
Prisoners	--	172
Missing in Action	--	48
Wounded	--	137

Casualties of British 1 Airborne Division

Ladbroke	--	41 off & 564 other ranks
Fustian	--	20 off & 423 other ranks

SOURCE: USAF Historical Study 74; NAAFICC, Report of Operations and Activities, 18 May-31 Jul 43; Brit War Cabinet, Chiefs of Staff Committee Report on Employment of Airborne Forces (Lessons of Husky).



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III. AIRDROP AT NADZAB, NEW GUINEA 5-6 SEPTEMBER 1943

The first U.S. combat airdrop in the war against Japan occurred on 5 September 1943 at Nadzab, about 20 miles northwest of Lae, New Guinea. Lae was an enemy stronghold on the northeastern coast, strategically set at the mouth of the Markham River valley. The airdrop and a follow-up airlift of an entire Australian division by troop carriers of the U.S. Fifth Air Force were part of the action required for the execution of Operation II of the Eltton Plan--the seizure of this valley and the Huon Peninsula.¹

The jungle-covered and mountainous terrain of New Guinea, the shortage of ships for amphibious landings, and the lack of enough aircraft for a total airborne attack combined to force the decision to employ an assault by parachute troops and a subsequent airlift to complement an amphibious operation.²

As in other New Guinea operations, the ground forces were under the command of the New Guinea Force, whose commander, Gen. Sir Thomas Blamey, was responsible for coordination of ground, air, and naval planning. The commander of Allied Air Forces, Lt. Gen. George C. Kenney, was authorized to deal directly with him, and the principle of cooperation rather than unity of command seems to have prevailed. The 54th Troop Carrier Wing was solely responsible to Fifth Air Force, Advance Echelon.³

Ground troops had already advanced up the northeastern New Guinea

coast to a position not far below Salamaua, about 25 miles east of Lae, but it was decided to focus on the capture of Lae with the expectation that Salamaua would fall also. The enemy had 10,000 men in the Lae-Salamaua area. The plan called for a pincer movement whereby Allied troops, airdropped and airlanded at Nadzab, would cut off the escape of the Japanese from Lae after a landing of the amphibious force on the beaches east of Lae on 4 September. The VII Amphibious Force would land 7,800 men of the Australian 9 Division that morning, 2,400 more that evening, and 3,800 on 5-6 September.⁴

Action of 4 September was preceded by heavy Allied air attacks on enemy airfields, shipping, and supply points. Beginning on 1 September, Allied bomber attacks, generally protected by fighters, were bitterly resisted by enemy aircraft, estimated at 76 fighters and 59 bombers in New Guinea and 109 fighters and 145 bombers in New Britain. The Japs had been building up strength on the four Wewak airfields only to have hundreds of planes destroyed by air strikes. The Allied Air Forces supported the amphibious landing on the 4th with heavy and light bomber attacks and with fighter cover.⁵

The 54th Troop Carrier Wing provided 84 C-47's for the airdrop at Nadzab. Loading the 503d Parachute Regiment and associated Australian units at Port Moresby early on 5 September, the C-47's took off and flew northwest over the 9,000-foot ranges of the Owen Stanley mountains a distance of about 200 miles to drop 1,700 paratroops, supplies, and artillery onto the kunai-grass plains of Nadzab. A cover of 100 fighters protected the unarmed transports, 6 squadrons of B-25 strafers with fragmentation bombs led the flight, 6 A-20's laid a smokescreen, and

5 B-17's followed with parachute packages. Counting all types, there were 302 aircraft in the flight. The B-17 supply unit dropped 15 tons of supplies to the paratroops that day.⁶

In the operation, 5 of the 84 transports were reserved for the Australian engineers and artillery, to be dropped after the paratroops. The remaining 79 C-47's took off from Moresby at 0825 in three flights, two of 24 aircraft and one of 31. They flew in 3-ship elements, in trail, and rendezvoused with fighter cover of P-38's, P-39's, and P-47's at 30-Mile Airdrome. They re-formed over Marilinan into 6-plane elements in step-up right echelon, all three flights abreast. From 9,000 feet over the mountains the transports came down to 3,500 feet at Marilinan and then to the required 400 to 500 feet for the drop, air-speed 100 and 105. Each plane dropped 19 or 20 paratroopers in quick succession, beginning at about 1020. The weather was good and the drop was highly successful. All but one of the C-47's dropped their loads so precisely that approximately 95 percent of the troopers landed in the target area. No enemy fighter or ground opposition was encountered. After clearing the target the C-47's re-formed in string-of-V formation and proceeded back to Moresby, all of them landing safely by 1204.

All men of the 503d, except one who fainted, jumped as the C-47's were emptied within four and one-half minutes. Two men were killed when their chutes failed to open, and a third died as the result of a 60-foot fall from a tree; 33 men were injured.⁷

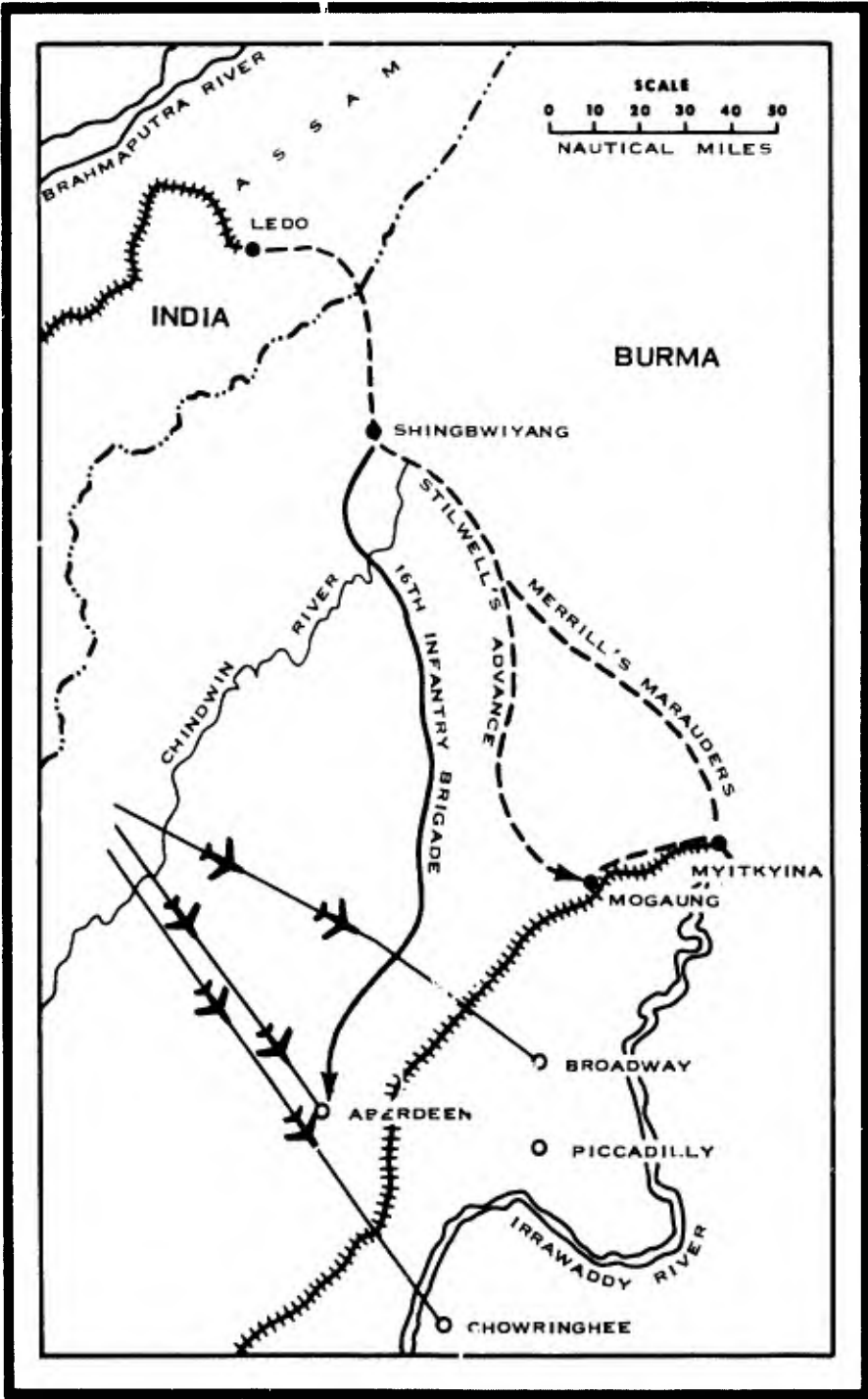
The paratroops met with practically no resistance on the ground, and by late afternoon had secured several miles of the trail to Lae. One battalion, along with Australian Pioneers who had been flown to the

area a few days previously, soon cleared an airstrip at Nadzab and had it ready to receive troop carriers by daybreak of the 6th. During the day, C-47's began to airlift troops of the Australian 7 Division from Tsili Tsili, about 35 miles southwest of Nadzab, to the Nadzab strip. The ferrying of the Australians continued on the 7th, and the C-47's also lifted a communications unit, construction equipment, and other supplies. By the 14th, Nadzab had acquired two runways, each 6,000 feet long, and a dispersal area capable of handling 36 transports simultaneously. As many as 27 troop carriers could load, unload, and take off within 45 minutes. As early as the 11th, 420 planeloads had been shuttled in from New Guinea bases.⁸

After airlanding, beginning on 6 September, the Australian 7 Division began driving down the Markham valley toward Lae while the 9 Division was pushing toward it from the beaches to the east. The ground troops were successful beyond expectations both at Lae, which fell on 16 September, and at Salamaua, occupied three days earlier.⁹

The C-47 was credited with putting forward the fighters and thus providing air cover for the amphibious operations. By camouflage and clever flying of the troop carriers, the existence of the field at Tsili Tsili was hidden long enough to stock it as a fighter base and emergency medium bomber base. From July into September the transports landed loads there daily, sometimes as many as 48 and some making repeat missions. In the same period, 9 to 18 C-47's with fighter cover dropped supplies daily to the troops near Salamaua, Bena Bena, Wau, Dobodura, and other places where there was no other means of supply. These drops achieved a general overall average of 85 percent recovery.

After the capture of Lae--"closing the back door to Lae" it was called--it was still necessary to push up the Markham valley, and the Australian 7 Division would eliminate the Japanese forces there entirely through ferrying and supply by the C-47's. The next two hops would be to Kaiapit and Sagarac. The Nadzab success initiated airlift as a standard and dependable operation, limited only by weather, to be used often and for times of considerable duration. This form of air cooperation was particularly important in the wilds of the Southwest Pacific Area.¹⁰



IV. AIRBORNE OPERATIONS IN BURMA 5 MARCH TO 17 MAY 1944

In 1942-44, Burma was a Japanese salient between China and India. Jungle-covered mountains along the frontiers, largely unbroken by roads, meant that the natural avenue for invasion of the country was from the coastal regions of the south. The Japanese had been able to exploit this gateway in 1942 because their previous occupation of Thailand and Malaya gave them access by land to the Moulmein-Pegu-Rangoon area. If the Allies were to reoccupy Rangoon and advance northward in a campaign of liberation, however, they would have to begin with amphibious operations. The Americans and British lacked the resources for such a move between 1942 and 1944. Their only alternative seemed at first to be the construction of roadways across the mountains. In 1942, few comprehended the potentialities of air for the transportation and supply of assault forces.¹

Background for Operation Thursday

During February-June 1943, British Brig. Orde C. Wingate attempted an infiltration behind the Japanese lines in which he employed the new technique of air supply. He led a small band of specially trained commandos or Chindits* into Burma. His troops, sustained by air supply from RAF aircraft flying 178 sorties and dropping 303 tons of food and equipment, used the jungle for cover and forayed the relatively open

*The term Chindit was derived from the word Chintse, the lion guardian of Burmese temples, which Wingate used in the design of the shoulder patch for his troops.

valley of the Irrawaddy River. The Chindits destroyed bridges, cut railway tracks, and blasted landslides across roads. As Wingate wrote later, it was during the 1943 expedition that he and his troops learned their way through the jungle, spotted clearings that a minimum of engineering could convert to landing strips, and gained the confidence to repeat their performance on a more extensive scale. As a result of his experiences in 1943 Wingate drew up his plans for 1944.²

Partly as a result of Wingate's effort in 1943, the military gained greater respect for air supply. Lt. Gen. Joseph W. Stilwell planned for air supply in his offensive from Ledo, in northern Assam, to Myitkyina in Burma, beginning in December 1943. Lt. Gen. Sir William Slim, commander of the British Fourteenth Army, counted on air supply for his 1944 offensives from Imphal in the north and along the coast through Arakan in the south. In September 1943, Maj. Gen. George E. Stratemeyer, future commander of Eastern Air Command (EAC), stated that "the only way we can supply any force that advances into Burma is by air." When he assumed command of EAC, 15 December 1943, Stratemeyer brought together all the AAF and RAF air supply activities within the Troop Carrier Command under Brig. Gen. William D. Old. By this time, all of the forces in the area had come under the Supreme Allied Commander, Southeast Asia Command, Admiral Lord Louis Mountbatten.³

Under the circumstances, Wingate found ready sympathy for his 1944 expedition, which he designated Thursday. It was important to realize, he said, that he planned an operation for land forces assisted by "subsidiary air components." His object was to occupy and hold territory then in the enemy's possession. His strategy, in its final form, was to send

2,000 troops southeastward from Shingbwiayang by foot, cutting their way through the jungle to join the main force brought in by air to specified areas in central Burma near Rail Indaw. The movement required the use of airfields inside enemy lines. To avoid the risk of making initial assaults on enemy-held positions, Wingate hit upon the scheme of establishing his own airstrips at clearings in the jungle noted the previous year. Such places were far removed from enemy lines of communication. It would therefore be possible to fly in small contingents by gliders with enough engineering equipment to construct fair-weather airstrips within 24 hours. Thereafter C-47's could transport the remaining troops with little chance of enemy interference at touch-down. He thought also of using one or two of his airstrips as relatively permanent bases, "strongholds" garrisoned by a small number of regular infantry on loan from Fourteenth Army. Wingate assumed that all his troops, whether marching through the jungle from Shingbwiayang or fanning out as marauding groups from the airstrips, would be supplied by air. He hoped in this way to employ his forces in severing Japanese communications with north Burma and cutting off reinforcements to the Japanese 18th Division facing Stilwell in the Hukawng Valley, midway between Ledo and Myitkyina.⁴

Because most of the 16,000 troops in his Special Force were British,* Wingate chose the official designation of 3 Indian Division as a cover device. It was composed of 77 and 111 Indian Infantry Brigades; 3 West African Brigade; and 14, 16, and 23 British Infantry Brigades. In addition Wingate had one field and one antiaircraft battery and one battalion

*There were a few Ghurkas in 77 and 111 Indian Brigades and a few negroes in 3 West African Brigade.

of infantry from Fourteenth Army for defense of the strongholds, along with a flight of Spitfires.

In the summer of 1943, Gen. Henry H. Arnold, Commanding General, AAF, agreed to commit the 5318th Air Unit to Wingate to provide air transportation and striking power. The unit, under Col. Philip G. Cochran, was known popularly as Cochran's Air Commandos. It reached Imphal in December, with the following complement of aircraft:^{*5}

150 CG-4 gliders	100 L-1 and L-5 aircraft
75 TG-5 gliders	6 YR-4 helicopters
13 C-47 transports	30 P-51A fighters
12 C-64's for glider towing	12 B-25H medium bombers

Command and Control

In organizing 3 Indian Division, Wingate's aim was to create a self-sufficient composite force. He himself would have control of all ground and air units supporting the Special Force. He would be responsible only to Slim. Cochran found this arrangement consistent with his instructions from Arnold. Probably no one would have questioned Wingate's system of command and control except for the fact that it was soon evident Cochran's task force was not sufficient for the needs of the Chindits. Stratemyer therefore directed the Strategic Air Force, the Third Tactical Air Force, and the Troop Carrier Command--all within EAC--to provide the heavy bombers and the additional fighter and air transports required. This move in turn created complexity of command, and Stratemyer, with Mountbatten's approval, placed Cochran's Air Commandos under the Third Tactical Air

^{*}The CG-4 gliders were capable of carrying 15 passengers. The TG-5's were training gliders and could accommodate no more than 3 passengers. The liaison aircraft and the helicopters were needed for landings on very small clearings and were intended primarily to provide efficient evacuation of the sick and wounded.

