

**AMERICAN ARMIES AND
BATTLEFIELDS IN EUROPE:
WORLD WAR II**





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Foreword

As we look back 75 years to the great victory achieved during World War II, the American Battle Monuments Commission remains dedicated to commemorating the service, achievement and sacrifice of the American Armed Forces through memorial programs and commemorations at American cemeteries and monuments in Europe.

The founding Chairman, General of the Armies John J. Pershing, defined our mission with the words, “Time will not dim the glory of their deeds.” His vision has been followed for nearly a century, with the creation and maintenance of monuments and cemeteries marking the achievements of American men and women in protecting our nation and serving as fitting reverent memorials to the fallen.

We are equally committed to contributing to the written history of these events.

General Pershing guided our agency in drafting the history of American forces in World War I, making it accessible and affordable for common Americans. First among these publications, *American Armies and Battlefields in Europe*, was published in 1927 with a second edition in 1938. A supplemental *World War I Battlefield Companion* was published for the WWI Centennial. Both documents serve as a comprehensive history and as a travel guide, directing visitors to historic sites, battlefields, monuments, and cemeteries of World War I.

This volume of *American Armies and Battlefields in Europe in World War II* is the second of a series focused on operations in World War II. It follows the agency’s tradition of telling the story of the American Armed Forces.

Certainly, the 75th Anniversary of the momentous events of World War II will witness commemorations and memorial ceremonies at American historical sites throughout Europe. Perhaps more important, this anniversary period will mark the last opportunity for most surviving members of the “Greatest Generation” to return to these now immortal fields to pay homage to comrades lost and those who have since passed on.

As yet another generation of Americans passes into history, today, 75 years later, we can proudly say, time has not dimmed the glory of their deeds.



William M. Matz
Secretary
American Battle Monuments Commission





President Franklin D. Roosevelt (left) and British Prime Minister Winston Churchill (right) in Placentia Bay, Canada, aboard the HMS *Prince of Wales*.

BOLERO

In August 1941, President Franklin Roosevelt and Prime Minister Winston Churchill met in Placentia Bay, Canada, to unofficially chart Allied strategy in the event of the American entry into World War II. From the start, both leaders agreed that in a multi-front war, the European theater must take priority. “Germany First,” became the watch words as Germany was deemed the most dangerous of the Axis powers. Even then, Churchill reminded Roosevelt that chipping away at Italy as the weakest of the three Axis powers might bring more immediate political results by undermining Germany’s position while lifting Allied morale. Implicit in any strategy would be the rapid movement of supplies and ground forces from the United States to the United Kingdom prior to any combined invasion of the northern European continent. This build-up was later codenamed Operation BOLERO.

The BOLERO plan was executed in four stages. Each reflected the changes in world-wide strategic reality over time, but each held to the final goal of a Cross-Channel invasion as the major United States strategic imperative for the European war. The first iteration of the plan was produced to support Operation SLEDGEHAMMER, a plan to establish a beachhead on the continent, possibly as early as the fall of 1942. It supported an initial troop basis of 1 million soldiers and was completed by the end of May 1942. The second stage of the BOLERO concept envisioned a stronger invasion in 1943 (Operation ROUNDUP) and increased the

planned number of troops. However, the third variation of the plan had to deal with the diversion of troops to Operation TORCH, the invasion of North Africa in November 1942. Most of the ground troops were sent to the Mediterranean and the half million men who did arrive in the UK were mainly focused on building bases for the air build-up. The fourth stage of BOLERO, published in July 1943 after the QUADRANT Conference, authorized the build-up of over one million men in the UK for the newly authorized invasion plan, Operation OVERLORD, planned for May 1944. Troop totals reached almost 1.5 million men by April 30, 1944. Thus, it can be said that one of the reasons that the BOLERO plan worked was due to Allied planning flexibility and their ability to shift training areas, transports, and equipment stocks to react quickly as the strategic situation changed worldwide. BOLERO provided a design for victory in Europe. The Allies' ability to carry it through to completion made it a decisive plan.

The original BOLERO concept saw the shipment of multiple divisions to Europe rapidly for a possible 1943 invasion of France, then codenamed Operation ROUNDUP. ROUNDUP foresaw a massive Allied landing taking place on the northern French coast in the vicinity of the region from Boulogne to Le Havre. It would require a buildup of approximately 100,000 men per week in 1942 and early 1943. It envisioned the use of 48 Allied divisions, 30 U.S. and 18 British. It assumed that the Allies would win the Battle of the Atlantic in order to ensure the safe transit of these troops across the Atlantic. It also required that the Allies have the strength to win at least local air superiority over the invasion beaches and thus envisioned a significant weakening of the German Air Force (*Luftwaffe*) capabilities.

Maj. Gen. James E. Chaney, then commanding the U.S. Army European Theater of Operations, oversaw plans for the reception of American forces into lodgment areas in England as well as planning along with the British for the possible invasion. The visit of Maj. Gen. Dwight D. Eisenhower to Europe changed this equation. Eisenhower was the head of the Operations and Plans Division of the War Department and a protégé of Army Chief of Staff General George Marshall. Initially charged with inspecting the theater of operations and giving Chaney firm directions, Eisenhower ended up replacing him.