Force for operational control, a serious blow to Wingate's hope for a "private air force." Stratemeyer then appointed Air Marshal Sir John Baldwin as his representative to coordinate air operations. Baldwin thus became for all practical purposes responsible for Thursday's air operations. He permitted Cochran to retain control of the fighters, bombers, and gliders of the Commandos but reassigned the C-47's to Old's Troop Carrier Command. Baldwin then had the job of appeasing the sometimes indignant Wingate who demanded explanations of every decision made for air operations.⁶

Operation Thursday's Initial Phase, 5-11 March 1944

On 4 February 1944, in accordance with Mountbatten's directive, Slim and Stratemeyer issued joint instructions to Wingate and Cochran to aid Stilwell by inflicting the maximum confusion and damage on the enemy in north Burma. The next day, 16 Brigade set out on foot from Shingbwiyang for central Burma.⁷

In the region of Imphal, Wingate was getting his other units poised for the fly-in, scheduled for 5 March. He maintained a combined headquarters for himself, Baldwin, and Cochran at Imphal. About 80 miles to the west, 77 and 111 Indian Brigades were concentrated near the sod strips at Hailakandi and Lalaghat for glider fly-in to three clearings known as Broadway, Piccadilly, and Chowringhee.* The distances in miles between these various locations were as follows:⁸

	<u>Hailakandi</u>	<u>Lalaghat</u>	<u>Imphal</u>
Broadway	268	267	182
Piccadilly	269	268	184
Chowringhee	250	248	172

*The 3 West African Brigade and 14 and 23 Brigades were scheduled to fly in a few weeks later. See below, p 36.

Take off for the gliders from Lalaghat was set for 1740. Eighty CG-4 gliders drawn up in a double row awaited their tugs to taxi into position for the hitch. After dispatch of the first 24 gliders, it would be necessary to await the return of the tugs for further movements. At 1700, when the gliders were being loaded, late photographs revealed that Piccadilly had been blocked by logs dragged across the field in regular lines. After consultation with Slim, Wingate decided to proceed with the operation, but he abandoned plans for landing at Piccadilly and concentrated on Broadway.⁹

The first tug and its towed gliders became airborne at 1808, only 28 minutes behind schedule. Other departures were as planned. The first wave of gliders carried the 77 Brigade commander, a small force of combat troops, and a detachment of American airfield engineers to prepare the landing strip for C-47's by the following night. The glider operations ran into trouble at once. First of all, the nylon tie ropes had deteriorated under exposure to the sun and weather, and some of them snapped shortly after take off. More than that, the use of one tug for two gliders--a technique accepted only because there were too few tugs--strained the aircraft in their rapid climb to avoid nearby hills. Overheated engines and abnormal consumption of fuel made it necessary to release some gliders far short of their destination. As a result, more than half of the gliders failed to reach Broadway, as shown below:¹⁰

Gliders reaching Broadway	32
Gliders landing in hostile territory	9
Gliders landing in friendly territory	9
Gliders unreported	2
Gliders turned back to Lalaghat	<u>15</u>
Total number of gliders airborne	67

At the Broadway touchdown there were other difficulties. The field was marred by deep furrows and water buffalo holes that had not shown in photographs. First arrivals lost their landing gear and could not be moved. Later arrivals crashed into the stalled gliders, and the field became a shambles. It is remarkable that this misfortune did not turn into a disaster. As it was, only 31 men were killed and 30 injured of the 539 who landed. To avoid more serious consequences, the brigade commander radioed to Imphal: "No more gliders," and the glider fly-in to Broadway ended. Fortunately, enough heavy equipment was salvaged to permit the American engineers and British troops to bulldoze an airstrip 300 by 5,000 feet. By the night of 6 March, Troop Carrier Command was able to complete the fly-in of 77 and 111 Indian Brigades, using 44 British Dakotas and 39 American C-47's. The numbers show how inadequate the 13 C-47's of the Air Commandos would have been if unaided by the Eastern Air Command. That same night, 6 March, 12 single-tow gliders landed at Chowringhee with no difficulty, and the contingent immediately prepared the field as a landing strip subsidiary to Broadway. It was not intended to use Chowringhee for more than a few days, and it was abandoned 10 March.¹¹

The initial phase of Operation Thursday ended 11 March, and there followed a brief period without further fly-ins to permit consolidation.

Operation Thursday's Second Phase, 22 March to 12 April 1944

On 10 March the Japanese opened a powerful offensive against Imphal. Within a few days they won alarming success, and Mountbatten transferred 23 British Infantry Brigade from the Special Force to Fourteenth Army.*

*This change reduced the total strength of the Special Force from 16,000 to 14,000.

At the same time, in another effort to help Slim, Mountbatten directed Wingate to accelerate his time table and fly in 14 Brigade and 3 West African Brigade as a possible deterrent to further Japanese advance in Assam. Wingate prepared a new stronghold called Aberdeen to receive the remainder of the Special Force, and the fly-in was resumed 22 March, but with the use of C-47's only. The movement was completed on 4 April for 14 Brigade and on 12 April for 3 West African Brigade. The second phase of Thursday proceeded without serious mishap for the troops despite the advent of bad weather.¹²

There was, however, one accident of major importance. On 25 March, Wingate was killed when his plane crashed into the Naga Hills while enroute from Broadway to Imphal. Maj. Gen. Walter D. A. Lentaigne, the commander of 111 Brigade, succeeded to the command of the Special Force.¹³

Enemy Opposition to Phases One and Two

The enemy had no warning of Wingate's plans. The operation itself was without cover plan, but the forced landing of nine gliders near enemy positions provided "an impromptu deception." Two gliders came down in the immediate vicinity of a Japanese divisional headquarters, and three near a regimental headquarters. The enemy concluded that an assault was under way on some of his installations, and he alerted his landing fields to that effect. Perhaps the deception was made more effective by the long-planned counterair force activity of the Air Commandos--attacks by P-51's and B-25's on nearby airfields. In any event, enemy ignorance of Wingate's airlift plan afforded the Special Force time to establish itself without opposition.¹⁴

On 10 March the Japanese staged an air attack on Chowringhee, but this was two hours after Wingate had abandoned the field. There was no attack on Broadway until 13 March, eight days after the first landings. By that time the field was a stronghold, and the antiaircraft and Spitfire defense cost the enemy four aircraft for one British fighter. Between 13 March and 1 April the Japanese hit Broadway eight times but with diminishing strength, no doubt partly because of the counterair activity of the Air Commandos and the Third Tactical Air Force as summarized in the following table:¹⁵

<u>Aircraft</u>	<u>Sorties</u>	<u>Bomb Tonnage</u>	<u>Enemy A/C</u>	<u>Damaged or Destroyed</u> (Claimed)
P-51	1,482	574		90
B-25	<u>422</u>	<u>211</u>		<u>00</u>
TOTAL	1,904	785		90

Ground Operations, 5 March to 17 May

Once the Phase One fly-in was completed the troops were organized into columns of 300 to 400 men each. By 20 March some columns were in contact with 16 Brigade, which had cut its way through the jungle from Shingbwiyang. Thus, at the time of his death, Wingate had approximately 11,000 men operating behind Japanese lines in central Burma. The number rose to roughly 14,000 after the April fly-in at Aberdeen.¹⁶

The entire force depended upon air supply. Requests were radioed from the originating column to brigade headquarters and relayed to Headquarters, Troop Carrier Command. Lack of fighter escort compelled the transport planes to fly at night in close cooperation with the column's attached air officer. The flight was from Imphal to an easily recognized

bend in the Chindwin River, and thence along a predesignated course for a specified time to a triangle of lights on the ground. Thence again along a predesignate course for a specified time, and the pilot released his cargo with confidence that he was above the drop zone. In this way TCC delivered an average of more than 60 tons each night to Lentaigne's columns.¹⁷

The helicopters, L-1's, and L-5's performed admirably in evacuating more than 1,300 casualties to Assam. Two Sunderland flying boats, borrowed from the British Eastern Fleet, evacuated an additional 500 men, shuttling between the Brahmaputra River in Assam and Lake Indawgyi in central Burma.¹⁸

Operation Thursday, as a distinct campaign, ended 17 May when the Special Force passed under the command of Stilwell. The Special Force brigades were not relieved, however, until August, and between May and August they continued to depend on air supply along with the entire army of the Northern Combat Area Command.¹⁹

Evaluation

Operation Thursday was a triumph of air transportation and air supply in support of assault forces,²⁰ but it had serious faults. The air plan did not provide proper care for the nylon tie lines, the C-46 tow aircraft were overtaxed, and there was a lack of exact information on the condition of the chosen airfields for the fly-in. The plan for ground operations underestimated the medical needs and provided the troops with equipment that was too light for large-scale operations. Even more important, the troops were kept too long in the jungle and there was a serious deterioration

of morale. Finally the system of command and control was too complex.

Although the Chindits inflicted heavy losses, they suffered heavy losses themselves—1,000 killed, 2,500 wounded, and 500 missing. Also, there was widespread illness. Though they cut the Japanese north-south communications several times, the Chindits failed to maintain a strong force astride the Bhamo-Myitkyina road and railway and therefore did not achieve their main objective of isolating the Japanese 18th Division, opposing Stilwell.²¹

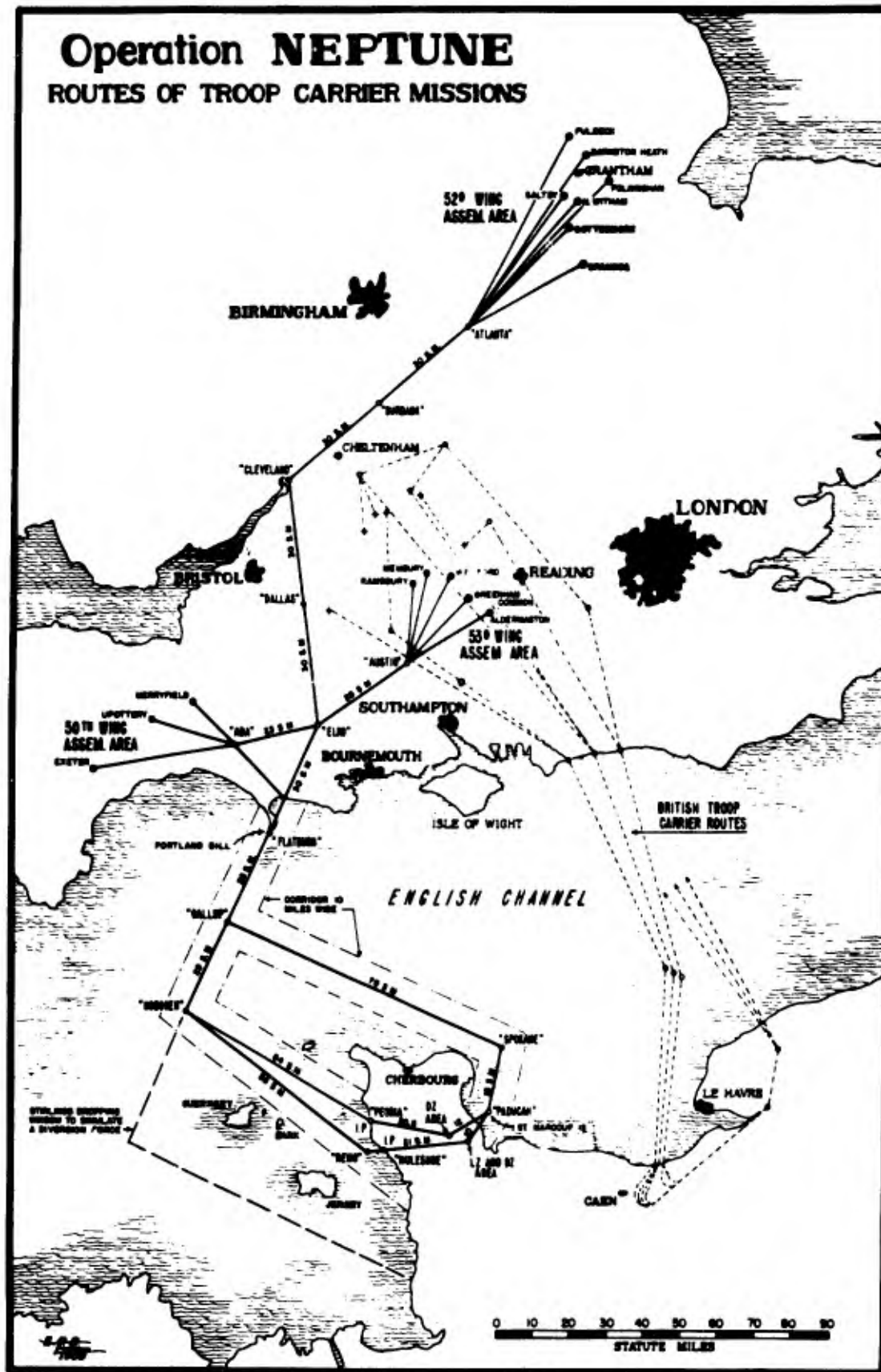
Operation ThursdaySummary of Transportation Operations

	<u>Phase One</u> (Into Boardway & Chowringhee)	<u>Phase Two</u> (Into Aberdeen)	<u>Total</u>
Troops	9,052	3,756	12,808
Mules	1,352	609	1,961
Supply tons	254	274	528
Glider sorties	74	0	74
C-47 sorties	579	463	1,042

SOURCE: USSBS, Air Operations in China, Burma, India--World War II
(Washington, 1947), p 31.

Operation NEPTUNE

ROUTES OF TROOP CARRIER MISSIONS



Reprinted from USAF Historical Study 97, p. 13.

V. AIRBORNE INVASION OF NORMANDY
6 JUNE 1944

In 1943 the United States and Great Britain decided upon an invasion of Europe in May 1944. Landing in Normandy, they would capture the Channel ports and secure an area for further ground and air operations. Airborne landings in conjunction with the seaborne assault were considered essential to the success of the entire invasion.¹

Under Supreme Headquarters Allied Expeditionary Force the 21 Army Group would command Allied ground troops and the Allied Expeditionary Air Force (AEAF) would command the air units. U.S. ground forces, under the First Army, included V Corps, which was to land on Omaha Beach on D-day, and VII Corps, which was to take Utah Beach on the east side of the Cotentin Peninsula and then capture the port of Cherbourg with minimum delay. The seaborne landing on Utah Beach of the 4th Infantry Division would be preceded by landings of two airborne divisions—the 82d and 101st. U.S. tactical air units, under Ninth Air Force, included IX Troop Carrier Command, composed of three troop carrier wings, the 50th, 52d, and 53d. These wings would carry the airborne troops.²

The British would also make airborne landings in Normandy farther east than the American area. The British Second Army was given the task of securing a beachhead from Port-en-Bessin through Caen along the Orne River to the sea. Its 6 Airborne Division would land east of Caen to seize bridges over the Orne and guard the left flank of the Second Army against counterattacks. RAF 38 and 46 Groups would carry

the British airborne troops to the scene.³

The area in which the U.S. airborne landings would take place was held by the LXXXIV Corps of the German Seventh Army. The Germans, recognizing the possibility of an airborne attack on the Cotentin Peninsula, built numerous obstacles and entrenchments. In May they reinforced the 243d and 709th Divisions in the area with the 91st Division and smaller units. As a result, the target area for the U.S. 82d Division was moved farther east.⁴

The terrain in the Utah Beach area favored the defense and was unsuitable for mobile warfare. The smooth, shallow beach was backed by sand dunes, and behind the dunes was swampy ground that the Germans had flooded. Traffic from the beach through the inundated area had to pass over four easily defended causeways. Farther inland, the valleys of the Douve and Merderet rivers restricted travel to roads that led to Carentan, and the Germans could isolate the Utah force by holding Carentan.⁵

The 101st Airborne Division was given the task of clearing the way for the seaborne assault by seizing the western exits of the four causeways and organizing the southern flank of the beachhead. It would also establish bridgeheads across the Douve for a later drive to Carentan. The 82d would secure the western edge of the bridgehead by capturing Ste.-Mère-Église, a key point on the road to Cherbourg. It would also establish deep bridgeheads across the Merderet to facilitate later attacks to the west. Meanwhile the 4th Division would land on the beach and advance on Cherbourg.⁶

To surprise the enemy, the Allies relied on bombing, deception,

and diversion. Beginning on 10 May, Allied bombers conducted a bombing campaign against German radar stations. Then, while the airborne invasion was in progress, ships and aircraft dropping "window" and other devices to simulate convoys and troop carrier serials, diverted 24 German night fighters from the landing areas. While the Allied efforts at deception did not have an important effect on German opposition to the airborne landings, the Germans were unable to redeploy before fighting began.⁷

Twenty aircraft, each plane carrying a team of pathfinder troops averaging 13 in number, preceded the main airborne landings. These teams, which began taking off about 2200 on the night of 5 June, tried to land in each drop zone with their navigational aids for guiding the mass drops that would follow shortly. Navigation was hindered by a cloud layer and sporadic German fire that damaged eight aircraft slightly. Troops in the lead serial came down at 0016 on 6 June. One or two serials were not as accurate as called for, but all teams were placed near enough to their zones to perform their missions.⁸

Meanwhile, at 2232 hours, C-47's of the IX Troop Carrier Command began to take off from 15 airfields, distributed in three major areas of England. The missions were divided into serials, most of which contained 36 to 45 planes. The loading, takeoff, and assembly of the 432 troop carriers participating in the paratroop of the 101st Airborne were accomplished with great efficiency, although some aircraft were overloaded, radios were banned on takeoff, and assembly at night was difficult. From three wing-assembly areas, the aircraft proceeded to the command departure point along the coast, then along a 10-mile-wide

channel between the isles of Guernsey and Alderney to a turning point
9
on the west coast of the Cherbourg Peninsula.

The standard operating procedure (SOP) called for intervals of six minutes between serials. The planes carrying paratroops would fly in flights of nine in tight formation. Approaching the zone, the formation would descend to 700 feet and slow down from a cruising speed of 140 to 110 mph to give the paratroops the best possible jump. They would then return home at a cruising speed of 150 mph. Planes towing gliders would cruise in at 120 mph.

The aircraft were not always able to follow the SOP. The serials carrying the 101st Airborne approached Normandy on course and in good formation but ran into a cloudbank beyond the coastline that disrupted their formation. The first four serials, consisting of 171 aircraft, had the easiest approach and the advantage of surprise. Some were dropped compactly and in the zone, but others were scattered and one serial was badly dispersed. The 126 aircraft in the next three serials not only ran into unexpected clouds but enemy flak and small-arms fire. While two serials made fairly good drops, one was widely dispersed. The 135 aircraft flying the last three serials of the 101st had similar experiences. The drop by the last serial began at 0140 on
10
6 June.

The 82d Division flew into Normandy in 369 troop carriers from bases in northern England. The first three serials of 132 planes climbed over the Cotentin cloudbank, kept in formation, and surprised the enemy. Although an overcast resulted in some overshooting of the drop zone, their drops beginning about 0145 were the best of the

entire airborne operation. Four serials of 132 aircraft for a smaller drop zone were less fortunate. They ran headlong into the cloudbank, flew blind until almost at the zone, and were harassed by enemy ground fire. They also received little help from pathfinder troops who were blocked from the zone by an enemy force. Half of one regiment dropped within two miles of the zone, but one quarter landed on the wrong side of the Merderet River, and the rest were so dispersed that they were utterly ineffective. The last phase of the 82d's drop was made up of three serials of 117 aircraft. Although this drop, which was ended about 0245, was better than the previous one, some elements were widely scattered.¹¹

The 821 troop carriers dispatched undertook to place 13,348 paratroops in Normandy. About 90 paratroops were brought back, 18 were in a plane that ditched, and some 140 were killed in planes that were shot down. At least 55 percent of the men dropped came within two miles of their goals and some 25 percent between two and five miles. More than 10,000 men were dropped within five miles of their zones, but since only 6 of the 20 main serials in the two large missions achieved compact drops the paratroops were widely scattered. The 101st Division had only 2,500 paratroops under divisional control and the 82d about 2,000 as late as midnight of D-day. A major difficulty was the problem of movement in hedgerow country against any opposition.

The Cotentin cloudbank was the chief difficulty encountered in the operation. Enemy fire within five miles of the drop zones caused losses of less than 2½ percent but threw many pilots off course. The limitations of navigational aids were also an important factor.

The difficulties of night paratroop operations—the vulnerability of lighted beacons, the limitations of radar, inability to keep formations—appeared to outweigh the hazards of daytime missions. Large night drops did not occur again in World War II.¹²

Followup airborne missions were comparatively small. They played a minor role in the operations of the 101st, for that division quickly linked with the seaborne forces. They were of real but limited assistance to the 82d. And they provided valuable experience in aerial reinforcement and resupply.

The first reinforcements arrived before dawn of D-day in gliders towed by aircraft that followed the routes of the paratroops. To assist the 101st, 52 aircraft each towing a Waco glider took off at 0119 carrying 155 men, antitank guns, and other equipment. This serial met few weather problems and sporadic enemy fire. The glider landings at 0354 were in general successful despite the fact that many glider pilots did not recognize their zone in the darkness and ran into unexpected obstacles that wrecked their gliders. An initial glider mission for the 82d, composed of 52 aircraft towing gliders carrying 220 men and equipment, took off at 0159. It was about 50 percent effective because of the cloudbank, enemy ground fire, and the inability of glider pilots to identify their landing zone.¹³

Later glider missions were heavily escorted and took a different route to avoid antiaircraft fire. A daylight mission late on D-day by 32 planes towing 32 gliders, which carried 157 men and tons of supplies for the 101st, was quite successful. A second large mission, to reinforce the 82d and composed of 176 gliders bringing 1,174 men

and equipment, ran into serious trouble, for part of the scheduled landing zone was occupied by German troops. The 82d tried to direct traffic to another landing zone but was not wholly effective.

Two more glider missions were carried out after daylight on D plus 1. The first of these, carrying 968 men and cargo to reinforce the 82d, was generally successful except for accidents in landing. The second included 100 gliders, 1,331 men, and supplies. The last gliders were released shortly after 0900. The flights were successful, but many gliders were damaged and widely dispersed. ¹⁴

The glider operations were more successful than many had predicted. Daytime missions were more accurate than night flights and less subject to accidents, and the vulnerability of gliders to ground fire had been overrated. Aside from unavoidable terrain and weather difficulties, confusion and casualties resulted because the Germans had occupied a landing zone and the 82d had not been able to inform the troop carriers of this fact. Small landing fields and the high landing speed of the Horsa glider resulted in many crash landings. Gliders also landed in the midst of a raging battle. ¹⁵

On the morning of D plus 1, two large parachute resupply missions were flown, both with powerful escort and fighter cover. In the first, 208 planes carrying 234 tons of supplies for the 82d ran into serious trouble. The Germans held the drop zone, and the 82d was unsuccessful in directing the aircraft to another zone. The planes began dropping their bundles at about 0603. Many aircraft were hit, and less than 100 of the 156 tons of supplies dropped by 148 planes were retrieved that day. The second resupply mission, designed for the 101st, was

less costly but also less successful. It was to be carried out only if called for, but the 101st did not call for it, expect it, or set out markers for the incoming aircraft. As a result, many of the bundles dropped at about 0630 by the 126 aircraft in this mission landed in enemy hands. Between 8 and 13 June, six small parachute and glider resupply missions were flown on call. All went smoothly and without either enemy opposition or significant weather problems. ¹⁶

The effectiveness of the airborne operation must be judged by the results obtained by the paratroops on the ground. Within a relatively few hours of landing, the 101st Airborne secured the western edge of the inundated area west of Utah Beach. It was not as successful in its second task of seizing the Douve River line on either side of Carentan. But despite the scattered landings and heavy losses in men and equipment, it had succeeded in clearing the way for the move of the seaborne forces inland, a task vital to the success of the Allied invasion plan. If its defensive line was weak, this was balanced by the enemy's inability to counterattack.

The position of the 82d was more difficult, for it landed on the edge of the German 91st Division and it suffered more seriously from scattered drops. It carried out one important task, the capture of Ste.-Mère-Église, primarily because of an exceptionally good drop. The inability of the Germans to counterattack enabled the 82d to build back its strength. At the end of D-day, the 82d held one village strongly, but it had assembled only 40 percent of its men and 10 percent of its artillery. The success of Allied airpower in keeping enemy aircraft away from the troop carriers and the battle-

field and in preventing German ground troops from arriving on the scene was certainly a major factor in the survival and ultimate victory of the airborne forces in Normandy.

British paratroop operations were in the main more successful than American. This was not true, however, of the pathfinder effort. Six Albemarle pathfinder aircraft preceded the main drops, bringing teams to three drop zones. Although 106 of the 140 men were dropped accurately, some dropped out of reach or lost their equipment, while one team set up its beacons in the wrong zone. For the main drops, the British did not fly in serials but individually in groups of three.

The major British airborne landings began in the first hour of D-day when six Horsa gliders landed troops to seize vital bridges north of Caen. Half an hour later, 237 aircraft dropped 4,310 paratroops of 6 Airborne Division east of the Orne River. About 30 percent of the pilots hit their zones, 25 percent came within a mile, and 10 within two miles. The excellence of the British drop was a result primarily of an easier route, superior navigational aids, and good weather.

The two RAF groups also dispatched 98 gliders carrying 493 troops and equipment before dawn on D-day. Strong winds and clouds caused about 20 to break loose prematurely, but 52 landed on their zones and 6 more within a mile of them. Landing accidents were numerous, however. On the evening of D-day a large 256-glider mission was highly successful, with only one or two shot down and 246 landing in or near their zones. The only large British resupply mission was made by 50 planes

of 46 Group at midnight of D-day. Because of a naval barrage, six planes were lost and only 20 percent of the supplies reached the troops. Four small resupply missions flown by 38 Group were fairly successful, although in one mission 7 of 12 planes were recalled because of clouds.

British paratroops not only seized the Orne bridges but built and reinforced a bridgehead east of the Orne. When enemy counter-attacks developed, the position was stubbornly defended. By afternoon of D-day the airborne units had established contact with the
18
British seaborne forces.

Paratroop Drops of IX Troop Carrier CommandNormandy - June 1944

<u>Aircraft</u>	<u>Total</u>
Dispatched ^a	821
Effective ^b	813
Abortive ^c	3
Destroyed or missing ^d	21
Damaged	196
 <u>Plane crewmen</u>	
Wounded or injured	15
Killed or missing (as of 1 Jul)	65
 <u>Troops</u>	
Carried	13,348
Dropped ^e	13,100
 <u>Artillery</u>	
Howitzers carried	14
 <u>Cargo</u>	
Short tons carried	389

a Includes pathfinders.

b Included if any troops jumped or cargo was dropped over France.

c Unable to fly or returned with load.

d Excludes aircraft destroyed before takeoff.

e An approximation.

SOURCE: USAF Historical Study 97, p 224.

Glider Operations of IX Troop Carrier CommandNormandy - June 1944

<u>Aircraft</u>	<u>Total</u>
Dispatched	516
Effective	511
Abortive	5
Destroyed or missing	7
Damaged	175
 <u>Horsa and Waco gliders</u>	
Dispatched: 222 Horsas, 295 Wacos	517
Abortive: 4 Horsas, 4 Wacos	8
 <u>Plane crewmen</u>	
Killed or missing (1 Jul)	9
Wounded or injured	12
 <u>Glider Pilots</u>	
Dispatched	1,034
Dead or missing (as of 1 Jul)	57
 <u>Troops</u>	
Carried	4,021
Landed	3,937
Landing casualties ^a	463
<u>Artillery pieces carried</u> ^b	95
<u>Vehicles carried</u>	290
<u>Cargo tonnage</u>	238

^a Includes 123 Waco troops, 340 Horsa troops.^b Howitzers and antitank guns.

SOURCE: USAF Historical Study 97, pp 224-25.

Resupply Operations Of IX Troop Carrier CommandNormandy - June 1944

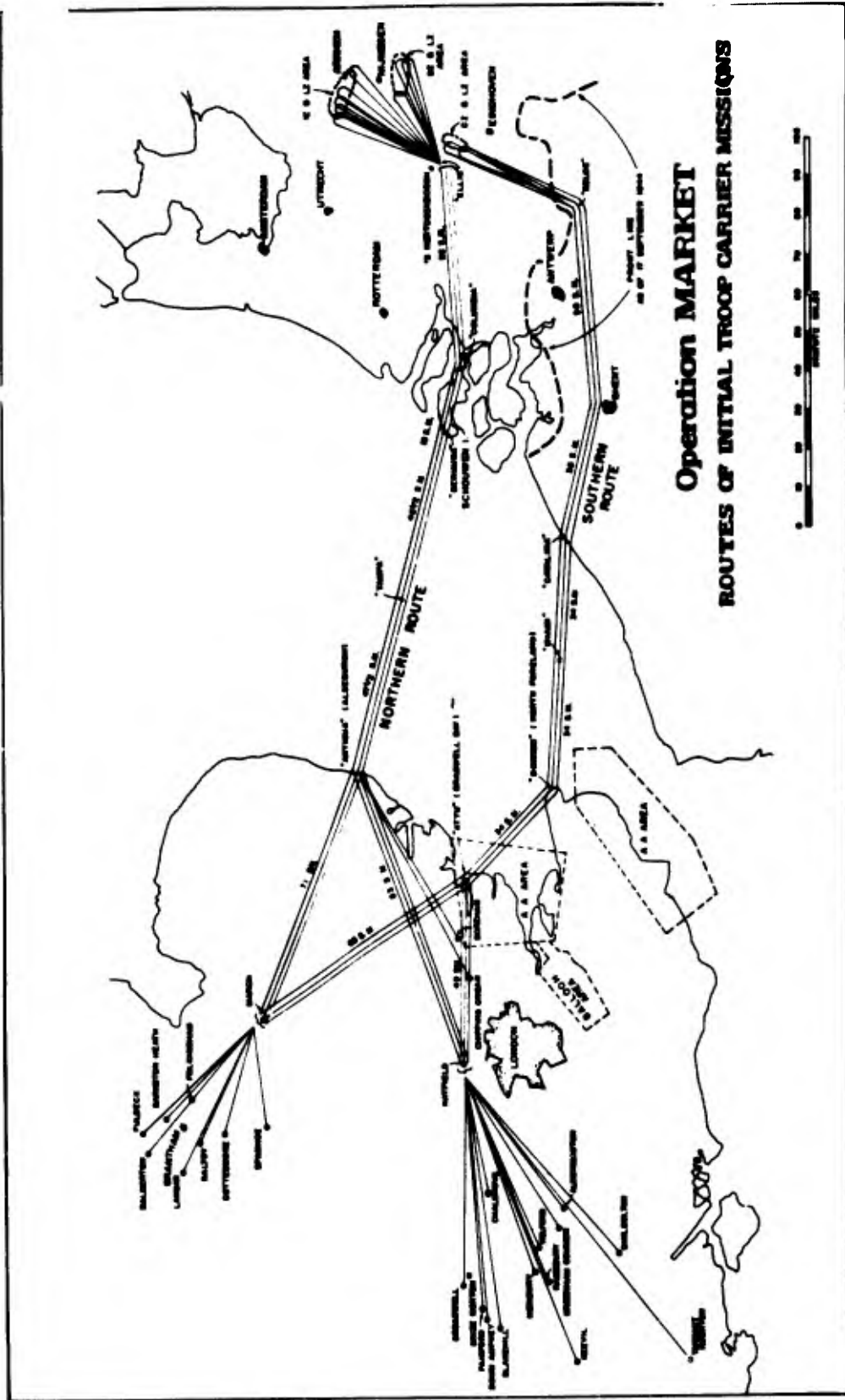
<u>Aircraft</u>	<u>Freeport^a</u>	<u>Memphis^b</u>	<u>On call</u>
Dispatched	208	119	34
Effective	153	117	34
Abortive	55	2	--
Destroyed or missing	11	3	--
Damaged	94	35	--
 <u>Plane crewmen</u>			
Dead or missing (as of 1 Jul)	29	2	--
Wounded or injured	22	4	--
 <u>Troops</u>			
Carried	76 ^c	--	15
Dropped	22	--	15
 <u>Cargo tonnage</u>			
Carried	211	221	7
Dropped	156	215	7
Recovered	100 ^d	(?)	7

(The following refers to on-call missions only)

<u>Gliders dispatched and effective</u>	--	--	10
<u>Vehicles carried and landed</u>	--	--	4
<u>Cargo tonnage carried and landed</u>	--	--	23
<u>Troops carried and landed</u>	--	--	44

a Performed for the 82d Airborne Division.b Performed for the 101st Airborne.c Includes 54 QM pers who did not jump.d Probably includes some supplies sent to Memphis.

SOURCE: USAF Historical Study 97, p 225.



Operation MARKET
ROUTES OF INITIAL TROOP CARRIER MISSIONS

Reprinted from USAF Historical Study 97, p. 92.

VI. THE AIRBORNE INVASION OF HOLLAND
17-26 SEPTEMBER 1944

As the Allied armies poured across France in August 1944 it became evident that the German armies could make no effective stand short of the Siegfried Line in the east and the Rhine River in the north. On 23 August General Eisenhower decided that major Allied emphasis would be placed on a thrust by General Montgomery's 21 Army Group northward through the Low Countries and across the Rhine onto the plains of northern Germany. This would place the Allies across the last major barrier--the Rhine--on the road to Berlin. It would also solve the supply problem because it would result in capture of the Channel ports and the great cargo port of Antwerp.¹

The use of the powerful Allied airborne forces in support of Montgomery's armies was an integral part of the proposed operations. These forces had been organized under a single command--First Allied Airborne Army (FAAA)--directly under Supreme Headquarters Allied Expeditionary Force on 8 August 1944. All American and British troop carrier and ground units assisting in airborne operations came under the command of Lt. Gen. Lewis H. Brereton. As Montgomery's two armies overran northern France and raced into Belgium, successive plans for airborne drops in cooperation with these armies had to be abandoned because of the speed of the advance.²

On 10 September General Eisenhower approved Operation Market, a massive daylight airborne assault in southern Holland along a corridor

linking Eindhoven, Nijmegen, and Arnhem. The objective was to secure for the passage of Montgomery's forces the highway between Eindhoven and Grave and bridges over rivers and canals at Nijmegen, Grave, and Arnhem. If successful, the operation would permit Montgomery to secure a bridgehead across the Lower Rhine on the north German plain, thereby outflanking the Siegfried Line. It could also cut the land exit of the Germans remaining in western Holland, complete the rout of the German armies, and prevent any effective defense of the Reich.