Gen. Dwight D. Eisenhower photographed in 1945 wearing the five stars of the newly created rank of General of the Army.



U.S. Navy battleship supporting Operation TORCH.

With Allied forces still weak and German strength in France unimpaired despite its invasion of Russia, it soon became apparent that any immediate attempt to invade the continent would be impractical. After much deliberations, and over the objections of both General Marshall and Chief of Naval Operations Admiral King, Roosevelt and Churchill settled instead on an invasion of Northwest Africa as a more practical option for 1942. Therefore, shortly after taking over the European Theater, Eisenhower was tasked to plan for TORCH and as a result, temporarily extended his European Theater boundaries to include North Africa. He planned to retain roles as both Allied Commander-in-Chief for TORCH and the Commander, United States Army, European Theater of Operations. While this was to be only a temporary appointment, it soon proved unworkable. Both the President and Prime Minister saw the political imperative of some form of combined offensive in 1942, and Africa appeared to be the most achievable goal.

While American strategists continued to press for an early landing in France, the main focus shifted to the Mediterranean. With the campaigns in the Pacific only slowly regaining the initiative, the war in the Atlantic still far from won, and the Russian Front in crisis, seizing French North Africa and developing a Mediterranean base as a springboard seemed the optimum compromise. American troops went into action in TORCH in November 1942, landing in Morocco and Algeria. They initially fought against Vichy French troops whose short-lived, but surprisingly fierce, resistance threatened to upset the Allied timetable. However, within weeks an armistice was arranged, first to stop the fighting and then to add French arms to the Allied camp. The French colonial forces came under General Eisenhower's command and a major effort began to provide them large quantities of American arms and supplies to improve their combat effectiveness.



American explosives being stockpiled in Britain as part of Operation BOLERO.

With operations in the Mediterranean consuming much of the Allied troops and equipment in 1943, the BOLERO build-up in the UK was greatly delayed. Allied shipping became a major bottleneck as priorities for other theaters competed for resources. In addition, the necessity to provide major quantities of

items to Allies, especially Russia then fighting for its life against German forces again on the offensive, became a significant impediment to the buildup of forces for future operations which would occur, at the earliest, in the spring of 1944.

With an invasion of the continent unlikely in 1943, the buildup of forces in the United Kingdom was heavily weighted to preparing operational air bases for the bomber offensive against Germany. It was also necessary to create usable staging areas, training areas, living quarters, communications sites, and storage depots for the massive numbers of troops and mountains of materiel that would be needed for a future ground invasion force. All these bases and depots needed to be near ports and transportation while still displacing the fewest possible number of civilians and occupying the minimal amount of arable land crucial for crops. England, never self-sufficient in food, was doing its utmost to retain as much land for agriculture as possible, even mobilizing thousands of young women as a “Land Army” to work in the fields. It was imperative to place as little strain on British economic resources as possible.

The new roads, telephone and cable lines, rail, beach and port facilities as well as airfields had to be carefully considered and planned. Airfields were created generally northeast of London in the area near ‘the Wash’ which became the basis for Eighth Air Force’s buildup and later also for the Ninth Air Force. The Eighth Air Force would be permanently based in the United Kingdom and would dispatch operational units to North Africa and the Mediterranean to create the Ninth and Twelfth Air Forces. It would also “loan” several bomb groups to the Mediterranean Theater for the Ploesti Raid on oil storage facilities in Romania in August 1943, many of which would not return.

The Headquarters, Bomb Divisions, and major components and personnel of the Eighth Air Force comprised the initial striking force of the U.S. strategic bombing campaign in Europe. Its headquarters was at Bushy Park, outside of London. Its first Commanding General was Maj. Gen. Carl A. Spaatz, but the bulk of the heavy lifting for the buildup and early missions would be shouldered by his successor as Eighth Air Force Commander, Maj. Gen. (later General) Ira C. Eaker, who would later command the Mediterranean Allied Air Forces in 1944-1945. Eaker created the concept of daylight precision bombing for the American Air Force in Europe. The British tended to focus on the less-costly, but also far less accurate, night bombing raids against population centers.



Lt. Gen. Ira C. Eaker

During Eaker's period of command, Eighth Air Force grew from four bomber groups of B-17s to a force of twenty-six heavy bomber groups and sixteen fighter groups located on sixty-six airfields and consisting of more than 200,000 men. He pioneered such breakthroughs in air tactics including multi-theater shuttle missions and specific bomb formations, oversaw the first penetrations of German air space, and orchestrated the first focused targeting of such strategic targets as ball bearing factories and specific aircraft components in specialized factories. The cost was high. Losses in crews and planes threatened both morale and public support of an air campaign which, had it failed, would have made an invasion of Europe a near impossibility. By the spring of 1944, then under the command of Lt. Gen. James H. Doolittle, this force would reach its peak of forty-one heavy bomber groups and 400,000 men.