The major objective of the operation was the single-span steel highway bridge across the Lower Rhine into Arnhem. The British 1 Airborne Division had the task of taking this and other crossings of the Lower Rhine. To the south, the U. S. 82d Airborne Division was to take and hold a bridge over the Maas, outside the village of Grave, five miles southwest of Nijmegen; at least one of four bridges over the Maas-Waal Canal between Grave and Nijmegen; and the bridge over the Waal at Nijmegen itself. Still farther south, the U. S. 101st Airborne was to secure a string of bridges along more than 15 miles of highway between Eindhoven and Veghel. The linking up of the three airborne divisions would provide a narrow corridor of more than 50 miles along which the British Second Army could race to and across the Lower Rhine.³

General Brereton named Maj. Gen. Paul L. Williams, commander of IX Troop Carrier Command, as air commander for the operation, with operational control over the RAF's 38 and 46 Groups as well as such bomber aircraft as might be used for resupply. British Lt. Gen. F. A. M. Browning would be the airborne commander, directing operations in the airhead on the ground until firm contact was made with the ground forces.

The U. S. 82d and 101st Airborne Divisions, the British 1 Airborne Division, and the Polish 1 Parachute Brigade were committed to the operation. All troops would be lifted from airfields in the United Kingdom.⁴

The two routes for the passage to the battle area provided flexibility and greater concentration of forces than would have been possible with only one route. The northern route ran from the British seaside town of Aldeburgh 94 miles straight across the North Sea to the west end of Schouwen Island, 18 miles more to the eastern end of the island, on for 52 miles to the initial point (IP), and finally 25 miles northeast to the Nijmegen area or 30 miles to the Arnhem zones. This route traversed enemy territory for about 80 miles, but it was believed to be relatively free of flak, a most important consideration. The southern route ran from the tip of the North Foreland on the English coast, across the Channel to a point four miles northeast of Ostend, to the outskirts of Ghent airfield, and then across Belgium to the IP, about 30 miles southwest of the Eindhoven drop zones--a total of 159 miles from England to the IP. This approach skirted a pocket of German troops south of the Schelde and cut between known flak concentrations around Eindhoven and Tilburg. All serials going to Arnhem and Nijmegen on D-day would use the northern route; the serials to Eindhoven would take the southern routes.

Market called for the use on each route of two parallel lanes $1\frac{1}{2}$ miles apart and the possible use of still a third if needed. In addition, 38 Group and 46 Group were to fly gliders over the northern route at a level 1,000 feet above the Americans, making that a four-lane skyway. Great concentration was achieved by spacing the American parachute serials along both routes at 4-minute intervals and gliders at 7-minute intervals instead of the 6 and 10-minute intervals used in Normandy. This was

possible because Market was a daylight operation, unlike the Normandy landings. These procedures were intended to permit the delivery of 1,055 planeloads of paratroops and 478 gliders within 65 minutes, the time it took to deliver 369 planeloads in Normandy.⁵

The terrain for the Market landings was more favorable than in the Normandy operation. Around Arnhem the land was rolling and, in many places, wooded. Between the Rhine and the Waal and in the Eindhoven area it was flat, open, and interlaced with rivers, canals, and ditches which could hinder operations of armor against airborne troops. Fields varied from very large to less than 200 yards in length but were bordered by low, weak fences and small hedges.⁶

The German forces opposing the Allied airborne landing proved to be much stronger than anticipated. Gen. Kurt Student's First Parachute Army held the general area of the southeastern Netherlands and was in the process of consolidation at the time of the attack. Student was also able to draw on the II SS Panzer Corps (9th and 10th Panzer Divisions), then being refitted in the Arnhem area, and the II Parachute Corps. In addition, Field Marshal Walter Model, commander of Army Group B, had his headquarters near Arnhem. His personal direction of operations permitted coordination of the fighting at Arnhem and Nijmegen.⁷

Preliminary operations to clear the path of the troop carriers began on the night of 16 September when 282 RAF bombers dropped 1,180 tons of bombs on airfields within fighter range of the Market objectives and on certain flak installations along the northern route. On the morning of D-day, 17 September, between 0930 and 1130, 852 Eighth Air Force B-17's supported by 147 P-51's attacked 117 installations, mostly flak batteries,

along the two routes and achieved good results against 43 of the 117 objectives. Also in the morning, the RAF sent 85 Lancasters and 15 Mosquitoes against coastal defenses on Walcheren Island. In final preliminary operations, 122 bombers of the British Second Tactical Air Force attacked German barracks at Nijmegen, Arnhem, and Ede, 13 miles northwest of Arnhem. The attacks on barracks did not appear to have any effect on the enemy's power to resist.

On 17 September the troop carriers were preceded by planes that dropped pathfinder teams to mark the major drop and landing zones. This was completed by 1300, but not all of the teams were successful in reaching their zones and using their equipment to guide the planes and gliders to the proper areas.

To meet the threat of ground fire between the IP's and the drop zones American and British fighters swept the area immediately before and during the troop carrier operations. They achieved good results against gun positions in the open, but they had little effect on guns in wooded areas. Fighters also patrolled the perimeters of both routes, and there was no interference to the troop carriers from German planes during the whole day's operations. Along the northern route to Nijmegen and Eindhoven, heavy concentrations of British and American fighters provided escort and area cover for the troop carriers from England to the drop zones.⁸

The first formations of the IX Troop Carrier Command began taking off from airfields in southern England shortly after 1000 on 17 September, and they were followed by a steady stream from the other American and British troop carrier bases in England. The serials generally encountered

strong flak and small-arms fire only as they neared their objectives and as they turned homeward after dropping their loads. The IX TCC enjoyed remarkable success in making accurate drops with a minimum of loss. Of 1,053 planes dispatched, only one was ineffective; 27 planes were lost and 137 were damaged; 51 crewmen were killed or missing. Of 4,676 transports, gliders, fighters, and bombers that participated in the operation, only 75 failed to get through.

In all, IX TCC dropped 13,941 of the 14,009 troops of the 82d and 101st Airborne Divisions. Drop casualties numbered 233. In addition, 110 gliders brought in another 506 troops and vehicles, trailers, and cargo to the two divisions. Approximately 20,000 American and British soldiers were dropped or landed within one hour and twenty minutes in good order far behind enemy lines.⁹

The drops began shortly after 1300 and were generally accurate, although there were some exceptions, but these did not seriously affect operations. Initial enemy opposition was light, largely because the Germans were taken by surprise. In the area between Eindhoven and Veghel the 101st held much of the road and many of the bridges by the end of the day, but it did not succeed in holding a bridge across the vital Wilhelmina Canal. The 82d captured the Maas bridge at Grave, but its initial efforts to reach the important Nijmegen bridges were unsuccessful.

The British brought their troops into the Arnhem area by glider as well as by parachute--more than 5,000 in all. The 143 IX TCC planes carrying British paratroopers flew effective sorties. Between 1353 and 1408 they dropped all but 4 of 2,283 paratroopers with near-perfect accuracy. Planes of 38 and 46 groups towed in 284 gliders, of which 275

landed on or very near their zones. The British encountered little opposition during the landing five to eight miles west of Arnhem, but German strength built up rapidly because of the presence of powerful forces in the area. The British lost the effect of the initial surprise by landing too far from the objective, and they were destined never to achieve it in spite of heroic efforts. Because of followup missions scheduled for the next day, most of the gliderborne troops, a majority of the total, had to remain in place to guard the drop and landing zones.¹⁰

For the next five days, increasingly bad weather and the buildup of German resistance frustrated Allied plans and operations. Weather on 18 September delayed airborne operations by four hours and required that all missions use the northern route. This resulted in the massing of four missions, involving almost 1,700 troop carrier planes and more than 1,200 gliders, along one route at one time. These missions received protection on the same massive scale as the day before. More than 650 British and American fighters escorted the troop carriers, flew area cover, and attacked flak positions along the route. The Germans made their first strong efforts to attack the airborne missions on the afternoon of the 18th, when operations were at the peak. Almost a hundred German fighters tried to get through to the Arnhem and Eindhoven areas from two different directions but were turned back by two American fighter groups before any of them could strike at the troop carriers.

The reinforcements of the 18th for the 82d and 101st Divisions came in gliders. The landings in the 101st area near Eindhoven were, on the whole, more accurate and successful than those in the 82d area.

Of 904 gliders dispatched to the two areas, 853 made effective sorties, but many of these crashed on landing or landed in German-held territory. The two missions landed 4,255 of the 4,397 troops carried, with only 71 landing casualties among the glider troops. The mission to the 101st area was considered 95 percent successful--2,579 troops assembled on the ground, with 151 jeeps and 109 trailers on hand and usable.

The gliders were followed by a column of Eighth Air Force B-24's that dropped much-needed supplies to the 82d and 101st. Of 252 bombers dispatched, 246 succeeded in dropping 486 tons of ammunition, food, and other items. The drop in the 82d's area was about 80 percent effective, but the 101st recovered little more than 20 percent of the bundles dropped. The bombers had effective fighter escort, but they lost 7 planes to flak, 4 crash-landed in England, and 70 were damaged.

The paratroop drop to the British at Arnhem on 18 September was carried out by 126 IX TCC troop carriers. They dropped 2,110 paratroopers, of whom about 90 percent landed "slap in the right place." Following the paratroopers came a British mission of 295 gliders, of which 272 succeeded in delivering 1,200 soldiers, artillery pieces, and vehicles. A supply drop by 35 British Stirling bombers had poor results, only 12 of the 87 tons of supplies reaching the British forces.

On the ground, the 101st and the Guards Armoured Division succeeded in taking strongly defended Eindhoven by 1700 hours on the 18th. The 101st also strengthened its hold on key positions along the road to Grave. The 82d's efforts to capture the Nijmegen bridges were prevented by strong enemy forces, and the Germans began to launch counterattacks

against the paratroopers. The British encountered powerful resistance at Arnhem, but they had reached the northern approach to the key bridge.¹¹

Weather proved even more of a hindrance to operations on the 19th. In the afternoon the glider mission to the 101st's area had heavy going, only 213 of 385 gliders reached the landing zone, bringing 1,341 of the 2,310 troops dispatched. They brought with them badly needed artillery pieces and jeeps and trailers. The glider mission to the 82d was canceled because of bad weather, and a resupply mission that did take off achieved little success. Only 60 of 107 planes managed to take off, 35 dropping about 71 tons, of which only about 20 percent was recovered. Fighter escort and flak-suppression sorties were conspicuous by their absence, caused by the weather.

The failure of the British to reinforce and resupply their forces around Arnhem on 19 September proved disastrous to their efforts. Bad weather forced postponement of the drop of the Polish parachute brigade for two days, and failure of the paratroopers to win control of a designated area outside Arnhem caused cancellation of a glider mission bringing the U. S. 87th Aviation Engineer Battalion to build an airstrip there. The British succeeded in getting a few gliders with troops into the area, but the losses were heavy. A resupply mission of 177 British planes dropped its load within the German lines because of poor communication with the paratroopers on the ground, only about 6 percent of the containers falling into British hands. The loss of equipment and operators caused a failure of communications between the British troops at Arnhem and the commander in the airhead that prevented the serious plight of the troops from becoming known for several days. This was a major contributing factor to the failure of the Arnhem operation.

On the morning of the 19th the Guards Armoured Division drove through Zon and gained contact with the 82d at Grave. By evening the Allies held a narrow corridor between Eindhoven and Nijmegen, but they had not yet captured the Nijmegen bridges. The long corridor was threatened by German forces gathering for counterattacks. At Arnhem, powerful German forces had forced the British paratroopers back west of the city.¹²

On 20 September unfavorable weather again curtailed the extensive troop carrier operations planned for the day--the use of more than 1,000 planes and 405 gliders. The Polish paratroop mission was again postponed and so was the big glider mission intended for the 82d Division. The desperate plight of the British at Arnhem caused the RAF to send a resupply mission of 162 planes to that area, but only about 41 of 386 tons of supplies were recovered by the troops on the ground. A resupply mission by IX TCC planes to the 82d Division was highly successful, 310 planes dropping 441 tons of supplies, of which about 80 percent was ultimately recovered. Smaller resupply missions to the 101st proved helpful.

Major actions on the 20th centered around Nijmegen and Arnhem. The 82d fought off a major counterattack by a German parachute division on its right; on its left it forced a crossing of the Waal in order to take the defenders of the main bridge from the rear. With the help of British tanks on the southern end of the bridge, they secured it by 1900. Meanwhile, at Arnhem, the Germans had retaken the key bridge over the Lower Rhine and had forced the British to retreat with heavy losses into a small perimeter north of the Lek (Lower Rhine) River. Here, their position against greatly superior forces became acute.¹³

In spite of continued bad weather on the 21st, a major effort was made to resupply and reinforce the paratroopers. A resupply mission by 61 Stirlings to the Arnhem area had inadequate fighter escort because of weather conditions and suffered accordingly. German fighters attacked them and shot down possibly as many as 13. A second resupply mission by 53 British planes also suffered heavily from German fighters and flak-- 10 planes were lost. These were the only successful air attacks against the airborne missions during Market. Only about 4 percent of the 271 tons dropped by both missions fell into the right hands. The major effort of the day was the drop of 998 Polish paratroops and 69 tons of supplies in the Arnhem area by 72 planes of IX TCC. Bad weather at the northern bases in England made it impossible to send the glider mission intended for the 82d. Small parachute resupply missions were flown for the 82d and the 101st.

The Germans continued their efforts to cut the narrow Allied corridor from Eindhoven northward and to recapture the bridges at Nijmegen. They had some temporary successes in the week after 21 September, but the Allied forces managed to hold on to the salient. The story was different at Arnhem, where the position of the paratroopers deteriorated rapidly in the face of overwhelming German forces. The British XXX Corps reached the Lek River on the 22d, but there was no way to get across it in strength to reinforce the paratroopers who were running short of supplies and ammunition. The Germans held up the movement of supplies and assault boats by cutting the road south of Veghel.

Continuing bad weather caused the cancellation of all airborne missions on 22 September. A large glider mission on the 23d brought

reinforcements and supplies to the two American airborne divisions, which, although in ground contact with the British forces, could not yet be adequately supplied by ground transport. Resupply to the British at Arnhem proved especially difficult because of the small perimeter still held by the paratroopers. Of the 291 tons of supplies dropped by 115 planes, it is unlikely that the paratroopers retrieved as much as 10 percent. Troop carrier missions were once again halted on 24 September by bad weather. Although additional flights were made to the battle area in the days that followed, as weather permitted, they were on a smaller scale because of the increasing availability of logistical support from ground sources. Finally, on the night of 25-26 September, about 2,400 men of the 1 Airborne Division and other units were evacuated in assault boats or swam across the river. This spelled the end of the effort to reach the north German plain, for the Arnhem bridge was indispensable to large-scale movement.¹⁴

The failure of the Market operation to achieve its objectives may be ascribed to a number of factors. First and foremost was the effective massing and direction of German forces to meet the airborne landings and the British Second Army advance. Second, the British drop zone was five to eight miles from its objective at Arnhem instead of near the bridge, and this gave the Germans time to gather strength. Unquestionably, the bad weather that delayed the bringing in of reinforcements and supplies, as planned, played a major part in the campaign. The inability to bring all of the airborne troop strength into the area in the first day, or possibly first two days, also hurt because of the necessity to use large forces to guard drop and landing zones for the later missions.

The failure of the British ground troops to move as fast as planned and to widen the flanks of the narrow corridor leading to Arnhem may have been the final straw that tipped the scales against Market. Other factors contributing to the defeat at Arnhem were weaknesses in communications, air support, and resupply. From D-day to D plus 5 the 1 Airborne Division had little contact with the outside world and the full extent of its plight was not known, even to General Browning. Especially costly was the weakness in ground-air radio contact with incoming troop carrier missions at the drop and landing zones. Air support to the airborne forces after they landed was on a small scale and ineffective by comparison with the massive support given to the troop carrier operations. In part, this was the result of orders to the fighters not to operate in close support when airborne missions were in progress in the area.

Market was the first major test of resupply by air. The parachute drop of supplies resulted in wide dispersion and the use of large numbers of men on the ground to collect the containers. Generous estimates of collections were 15 percent of supplies dropped to 1 Airborne, less than 50 percent to 101st, and less than 70 to 82d. The cost in planes was high, but not unacceptable. The British sent 630 planes to Arnhem on resupply missions and lost 52, or 8.5 percent, while 281, or 44 percent, were damaged.

Overall, as a troop carrier operation, Market was a great success. The paratroops themselves considered it the best they had ever engaged in, and the fact that it was flown in daylight had a great deal to do with its success. At the same time, the Allies had crushing air

superiority, flying some 5,200 sorties in escort or against flak installations. The Luftwaffe was never a serious threat to the troop carriers.

Operation Market was the largest airborne operation ever mounted, and it would have been larger had there been more troop carriers to lift the available forces. Almost 35,000 men were dropped or landed behind enemy lines, 20,000 of them on the first day of the operation. The troop carriers flew almost 5,000 effective sorties and gliders more than 2,400. The scale of the effort both in the air and on the ground was justified by the objectives. Market could have been the major turning point in the campaign of western Europe.¹⁵

Operation MARKETIX Troop Carrier Command--17-30 Sep 44

<u>Aircraft</u>		<u>Gliders</u>	
Dispatched	3,989	Dispatched	1,899
Effective	3,743	Effective	1,618
Destroyed or Missing	87		
Damaged	845		

Troops*

Carried	32,519
Dropped	20,011
Landed	10,374

<u>Cargo Tonnage Carried</u>	2,856	<u>Jeeps</u>	
		Carried	830
		Effective	710

Trailers etc.

Carried	526
Effective	465

*Includes British troops also, exclusive of those carried in British planes and gliders.

SOURCE: USAF Historical Study 97, p 226.

Operation MARKETRAF 38 and 46 Groups--17-25 Sep 44Aircraft

Dispatched	1,341
Effective	1,191
Destroyed or missing	55
Damaged	350

Gliders

Dispatched	697
Effective	621

Troops

Dropped	186
Landed	4,215

<u>Net tonnage dropped</u>	1,431
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<u>Vehicles landed</u>	1,026
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SOURCE: USAF Historical Study 97, p 227.

Operation MARKET
Eighth Air Force Resupply Operations
18 Sep 44

Aircraft (B-24)

Dispatched	252
Effective	246
Destroyed or missing	11
Damaged	70

Tonnage

Dropped	486
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SOURCE: USAF Historical Study 97, p 227.

Operation MARKETCasualties--17-30 Sep 44Air Units

	<u>Killed</u>	<u>Missing*</u>	<u>Wounded or Injured</u>	<u>Total</u>
IX TCC Crews	31	155	66	252
IX TCC Glider Pilots	12	55	37	114
RAF TC Crews	31	217	17	265
British Glider Pilots	59	636	35	730
2d Air Div	1	63	34	98
Total	<u>134</u>	<u>1136</u>	<u>189</u>	<u>1459</u>

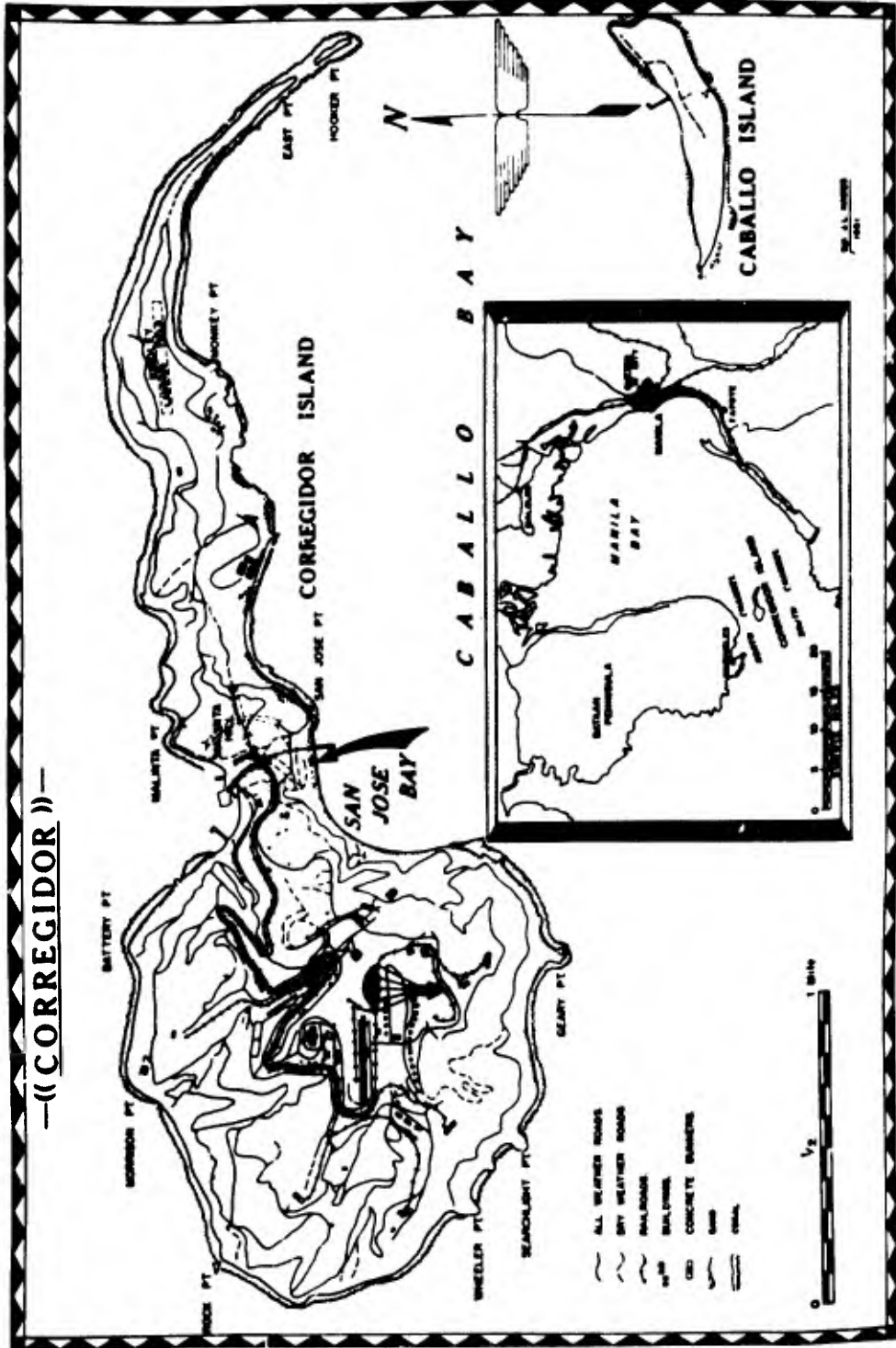
Ground Troops, 17-25 September 1944

82d Airborne Div	215	427	790	1432
101st Airborne Div	315	547	1248	2110
1 Airborne Div	286	6041	135	6462
1 Polish Parachute Brig	47	173	158	378
Hq Brit Abn Corps & Signal Pers	4	8	--	12
Total	<u>867</u>	<u>7196</u>	<u>2331</u>	<u>10394</u>
GRAND TOTAL	1001	8332	2520	11853

*Many of the missing were undoubtedly killed or died subsequently.

SOURCES: USAF Historical Study 97, pp 226-27; pageproof, Charles B. MacDonald, The Siegfried Line Campaign (U.S. Army in World War II), Chap VIII, p 55.

—((CORREGIDOR))—



Reprinted from V. F. Craven & J. L. Gate, eds, The Army Air Forces in World War II (Chicago, 1953), Vol. V, p. 432.

VII. AIRDROP ON CORREGIDOR 16 FEBRUARY 1945

An American parachute force successfully assaulted Corregidor (The Rock) on 16 February 1945 after a well-planned airdrop executed by FEAF C-47's. American forces had entered Manila on 5 February, and while they were rooting the Japanese out of the city many enemy troops had escaped across the bay to Bataan and Corregidor. To secure these positions the U.S. Sixth Army landed a force at Mariveles on the tip of Bataan, opposite Corregidor, on 15 February, with a plan to advance and meet another force driving down the east coast of Bataan. The next day it launched the airborne assault on Corregidor, followed by amphibious reinforcement.

The assault was preceded by thorough aerial reconnaissance for approaches and jump zones and by detailed planning. These revealed only two possible jump zones on "Topside," the key terrain feature of this small tadpole-shaped island. The two zones combined provided the smallest area into which an airdrop of any size had been made in that theater.* Furthermore, the drop zones were surrounded by dangerous hazards such as craters, wrecked buildings, tangled undergrowth, and sheer cliffs. Because of wind drift and other factors, it was estimated that jump casualties might run as high as 20 percent, but an amphibious attack alone was considered even more hazardous.¹

*Previous sizable American airdrops had been made at Nadzab, New Guinea, 5 September 1943; Noemfoor Island, 3-4 July 1944; Tagaytay Ridge, Luzon, 3-4 February 1945.

To neutralize as many enemy defensive positions as possible and to keep to a minimum the enemy forces on Topside during the approach of the troop carriers, Corregidor was subjected to the heaviest and most intensive aerial pounding of any square mile in the Southwest Pacific Area. Heavy bombers of the Army Air Forces dropped 3,128 tons of bombs on Corregidor in the three weeks preceding the airdrop. On 16 February, in addition to naval gunfire, a heavy air bombardment preceded and covered the parachute drop. Heavy bombers, dropping 125 tons of demolition bombs, were followed by bombing B-25's and strafing and bombing A-20's. The total weight of bombs dropped in direct support of the combined airborne and amphibious assault on the 16th was 185 tons.²

The drop at Corregidor began at 0830 on 16 February. In two lifts, 82 C-47's of the 54th Troop Carrier Wing carried 2,050 men of the 503d Parachute Regimental Combat Team (RCT) from Mindoro. The initial drops were made from an altitude of 650 feet, but this was soon reduced to 500 feet or less to minimize drift. The RCT included two battalions of the 503d Parachute Infantry and its headquarters, engineer and service companies, and field artillery batteries of 75-mm. howitzers and .50-cal. machine guns. The 503d was under the control of the Commanding General, Fifth Air Force from takeoff until the drop was executed. This force, combined with an amphibious reinforcement to bring the total to about 4,000 by the end of D plus 2, was thought to be adequate against an estimated enemy defense of 850 (later proved to be about 6,000) in heavily fortified positions.³

During the first lift, sporadic antiaircraft fire holed some planes and injured some personnel, but the close support of strafing A-20's

silenced most of the fire. All troopers made their jumps and no planes were lost. By 0945 the first lift was on the ground and assembled; by 1000 the men had secured the drop zones for the second lift. At noon the second lift was also successful despite continuous antiaircraft fire that could not be silenced by A-20's because of the U.S. troops already on the ground near the jump area.

The paratroops completely surprised the defenders and speedily seized their first objective. By the end of 16 February they were firmly established on Topside, while the amphibious force was in control of Malinta Hill, the dominating terrain in the beachhead area. The 3d Battalion of the 34th Infantry, reinforced, had landed at San Jose beach that morning between the two airlifts and secured the hill after suffering heavy casualties from land mines on the beach. The paratroop drop apparently diverted Japanese attention from the amphibious craft moving toward Corregidor. With the two successes of the 16th the assault phase was complete, but the business of routing the enemy from caves and tunnels all over the island still faced the "Rock Force," as the combined 503d RCT and 34th Infantry troops were called.⁴

Drop casualties actually approximated 13.5 percent instead of the feared 20 percent. Of the 279 casualties, only 20* were deaths; one caused by malfunction of a chute, the others by enemy action or striking an obstacle.⁵

A third lift on 17 February dropped supplies and equipment on Corregidor. This lift had been planned as a personnel drop also, in which 43 C-47's would drop a third battalion and equipment. But the

*Sixth Army Report gives only 12 deaths.

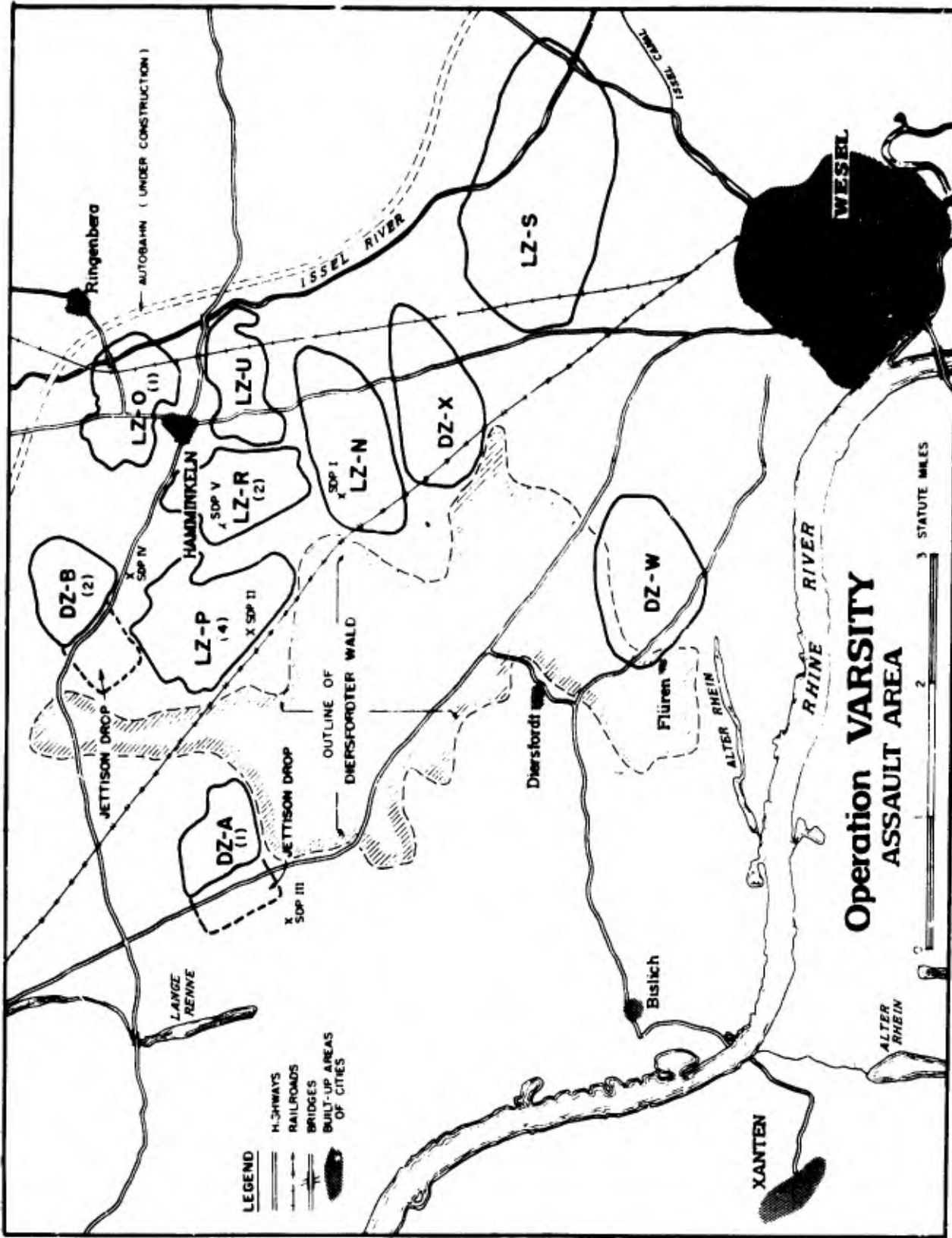
successes attained on 16 July persuaded the commander of the 503d Parachute RCT to avoid the possibility of further drop casualties by landing the personnel at San Marcelino airstrip on Luzon and moving them by ship to The Rock.

The Army attributed the success of the air assault phase to several factors. First, the careful reconnaissance for drop zones and the detailed planning had resulted in a well-coordinated approach by the troop carriers and a flexible flight pattern and jump plan. Second, close timing and coordination of land, sea, and air participation had achieved excellent results. An example was the air and naval bombardment of Topside to prevent the enemy from occupying it against the airborne assault. The third factor was the complete surprise attained. The Japanese commander on Corregidor had completely ruled out any possibility of an airborne assault, although higher headquarters had warned him. He had disposed his strength to prevent amphibious landings and to provide a reserve at many strongpoints. Wire communication between these and a central on Topside was completely cut off when the parachutists captured the central at an early moment.⁶

Air support strikes continued on daily call during the period of bitter fighting that lasted through 26 February. Napalm, dropped by P-47's, proved effective in penetrating caves as deep as 35 feet, and on the 19th demolition bombs killed some 500 Japanese in underground barracks. Between 16 and 25 February, Fifth Air Force P-47's flew some 150 close support sorties. C-47's provided air resupply until the supply road from the beach could be opened. By 27 February the Americans had killed about 4,500 Japanese and captured 19. The Americans had suffered

more than 1,000 casualties by 2 March, including 210 deaths.

This difficult military maneuver--a coordinated parachute and amphibious attack--met with success in a daring operation over a rocky and very limited area in the Pacific. General MacArthur inspected Corregidor on 2 March and observed: "Corregidor is a living proof that the day of the fixed fortress is over."⁷



Reprinted from USAF Historical Study 97, P. 175.

VIII. AIRBORNE ASSAULT ACROSS THE RHINE
24 MARCH 1945

In early 1945 the Allies agreed on a three-phase campaign to end the war against Germany: (1) an advance to the Rhine, taking the entire Rhineland, along the west bank of the river from Holland to the Alps; (2) assaults across the Rhine north of the Ruhr between Emmerich and Wesel and south of the Ruhr between Mainz and Karlsruhe; and (3) a dual thrust into the heart of Germany. At the urging of the British, General Eisenhower agreed that the northern assault should be given maximum strength and launched as soon as possible.¹

In November 1944 the First Allied Airborne Army had prepared a short staff study for an airborne assault north of Wesel in conjunction with a U.S. Ninth Army crossing of the Rhine. The German Ardennes offensive of December delayed its application, but on 10 February 1945 the FAAA reissued the staff study with remarkably few changes. The biggest change was in the ground forces since the sphere of the British 21 Army Group had been extended southward to include Wesel, thus displacing the U.S. Ninth Army. Consequently, the airborne operation--Varsity--was designed to support a British Second Army amphibious crossing of the Rhine in the vicinity of Wesel. The most notable difference from previous airborne operations was that the entire mission--positioning of some 17,000 troops with ammunition and equipment, plus their resupply--was to be completed in four hours. Additionally, the attack was to follow instead of precede the ground assault.

Lt. Gen. Sir Miles Dempsey, commander of the Second Army, gave

Varsity its objective. Rather than secure the east bank of the Rhine--as originally planned--the air attack was to secure the Diersfordter Wald, a wood between three and five miles east of the Rhine, on the crest of a gentle rise. Though scarcely 100 feet above the river, the high ground provided the only good natural observation points in the area, and the trees provided cover from which German artillery could rake the stream. Until the wood was taken, construction of bridges across the Rhine would be impossible. The initial plan had required simultaneous airborne and amphibious assaults under the cover of darkness, but the changed objective made the night attack unnecessary and unduly risky. Since possession of the Diersfordter Wald was not required until the bridging operations began, plans were made for an amphibious assault an hour or two before dawn, followed at 1000 hours by the airborne attack.

Four paratroop drop zones and six glider landing zones were selected. Nine were on or near the east side of the wood, while one of the paratroop zones was on the west side. All 10 zones were located in an area less than six miles long and five miles wide--an unprecedented degree of concentration.

The drop and landing zones were generally firm, level ground, consisting of fields and meadows averaging 200 to 300 yards in length. Hedges were small and fences light. Ditches were few and small. The enemy had prepared no landing obstacles. A double-track railroad cut diagonally across the area from northwest to southeast. A few hundred yards to the east of the railroad a high-tension power line on 100-foot pylons presented a major hazard to gliders and paratroopers. Bordering

the eastern edge of the area and running south-southeast was the Issel River—a water barrier 60 feet wide. There were many other minor hazards, but it was most important to avoid depositing the airborne troops in the wood, in or beyond the Issel, or against the high-tension line.

Aware that Wesel was a logical place to cross the Rhine the Nazis had, it was estimated, massed about 10 of their best remaining divisions within 20 miles of the assault area. However, they had been so reduced by attrition as to number less than 50,000 combat effectives. Among them were two or three panzer divisions with perhaps 100 tanks and self-propelled guns, but these were reported to be more than 10 miles from the assault area. A maximum of 12,000 troops including two divisions and a brigade group were thought to be within a 10-mile radius of the airborne assault. If they concentrated in the Diersfordter Wald to oppose the amphibious landings, the arrival of the airborne attack at their rear and on their flanks would cut them off. Since it was believed that the Germans were expecting an airborne assault, it was more likely that they would keep their main strength back of the Issel River, with only a holding force in the wood. In that case the airborne troops might be the ones encircled.

It was evident that within five minutes of landing the Allied forces would be in combat with substantial numbers of the enemy. The duration and severity of the battle would probably depend on the extent to which the Germans could bring up reinforcements. The Allies proceeded to stop such movements by a systematic interdiction campaign. During the three days prior to the attack—21-23 March—8,500 tons of bombs were dropped against communication targets in 3,471 sorties. Barracks and other

military installations received 6,600 tons of explosives, delivered by 2,090 bombers. In addition, fighter-bombers swept over the railroads and highways, claiming a total of 215 rail cuts, 80 locomotives, 2,383 railroad cars, and 318 other vehicles.

Varsity involved both British and American air units. The U.S. IX Troop Carrier Command was responsible for transporting the paratroops of both the U.S. 17th Airborne Division and the British 6 Airborne Division. It provided 226 C-47's and 72 C-46's for the 17th Division paratroop lift; 243 C-47's for the British division; and 610 C-47's, many of them using the double-tow technique, to tow 906 gliders carrying 17th Airborne Division troops. The RAF 38 and 46 Groups supplied 440 aircraft to tow an equal number of gliders carrying 6 Airborne Division troops.

The flight path was not excessively long and only the last six miles were over enemy territory, but to deliver simultaneously two divisions of troops within a period of two hours and 37 minutes required clock-like precision. It was decided that the British troops would fly from England and the Americans from bases around Paris. By February the British 38 Group was stationed in Essex, northeast of London, and the 46 Group was in place in East Anglia on Eighth Air Force fields. Three groups of the American 52d Troop Carrier Wing--designated to carry the 6 Airborne Division paratroops--were also placed in East Anglia; the remainder were assigned to a group of bases between 60 and 90 miles north of the French capital. The 50th and 53d Troop Carrier Wings were located on bases south and east of Paris.

Troop carriers based in England were instructed to enter the Continent

at Cape Gris-Nez and make a dogleg flight to Wavre--thus avoiding the radar range of German-held Dunkirk. Wavre was the command assembly point where the flights from England and France were to merge. This location involved the least possible detour for the wings stationed in France and could be reached by all wings without crossing each other's courses or assembly areas. From Wavre, three lanes spaced $1\frac{1}{2}$ miles apart, proceeded northeast for 92 miles to Weeze--the principal initial point, located 14 miles west of the Rhine.²

At 2000 hours on 23 March the British began a heavy artillery barrage covering the bank of the Rhine and the DZ's and LZ's selected for the airborne operation. An hour later the artillery barrage lifted and the first wave of the British Second Army assault boats pushed out into the Rhine. To the south, the U.S. Ninth Army assault began at 0200. All the crossings were completely successful; the opposite bank proved thinly held, initial resistance was feeble, and the initial artillery reaction slight. By dawn, nine small bridgeheads had been secured in the Wesel-Emmerich area. Fierce fighting did develop at some points. German paratroops held Rees throughout D-day and kept the British 51 Division pinned close to the river. Enemy troops in Wesel also maintained their position during the day. However, the British 15 Division, in the center of the line, did well and by 1000 was in a position to capitalize on the airborne assault, which was to strike Diersfordter Wald on the hill position directly in front of it.³

IX TCC aircraft took off on schedule between 0709 and 0740 of 24 March, carrying close to 3,900 paratroops of the British 6 Airborne Division. Of the 243 C-47's scheduled, one failed to depart because

no load had been provided for it.⁴

From England to the Rhine everything went smoothly. The 213 planes of RAF Fighter Command guarding the route had little to do for they sighted not one enemy aircraft. Near the Rhine the smoke laid to screen the amphibious assault had cut visibility between the river and the drop zones to one mile or less. Fortunately the distance was short and the landmarks plentiful and not readily obscured by haze. Some pilots were helped by the visual aids set out by the pathfinders. At 0951--slightly ahead of schedule--the men began to jump. Both supplies and troops were dropped with great accuracy.

Flak was light during the drop, but as the C-47's swung left onto a homeward course sudden blasts of intense and accurate flak swept the serials. Of the 119 aircraft over DZ-A, 3 were brought down and 30 damaged. The aircraft over DZ-B were less fortunate. Of the 121 planes reaching the assault area, 10 were destroyed east of the Rhine, 7 crash-landed in friendly territory, and 70 were damaged, most of them severely.

Immediately following the paratroop drop the 6 Airborne Division gliders were released in the combat zone. The first tug and glider had taken off at 0600, an hour earlier than the paratroop aircraft. Only one of the 440 tugs failed to become airborne, but 35 gliders broke loose or had to be released prematurely. Two hostile planes were sighted but did not attack, and the high-flying British column suffered little from the flak. Haze, smoke, and dust over the combat area reduced visibility but helped shield incoming gliders. Although many were released as much as 1,000 feet higher than planned, 90 percent landed on or near their zones--many within 100 yards of their objectives.

Six missed the landing area by more than a mile but came down in the territory held by American airborne troops. About 10 of the gliders were shot down and 284 damaged by flak--partially due to the high releases. About half the gliders were damaged in landing. Ground resistance was vigorous and effective, and only 88 gliders came through completely unscathed.

The glider contingent would have had an even harder time had it not been for the presence of British paratroops on DZ's A and B and of American paratroops dropped by mistake on the LZ's around Hamminkeln. Thus, the operations did not provide a good precedent for glider landings on zones not previously occupied by paratroops. However, the gliders did bring in a force of 3,383 troops, 271 jeeps, 275 trailers, 66 guns, and a wealth of other equipment including trucks and bulldozers.

By nightfall of D-day all organized resistance in the British sector from the western edge of the wood to the Issel had been broken--union was made with the forces moving up from the Rhine, six bridges across the Issel River had been seized intact, and over 600 prisoners taken.⁵

The lift of the American paratroops began at 0725 on the 24th when a pathfinder plane took off from Chartres. Within 10 minutes the first serial swept over the field in formation and headed for the assembly point at Wavre. From the other fields around Paris six additional serials took their position behind the leader. Not one of the C-47's in the paratroop formations failed to take off or had to turn back. Two C-46's aborted but the personnel quickly transferred to four C-47's, and the last aircraft left Achiet about 0930--half an hour behind schedule.

The first four paratroop serials, a force of 181 C-47's, carried 2,479 troops of the 507th Parachute Infantry Regiment (PIR) and the 464th Parachute Field Artillery Battalion (PFAB) to DZ-W. The drop zone was located on the south side of Diersfordter Wald and $2\frac{1}{2}$ miles northwest of Wesel. When the aircraft arrived, DZ-W lay under a pall of smoke. The flyers caught glimpses of the Rhine but beyond the river the ground was invisible except through an occasional rift in the smoke. Ground fire was slight and although 29 planes were hit not one was shot down. Most of the first serial, however, lost its way and dropped 693 men at about 0950 some two miles northwest of the drop zone, but they rejoined the rest of their battalion within an hour. The second and third serials placed their paratroops squarely in the drop zone. The fourth serial reached the zone about 1005 and dropped the 464th PFAB accurately but in a somewhat dispersed pattern. However, by 1300 the artillerymen had 9 of their 12 howitzers in position and firing.

Within $3\frac{1}{2}$ hours the 507th PIR had taken all its assigned objectives; at 1300 it made contact with advanced elements of the 15 Division. By 1803 the U.S. paratroops joined forces with the British airborne on the northern border of their sector, and at 0200 on the 25th a patrol to the southeast reached the British troops in the Wesel area.

The last three of the seven serials carrying American paratroops lifted the 513th PIR and the 466th PFAB to drop them on DZ-X, located on the east side of Diersfordter Wald about $1\frac{1}{2}$ miles east-northeast of DZ-W. The whole air echelon, composed of 2,071 men with 64 tons of supplies, was flown from Achiet in 72 C-46's. The pilots missed their crossing point over the Rhine completely, partially because of poor

visibility and partially because of inexperience in flying their new planes in large formations. As a result, they deposited their paratroops between 1½ and 2 miles north of DZ-X in the British zone southwest of Hamminkeln.

At 1008 as the first aircraft began to drop its troops the serial was raked by intense and accurate flak and small-arms fire. This fire continued from positions along the Issel while the C-46's were making their right turn after the drop, and some shooting followed them until they got back to the Rhine. The C-46 proved extremely inflammable, and German guns destroyed 19 planes and damaged another 38.

Upon landing, the 513th engaged the enemy in the vicinity. By 1230 a nucleus of the regiment had formed and begun to move toward its preplanned position in DZ-X. By 1530 most of the regiment had reached the proper area, and since most of the objectives had already been taken by other American units the 513th moved almost unopposed into the assigned positions.⁶

The American glider effort for Varsity was composed of 610 C-47's and 906 Wacos. Twenty-one gliders dropped out along the route because of loose or ill-balanced loads, structural weakness, or towing difficulties. Formation flying along the way was made difficult by extreme turbulence. As a further complication, the prescribed airspeed of 110 miles an hour was too slow, causing some near stalls and much jockeying for position. No navigation problems appeared until the formations reached the Rhine. Here they met with the poor visibility that had plagued the paratroop aircraft.

The first contingent, made up of eight serials of 296 C-47's towing

592 Waco gliders, flew the 194th Glider Infantry Regiment, the 680th and 681st Field Artillery Battalions, and four batteries of the 155th Anti-aircraft Battalion to LZ-S, about one-half mile southeast of DZ-X and about two miles northeast of Wesel. The trip to the Rhine was uneventful but visibility over the run-in area was down to one-eighth of a mile. However, only a portion of one or two serials went off course. During the approach run, ground fire destroyed two aircraft, forcing their gliders to cut loose a mile short of the destination. The thickest fire was at the LZ and on the turn after release. Of the 295 planes entering the battle area, 12 were shot down, one was lost by accident on the return, and about 140 were damaged--mostly minor.

The lead serial made its release at 1036, the last at 1140. Within little more than an hour the serials delivered approximately 572 gliders containing 3,492 troops and 637 tons of cargo, including 202 jeeps, 94 trailers, and 78 mortars and artillery pieces. Navigational error caused 83 gliders to land outside the zone. Luckily, most of the misplaced glider men found themselves among friendly troops. Once Wesel was passed, the return of the tugs was unopposed.

The last seven American glider serials went to LZ-N, on the east side of the Diersfordter Wald and just north of DZ-X. Composed of 314 C-47's pulling an equal number of gliders, the load amounted to 1,321 troops and 382 tons of supplies and equipment. Wind, turbulence, prop wash, and low airspeed gradually distorted the glider formations and caused the rear elements of the serials to stack up until they were some 400 feet or more above the leaders. On the other hand, they arrived at the Rhine squarely on course. Ground fire between the Rhine and the

landing zone was meager--having been silenced by the 507th PIR. The first glider cut loose at 1155. Between 1404 and 1505 the aircraft returned to their bases almost intact. Out of 313 planes winging over or near LZ-N, only 3 were lost and 44 damaged. Each of the serials intended for LZ-N appears to have been released over or very near that zone. Of 302 gliders, about 200 landed on the zone, not more than 15 landed over 1,000 yards away, and none more than 1½ miles away.⁷

Close behind the last troop carrier formation came 240 Eighth Air Force B-24's engaged in the D-day resupply. Half of the bombers were designated to drop their supplies for the 17th Airborne Division while the remaining 120 aircraft were to drop for the 6 Airborne Division. Navigation was good and all but three of the aircraft reached their destination carrying a total of 598 tons of supplies. There were no major errors, but minor ones, caused by poor visibility, high speed, and low altitude, were sufficient to spread supplies all over the Diersfordter area. Fortunately, few pilots overshot the mark by so much as to put them beyond the territory held by the airborne, so almost all the bundles were recoverable. The 17th Division collected about 50 percent of the 306 tons of supplies dropped for it. However, it was known that many bundles were picked up and used on the battlefield without any report. The British airborne reported that about 85 percent of their 292-ton consignment landed in the divisional area and about 10 percent to the north of it.⁸

The B-24's met no opposition until after the supplies were dropped, but then they ran into light flak and small-arms fire which shot down 15 of the aircraft and damaged 104. Astonishingly, the bomber loss rate

was seven times higher than that experienced by the C-47's in the area only a few minutes earlier. It seems possible that in some cases the momentum of the faster bombers carried them beyond the Issel before they could complete their turns, thus giving German gunners an opportunity to fire at close range.

Before the last bomber dropped its load of supplies, the airborne troops had made contact with the Second Army. German resistance disintegrated rapidly, and about 1600 the Second Army canceled the supply drop scheduled for D plus 1.

Varsity was rated the most successful airborne operation yet attempted. Nearly 17,000 men had been poured into an area of less than 25 square miles within 4 hours. This concentration in time and space was decisive. With the exception of one serial, the concentration and pattern of the paratroop drops ranged from good to excellent. It is significant that the 507th PIR was able to assemble 90 percent of its strength within an hour and a half and the 513th did almost as well. The glider serials were more accurate but less orderly than the paratroop formations. Except for about four flights and a handful of individuals, all seem to have released their gliders over or very near their proper zones. Ragged formations, overrunning of some serials, and a general tendency of rear elements to climb to avoid prop wash produced considerable confusion and made it difficult for the glider pilots to land on their assigned fields.⁹

The overall cost of Varsity was moderate--7 British troop carrier aircraft destroyed, 46 American aircraft destroyed (plus 9 salvaged), and 15 bombers in the resupply mission. Up to 2400 on D plus 2 the U.S. 17th Division

had 231 killed in action and 670 wounded, exclusive of injuries. The British 6 Airborne Division reported casualties on D-day of 347 killed, 731 wounded, and 319 missing--many of whom later rejoined their units.¹⁰

Flak neutralization had been difficult but was on the whole successful. Perhaps the major achievement of the Allied air forces was the complete neutralization of the Luftwaffe on its home grounds. Less than 20 German planes came within sight of the troop carrier formations. Equally significant was the success of the interdiction campaign which prevented the Germans from moving reinforcements into the area.¹¹

Operation Varsity24 March 1945

<u>Aircraft</u>	<u>U.S. IX TCC</u>	<u>8 AF</u>	<u>RAF 38 & 46 Gps</u>	<u>Total</u>
Dispatched	1,156*	240	440	1,836
Effective	1,144	237	402	1,783
Abortive	10		35	45
Dest or Missing	58	15	7	80
Damaged	352	104	39	495
<u>Gliders</u>				
Dispatched	908		440	1,348
Effective	883		392	1,275
Abortive	18		35	53
<u>Paratroops</u>				
Carried	8,834			8,834
Dropped	8,677			8,677
<u>Glider Troops</u>				
Carried	4,915		3,383	8,298
Landed	4,810		(Not Available)	
<u>Cargo Tonnage</u>				
Aircraft	353	598	(Not Available)	
Glider	1,036		(Not Available)	
<u>Carried by Gliders</u>				
Artillery pieces	43		66	109
Jeeps and Trucks	350		285	635
Other Vehicles	198		553	751

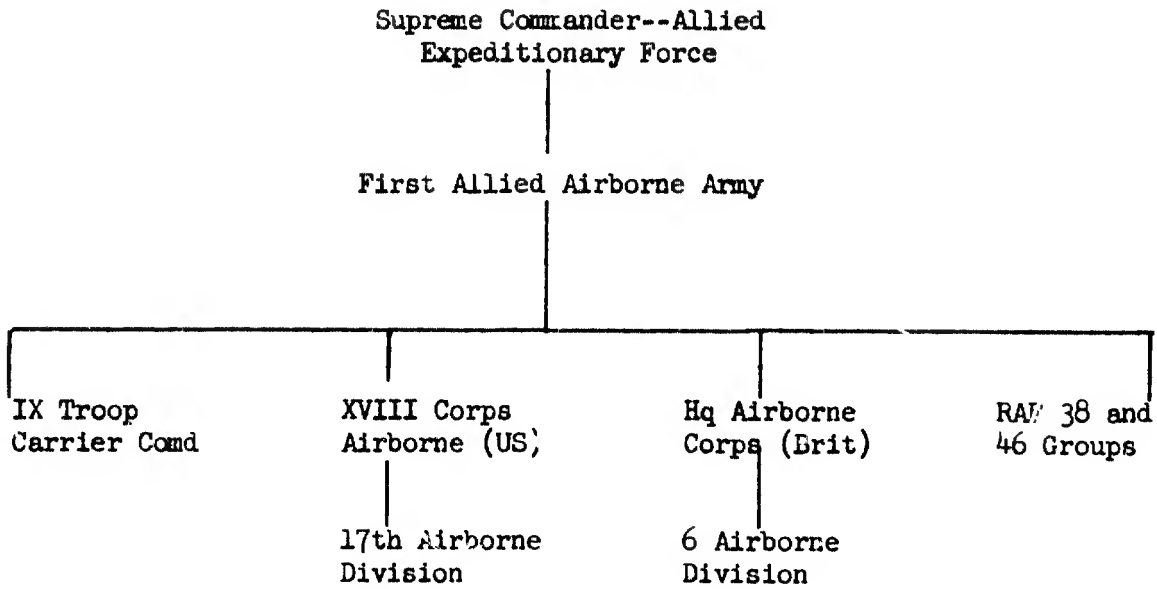
*Includes 242 aircraft used to transport Brit 6 Airborne Div Paratroops

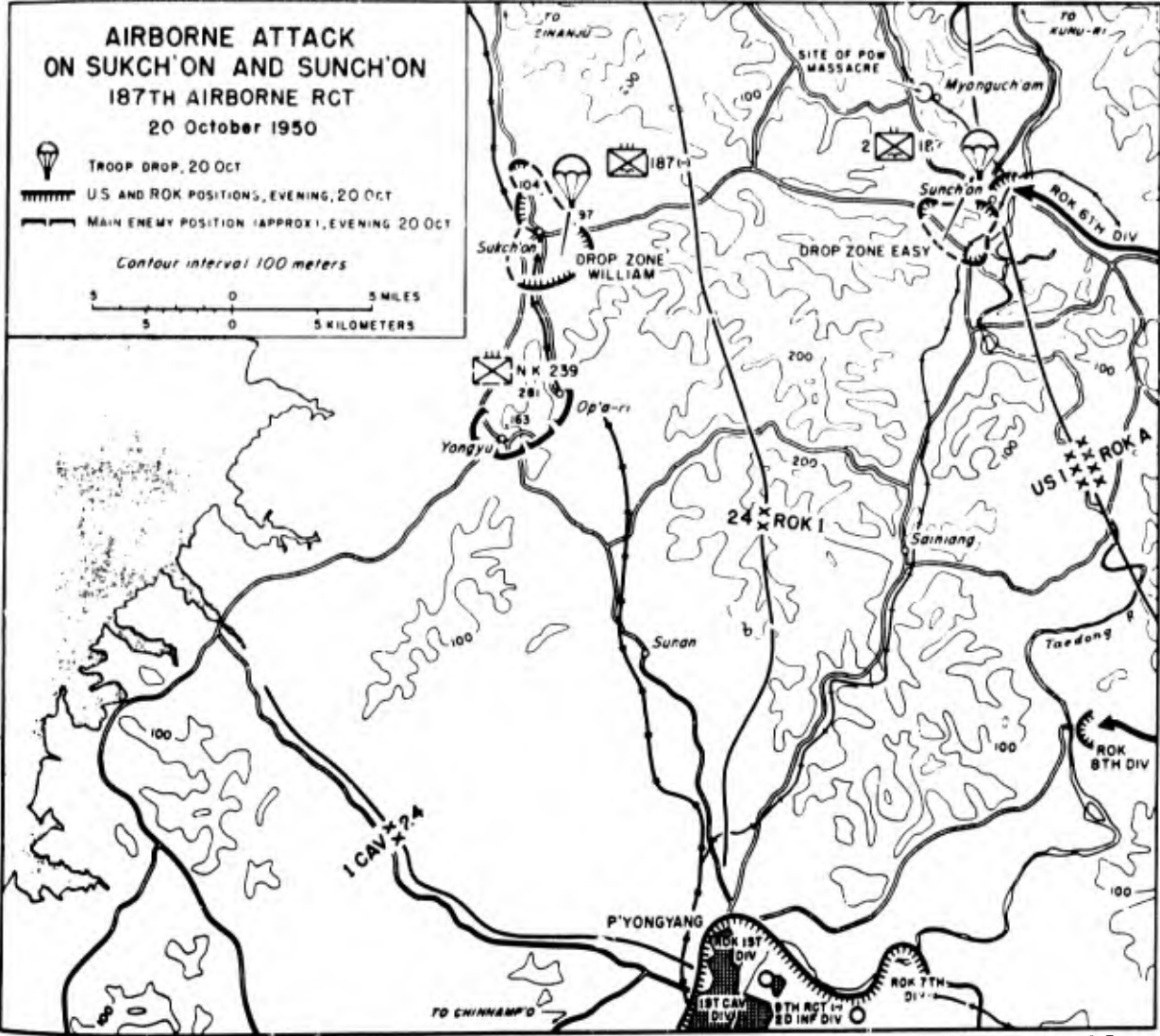
SOURCE: USAF Historical Study 97, pp 228-29.

Casualties in Operation Varsity24 March 1945

	<u>Killed</u>	<u>Missing</u>	<u>Wounded or Injured</u>
IX TCC Crew Personnel	8	108	47
IX TCC Glider Pilots	33	55	106
RAF TC Crew Personnel	7		20
British Glider Pilots	38	135	77
8th AF (2d Air Div) Crew Personnel	5	116	30
	—	—	—
TOTAL	91	414	280

SOURCE: USAF Historical Study 97, p 229.

Operation Varsity Chain of Command24 March 1945



F. Temple

Reprinted from Roy E. Appleman, South to the Naktong, North to the Yalu (U.S. Army in the Korean War) (Washington, 1961), p. 655.

IX. AIRBORNE OPERATIONS AT SUKCHON-SUNCHON, KOREA
20-23 OCTOBER 1950

By the end of September 1950 the United Nations Command had broken the back of North Korean forces south of the 38th parallel. Its next move called for the occupation of that part of Korea north of the 38th parallel authorized by the U.N. resolution of 6 October. The strategy of the U.N. Command was similar to that employed at Inchon in September. The U.S. Eighth Army would attack along the Kaesong-Sariwon-Pyongyang axis, secure Pyongyang, and effect a juncture with X Corps, scheduled to make an amphibious assault at Wonsan on the east coast. Advancing northward, it would establish a defensive line stretching across the neck of the peninsula from Chongju on the west coast to Hungnam on the east coast. Beyond this line non-Korean U.N. troops would not go without further orders. The encircled North Korean forces would be destroyed, and the United Nations would assist the Republic of Korea (ROK) government in establishing control over Korea.¹

The Far East Air Forces (FEAF) would continue its current missions, including support of the advance of the Eighth Army and the landing of X Corps at Wonsan and its march inland. In addition, FEAF was prepared, on four days' notice, to drop the 187th Airborne Regimental Combat Team (RCT) where and when needed. FEAF's Combat Cargo Command (COMCARCOM)* would be responsible for the airborne lift, air evacuation, and emergency airlift to Pyongyang and Wonsan.²

*Succeeded by the 315th Air Division on 25 January 1951.

D-day for the amphibious entry into Wonsan was 20 October, but as it fell to ROK troops before that date the operation was unnecessary. Meanwhile, the Eighth Army pushed north under Fifth Air Force air cover, and by the 20th it had captured Pyongyang, the North Korean capital. The ROK 1st Division assisted by attacking the city from the southeast, east, and northeast and by taking the two airfields near the city.³

After the fall of the North Korean capital, the U.N. Command decided to trap as many of the remaining Communist forces as possible. The 187th RCT was standing by at Kimpo Airfield, near Seoul, to aid in such an envelopment. On 18 October, General MacArthur ordered the 187th to drop about 30 miles north of Pyongyang on the 20th, in order to cut off North Korean officials and enemy troops and to rescue American and ROK POW's being evacuated northward. Two airdrops were planned: the principal one near Sukchon and the other near Sunchon. Drop zones would be about 12 miles apart. Maj. Gen. William H. Tunner, commander of COMCARCOM, immediately canceled all transport commitments of the 314th Troop Carrier Group's C-119's and the 21st Troop Carrier Squadron's C-47's to make certain that the aircraft would be fully ready for the operation.⁴

Preparations for the airdrop called for close coordination between COMCARCOM and the 187th RCT. Unlike similar operations in World War II, establishment of a special interservice airborne unit was infeasible. In addition to the lack of time, there was a lack of sufficient aircraft, trained crews, maintenance personnel, and bases in Japan and Korea to support such an arrangement. Also, the numerous missions imposed on COMCARCOM made centralized control of all transport units by a single headquarters necessary.⁵

Fortunately, a close working arrangement with the 187th was possible. The 314th Troop Carrier Group's C-119's previously had had considerable experience in the United States dropping paratroopers of the 11th Airborne Division. And the 187th was made up largely of men of this division. A regular exchange of liaison officers between COMCARCOM and the 187th, and a desire by both air and airborne commanders to get things done and leave controversies to higher command levels, also facilitated the spirit of cooperation.⁶

On the morning of the 20th the paratroops, supplies, and equipment were loaded on 76 C-119's and 40 C-47's at Kimpo strip. The planes were crowded. A typical C-119 carried 46 men in "sticks" of 23 men each, 15 monorail bundles, and 4 door bundles. Each man had a parachute, a .45-caliber pistol, and a carbine or M1 rifle.⁷

The first aircraft was aloft by noon. After all the planes assembled over the Han River estuary, they turned north along the west coast of Korea, escorted by Fifth Air Force fighters. As the carriers approached the drop zones, FEAF fighters and light bombers rocketed and strafed the Sukchon and Sunchon areas. General Tunner served as airborne commander. At about 1400 hours the first troops began dropping from lead planes. There was no anti-aircraft fire and only occasional sniper fire. The initial drop placed Brig. Gen. Frank S. Bowen, Jr., commander of the 187th, and the 1st Battalion with engineer, medical, and service troops-- a total of 1,470 men--in Drop Zone William southeast of Sukchon. The 3d Battalion landed in the same area. At 1420 hours paratroops began landing in Drop Zone Easy, about two miles southwest of Sunchon. Parachute recovery teams jumped with the troopers, the first effort of this type

in U. S. Army history. They served as combat soldiers until the drop zone perimeters were secured. Casualties were light for both jumps-- only 1 man killed, 46 injured. The jumps were completed within an hour, 111 planes dropping 2,860 paratroops and 301.2 tons of supplies and equipment in two drop zones by 1500.⁸

On the ground the paratroops quickly occupied the high ground overlooking both drop zones, meeting little resistance. In the William area, General Bowen established a command post. His men cleared Sukchon and set up road and rail blocks around the town. Five enemy soldiers were killed and 42 captured with no loss to the Americans. In the Easy area, road blocks were also established around Sunchon. One company advanced into town and established contact with elements of the ROK 6th Division, which had reached the town from the southeast in their drive toward the Chongchon River. Troops in the two drop zones established contact on the afternoon of the 21st.⁹

The softening-up attacks around both drop zones probably contributed to the light enemy resistance. Defensive positions with guns and ammunition had been abandoned. In the preliminary assault and subsequent air support during the afternoon under direction of air controllers, the Fifth Air Force employed 75 F-51's, 62 F-80's, and 5 B-26's. The pilots claimed destruction of 53 vehicles, 5 fuel and ammunition dumps, 23 ox-carts, 4 tanks, and a field artillery gun.¹⁰

In the following three days additional men, supplies, and equipment were airdropped, reaching a total of 3,955 men and 592 tons for the four-day period. Relatively few items dropped were damaged or lost: 2 of 12 105-mm. howitzers, 4 of 39 jeeps, and 2 of 4 three-quarter-ton trucks.

One of the two howitzers was lost when its parachute streamed, and the other, with a broken axle, was repaired in the field.* It was the first time such heavy equipment had been dropped by U.S. forces in combat and the first time C-119's were employed in a combat parachute operation.¹¹

Although the airdrop had been arranged on short notice, General Bowen said that there had "not been a better combat jump." In addition:¹²

He called the formation and timing "perfect." As an example, equipment for the 1st and 3d Battalions and the 1st Battalion's personnel were dropped together; the 3d Battalion, which jumped later landed right in its own equipment. Casualties were light: Only 1 man killed and 46 injured. Bowen particularly commended the formation of C-47's which was the more remarkable since the 21st Squadron had had little airborne training. Bowen did suggest that future formations for heavy drops not be as tight as that employed because large parachutes tended to steal air from the smaller ones, causing the latter to stream. Aside from that, he thought that the only difficulties with the mission arose from faulty materiel or inexperience on the part of his packers.

General MacArthur witnessed the airdrop and considered it "an excellent performance." He believed it surprised the enemy and expected it would trap 30,000 North Koreans--about half of the remaining force--between the 187th RCT on the north and the 1st Cavalry Division and ROK 1st Division at Pyongyang on the south. MacArthur's optimism was not borne out by events. The main body of North Korean troops was already north of Sukchon and Sunchon, and the principal North Korean officials and most of the American and ROK prisoners of war had already evacuated the capital. Nevertheless, some heated fighting ensued.¹³

Most of the enemy forces in the area, about 2,500 men of the North Korean 239th Regiment, held defensive ground in the high hills near

*The Army claims only 6 of the 12 howitzers dropped were recovered in usable condition.

Yongyu. These were attacked from the rear by I and K Companies of the 3d Battalion during the 21st, and they tried to break out beginning about midnight. Despite heavy losses from direct and enfilading fire, the North Koreans made several attacks, and the 187th finally radioed for assistance. It arrived next day when the Australian 1 Battalion of the British Commonwealth 27 Brigade, attached to the U.S. 24th Division, approached Yongyu. At daylight on the 22d the Australians joined the battle and engaged the North Koreans in fierce fighting in an apple orchard and a rice field. Together, but in separate areas, the Australians and members of the 3d Battalion of the 187th virtually destroyed the North Korean regiment. The 3d alone claimed to have killed 805 and captured 681 of the enemy in the Yongyu battle.¹⁴

The 187th's 2d Battalion remained relatively inactive during the fray in and around Easy zone near Sunchon. ROK 6th Division forces cleared the town and vicinity of enemy stragglers. When the 187th returned to Pyongyang on the 23d, it had captured 3,818 North Korean prisoners in the entire operation while suffering 65 battle casualties.¹⁵

On 2 November, Maj. Gen. William M. Miley, chief of the Army's Airborne Center at Fort Bragg, N.C., reviewed with General's Tunner and Bowen this Korean airdrop. Despite the fact that the operation was successful, General Miley expressed the view that there should be an airborne army with command control over all airborne units, troop carrier units, and supporting fighter units. Drawing an analogy between the existing command organization and the First Allied Airborne Army of World War II, he tried to get General Tunner to concur. But General Tunner disagreed since the change would require setting up a special command that he did

not believe necessary. He pointed out that for the recent operation there was only one regimental combat team, one source of fighters, and one source of troop carriers in Korea. The problem was not complicated and probably would not recur often enough to warrant setting up a special command. Bowen generally agreed that an airborne army was not necessary for the Korean operation, and he said experienced personnel in the 187th RCT agreed that there had "not been any better combat jump" and that the "formation and timing were perfect."¹⁶

Sukchon-Sunchon Airdrop20-23 October 1950

<u>Date</u>	<u>Aircraft dispatched</u>	<u>Type Aircraft</u>	<u>Troops dropped</u>	<u>Tonnage dropped</u>
20 Oct	76 40	C-119 ^a C-47	2142 718	301.2
21 Oct	40	C-119 ^b	1093	106.8
22 Oct	22	C-119 ^c		130.0
23 Oct	<u>9</u>	C-119	<u>2</u>	<u>54.0</u>
TOTALS	187		3955	592.0 ^d

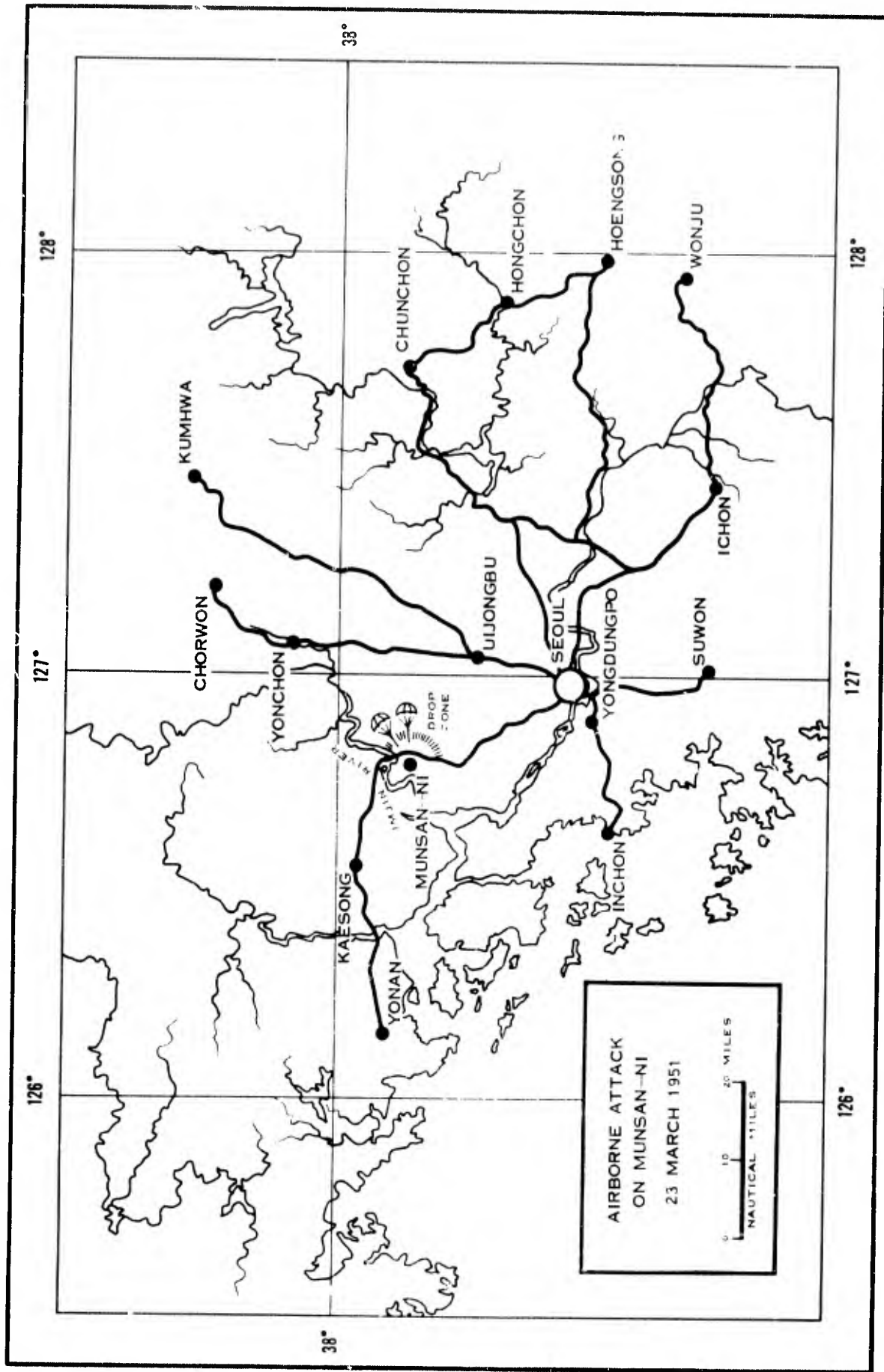
^a. Five aborts. ^b. Two aborts. ^c. One abort. ^d. Army figures indicate about 645 tons.

SOURCE: USAF Historical Study 71, p 77; Hist Rpt, FEAF COMCARCOM (P), 10 Sep 50-24 Jan 51, Vol II, Doc 102.

Sukchon-Sunchon Airdrop
of Heavy Equipment and Supplies
20-23 October 1950

<u>Type</u>	<u>Number</u>
Howitzers (105mm)	12
Jeeps	39
Trailers ($\frac{1}{4}$ ton)	38
Trucks ($\frac{3}{4}$ ton)	4
Antiaircraft guns (90mm)	4
Mobile radio transmission set ($2\frac{1}{2}$ tons)	1
Ammunition, gasoline, water, rations, and other supplies	584 tons

SOURCE: Roy E. Appleman, South to the Naktong, North to the Yalu (U.S. Army in the Korean War) (Washington, 1961), pp 656-57.



X. AIRBORNE OPERATIONS AT MUNSAN-NI, KOREA
23-27 MARCH 1951

In an effort to drive Chinese Communist and North Korean forces out of the area above Seoul, Lt. Gen. Matthew B. Ridgway, commander of U.N. ground forces in Korea, instituted Operation Ripper on 7 March 1951. This placed the main U.N. attack along an axis stretching northward from Hongchon to Chunchon, two towns northeast of the South Korean capital. On the night of 14/15 March the Chinese, possibly fearing a flanking attack, abandoned Seoul without a fight. Hongchon fell on 15 March. By the 18th the Communists were trying to withdraw their forces on all fronts across the Korean peninsula. To exploit the enemy's retreat, General Ridgway and Maj. Gen. Earle E. Partridge, commander of the Fifth Air Force, planned to drop the 187th Airborne Regimental Combat Team (RCT) at Chunchon, which was a principal enemy supply and communication center.¹

Earlier in the month, when plans for an airborne operation were taking shape, Brig. Gen. John P. Henebry, commander of the 315th Air Division,* had informed the U.S. Eighth Army that to assure sufficient aircraft, his headquarters needed five days between first notification of an airdrop and D-day. This would allow time for tapering off of airlift operations, assembly of necessary aircraft (including 10 percent spares), installation of monorails on carriers, and other preliminary work. The 187th RCT estimated a minimum requirement of four days to prepare for an airdrop.²

*The 315th Air Division replaced FEAF Combat Cargo Command (Provisional) on 25 January 1951. General Henebry succeeded Maj. Gen. William H. Turner as commander of the 315th on 8 February.

General Ridgway was dissatisfied with the request for a five-day advance notice and indicated that the airdrop might take place sooner. On 19 March he set D-day for 22 March. On the same day a decision was made to include two Ranger units not previously committed to the impending operation. This created a sudden need for an additional troop carrier squadron.³

On the morning of the 21st, Generals Ridgway and Partridge alerted their forces for Tomahawk, the code name for the airborne operation. Seventy-five C-119's of the 314th Troop Carrier Group and 55 C-46's of the 437th Troop Carrier Wing immediately began to assemble at K-2, an airfield near Taegu. Before noon, however, information was received that Chunchon had fallen to the 1st Cavalry Division and that an alternative drop area had been selected at Munsan-ni, a village on the south bank of the Imjin River between Seoul and Kaesong. D-day was postponed until the 23d.⁴

General Henebry, Brig. Gen. Frank S. Bowen, commander of the 187th, and other key personnel immediately conducted an aerial observation of the Munsan-ni area to select drop zones, approaches, and withdrawal routes. On the 22d, General Bowen met with the commander of I Corps, some of whose troops would link up with the 187th within 24 hours after the drop. At this meeting the airdrop was scheduled for 0900 hours on the 23d. Six serials were scheduled for the first day: four carrying troops and two carrying heavy equipment. An effort would be made to place the largest number of men into the drop area as soon as possible. The heaviest equipment slated for the airdrop were jeeps and 105-mm. howitzers. Aerial resupply was scheduled for the three days following D-day, but plans

remained flexible.⁵

Weather on the morning of 23 March was perfect. General Henebry's C-54 command ship led the way and the other transports followed, beginning at 0730 hours. Because of dust at the airfield, all takeoffs, after the first few, were made blind at 10-second intervals. Upon entering enemy territory the transports were escorted by 16 P-51's. At 0900 hours the first serial began placing the 187th's paratroops into the drop zone and the other serials followed. Two aircraft aborted, one of them, carrying the leader of the second serial, after becoming airborne; it landed at K-37, an alternate airfield near Taegu. The leader secured a spare C-46, from which he mistakenly dropped 30 men in the south drop zone. These were successfully retrieved by a company of paratroops. Except for this incident, Operation Tomahawk proceeded smoothly. By the end of the first day 73 C-119's had dropped 2,011 paratroops and 204 tons of supplies and equipment, and 46 C-46's had dropped 1,436 paratroops and 15.5 tons of supplies. There were 84 jump casualties, but 40 soon returned to duty. Enemy action wounded 18 and killed 1. In addition, 5 C-119's incurred some damage from small-arms fire. One of the damaged planes burst into flames on its return flight to Taegu, killing the pilot and copilot. The rest of the crew bailed out safely.⁶

To support the 187th RCT and the U.N. force driving northward from Seoul, the Fifth Air Force flew 31 F-51, 50 F-80, 31 F-84, and 56 B-26 sorties on the 23d. Several airborne relay aircraft provided tactical coordination and reconnaissance over the drop zones. A C-47 providing airborne control for the air support aircraft circled Munsan-ni for more

than nine hours. In direct support of the 187th, relay aircraft directed 31 flights of 108 fighter aircraft. The fighters attacked 12 dug-in and 7 open troop concentrations, 4 villages containing troops and supplies, 2 supply dumps, and 5 weapon positions. Generals Ridgway and Bowen gave high praise to the fighter support for the 187th RCT.⁷

A tank battalion of I Corps departing Seoul at 0600 hours on D-day soon linked up with the main body of the paratroops as planned. Although the airdrop enabled the corps to reach the Imjin River quickly, the overall results were negligible, for contrary to expectations, the area around Munsan-ni was held by only a single North Korean regiment. Thus the 187th's initial bag was small: only 200 enemy killed and 84 captured. An additional 24 enemy troops were subsequently apprehended. Some of the North Koreans said they had prior warnings of the airborne operation.⁸

As the paratroops could not be profitably employed at the Imjin River, they were ordered to move east and take high ground behind enemy troops opposing the march of the U.S. 3d Division, which was moving from Seoul to Yonchon. In preparation for this assignment a few more men and additional supplies were dropped at Munsan-ni on the 24th. Additional aerial resupply aided the advancing troops on the 26th and 27th. These were the last supply drops and brought the totals for the entire airborne operation to 3,487 men and 483 tons of supplies and equipment.* Meanwhile, foul weather and bad roads so slowed the paratroops that the Communists were able to withdraw from the front of the U.S. 3d Division before the 187th reached its objective. After five days of ground activity the regiment was withdrawn from the area.⁹

*See attached table.

A joint critique held on 3 April by representatives of the 315th Air Division and the 187th RCT drew lessons from the operation. The failure of the leader of the second serial to place his planeload in the correct drop zone was attributed to human error. For the future, enemy air opposition permitting, General Henebry recommended the use of an airborne drop-zone control ship fully equipped for navigation and multichannel radio communications. He also urged joint briefings for serial leaders and airborne unit commanders to permit each to understand the other's functions, a minimum 24-hour notice of a change in the drop zone after aircraft had been assembled, and a minimum 5-day notice for alert, preliminary planning, and aircraft standdown prior to an airborne operation.¹⁰

General Bowen assumed responsibility for malfunctions in the heavy equipment drops and indicated there was less supply damage at Munsan-ni than during the Sukchon-Sunchon airborne operation of October 1950. He said that about 95 percent of the supplies dropped were recovered. He recommended the use of Rebecca-Eureka radio beacons to assure proper identification of drop zones during resupply operations. The conferees also agreed on the need to reduce loading time of paratroops and to use longer safety belts in carrier aircraft. Finally, they indicated that numerous problems could have been avoided or minimized by more detailed resupply planning and by stricter adherence to normal operating procedures and regulations.¹¹

Airdrop at Munsan-ni23-27 March 1951

	<u>Aircraft dispatched</u>	<u>Type Aircraft</u>	<u>Troops dropped</u>	<u>Tonnage dropped</u>
23 Mar	73 48 ^a	C-119 C-46	2,011 1,436	204.0 15.5
24 Mar	36	C-119	40	187.7
26 Mar	4	C-46		10.0
27 Mar	<u>12</u>	C-119	<u> </u>	<u>65.8</u>
TOTALS	173 ^b		3,487 ^b	483.0 ^b

^a. Includes one ground and one airborne abort.

^b. Another source asserts that 148 C-119's and 52 C-46's dropped 3,485 men and 653.6 tons of supplies and equipment during the Munsan-ni airborne operation. (See Hist, 315th Air Division, 1 Jan-30 Jun 51, I, 15^u.)

SOURCES: USAF Historical Study 72, p 57; ltrs, Brig. Gen. J. P. Henebry to Lt. Gen. G. E. Stratemeyer, no subj, 27 Mar and 9 Apr 51; Narrative Report, subj: Munsan-ni, Korea, Combat Drop, 17 Aug 51, all in Hist, 315th AD, 1 Jan-30 Jun 51, Vol I.

NOTES

CHAPTER I

1. George F. Howe, Northwest Africa: Seizing the Initiative in the West (U.S. Army in World War II) (Washington, 1957), pp 15-85 passim & App A; W. Frank Craven & James L. Cate, eds, The Army Air Forces in World War II, II (Chicago, 1949), 3-66 passim.
2. John C. Warren, Airborne Missions in the Mediterranean, 1942-1945 (USAF Historical Study 74), pp 5-9; Craven & Cate, pp 56-57.
3. See n 2.
4. See n 2.
5. USAFHS-74, pp 9-10; Howe, pp 212-13; Craven & Cate, pp 71-72.
6. USAFHS-74, pp 10-12; Howe, pp 212-13; Craven & Cate, pp 71-72.
7. USAFHS-74, pp 12-13; Howe, pp 212-13; Craven & Cate, pp 71-72.
8. USAFHS-74, pp 13-14.
9. Ibid., p 14; Craven & Cate, pp 79-81; Howe, p 278.
10. See n 9.
11. USAFHS-74, pp 14-16; Craven & Cate, p 81; Howe, p 279.
12. USAFHS-74, pp 16-17; Craven & Cate, p 81; Howe, pp 279-80.
13. USAFHS-74, pp 18-19; Craven & Cate, p 87; Howe, pp 305-9.
14. See n 13.
15. See n 13.

CHAPTER II

1. John C. Warren, Airborne Missions in the Mediterranean, 1942-1945 (USAF Historical Study 74), pp 21-26; W.F. Craven & J.L. Cate, eds, The Army Air Forces in World War II, II (Chicago, 1949), 446-49.
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G L O S S A R Y

Abn	airborne
AEDF	Allied Expeditionary Air Force
Bn	Battalion
CCC	Combat Cargo Command
COMCARCOM	Combat Cargo Command
C/S	Chief(s) of Staff
Dest	destroyed
DZ	drop zone
EAC	Eastern Air Command
FAAA	First Allied Airborne Army
FEAF	Far East Air Forces
NAAF	North African Air Forces
PFAB	Parachute Field Artillery Battalion
PIR	Parachute Infantry Regiment
Prcht	Parachute
RCT	Regimental Combat Team
TCC	Troop Carrier Command
TCW	Troop Carrier Wing
USAFHS	USAF Historical Study
USSBS	U.S. Strategic Bombing Survey