As part of BOLERO, the original plan to deploy seventy-two heavy bomber groups to England would have taken up a great deal of space on the ground. This pressure was relieved by the 1943 strategic decision to deploy a large force of bombers to the Mediterranean area to attack European targets from the southeast. It would also allow allied bombers to extend their aerial reach into the Balkans and to capitalize on the "shuttle mission" concept by hitting targets in eastern Europe and then continuing their flight to land in Russia. After refueling and rearming, they would return by the same route and land again at their bases in the Mediterranean.



A P-51 Mustang is tested in the skies over California.

Meanwhile, the build-up of bombers and fighters in England continued. By the end of 1943 new production models of B-17G aircraft, B-24 Liberator aircraft, P-51B long-range fighter aircraft, and improved drop tanks to make such long-range escort operations possible all began arriving in the United Kingdom in increasingly large numbers. By the very early spring of 1944, these forces had turned the tide of the air war dramatically, making possible larger and less-costly daylight raids.

The Army Air Force in England was divided into several commands. The United States Air Forces, Europe commanded all forces administratively under Spaatz, but the primary operational headquarters were the United States Strategic Air Forces, Europe which comprised the UK based Eighth Air Force and the Italy based Fifteenth. The combined Allied Expeditionary Air Forces under Air Chief Marshal Sir Trafford Leigh-Mallory had operational control for the planned invasion of the continent over the tactical air forces which included the U.S. Ninth Air Force, administratively under Spaatz's control. Its commander was Maj. Gen. (later Lt. Gen.) Lewis H. Brereton. It directly supported the armies with three Tactical Air Commands and the IX Troop Carrier Command. Ninth Air Force would move to the continent with the invasion armies.

The shipping of troops was also deeply affected by the vagaries of shipping losses. The submarine menace in the North Atlantic continued throughout 1942 and 1943. To cope with this, necessary military supplies were shipped early in 1942 when the submarine threat was highest with troop convoys following later in 1942 and 1943 as the threat receded. Troop convoys were provided the highest concentration of naval escorts as protection from the roving "wolf packs" of U-boats. Finally, shipping plans were affected by world-wide strategic requirements which were shaped by shifting strategic circumstances and major decisions of the Combined Chiefs of Staff.



Maj. Gen. Matthew B. Ridgeway (left) confers with Brig. Gen. Maxwell D. Taylor on the battlefield in Sicily on July 26, 1943.

Victory in North Africa by May 1943 led to further consequences for Allied plans. With an early invasion of the continent looking very problematic in 1943, and the presence of substantial Allied forces in the Mediterranean, Italy became a logical next target. Sick of near constant defeat, the Italians were seen as weakening in their support of the war. The Allied conquest of Sicily, a key stepping stone to Italy, in the summer of 1943 (Operation

HUSKY) helped topple Mussolini. The subsequent Allied landing in southern Italy (Operation AVALANCHE) in September 1943 coincided with the surrender of Italy but it also prompted a German occupation of northern Italy which brought the Italians into the war on the side of the Allies. In one stroke, the Mediterranean's sea lanes and passage to India and the Persian Gulf route for supplies to Russia via the Suez Canal were secured.

The critical QUADRANT Conference, held in Quebec in August 1943, approved the tentative plans for Operation OVERLORD, the Allied invasion of northern Europe. This gave BOLERO full priority. Following on the end of the defeat and near-total suppression of the U-Boat threat by the end of 1943, huge convoys and the increased availability of new ships made the maximum flow of troops and supplies possible for the first time.



From left to right: Hon. Mackenzie King, President Franklin D. Roosevelt, and Hon. Winston Churchill at the Quebec Trident Conference.

The approval of the OVERLORD plan with a new target date of May 1944 for the invasion dramatically increased the flow of ground units to the United Kingdom. With the Mediterranean becoming relegated to a secondary theater with a virtual stalemate in Italy, units were transferred from there to England where they were joined by units coming directly from the United States. Veteran divisions such as the 1st and the 9th Infantry Divisions, the 82d Airborne Division and 2d Armored Division were sent from the Mediterranean directly. Other Mediterranean units would later come to Europe via the invasion of southern France in August 1944. Air units making the move to England included the Ninth Air Force Headquarters, although many of its combat units stayed in the Mediterranean and went on to comprise the Fifteenth Air Force and to increase the size of the Twelfth Air Force, both which continued to operate in southern Italy.

BOLERO had always been implemented in stages. At the end of 1942, only some 135,000 men and women had been deployed in the United Kingdom, mostly airmen. During the early period of BOLERO, the flow of ground forces to the United Kingdom had been slow, with only the 29th Division, V Corps Headquarters, and a number of service support units needed for the arrival of later combat units arriving. Some of the early ground force units had been sent to the strategic island of Iceland to bolster defenses there and to northern Ireland. Plans to deploy an additional 1 million ground troops were proposed for 1943 to support ROUNDUP if approved, giving it the balance of about fifty percent of all Army troops and air elements deployed overseas.

With ever increasing industrial efforts in the U.S., and the winning of the war in the Atlantic by May 1943, the troop flow problem was vastly simplified. The use of the “monster” transports, the great “queens” such as the ocean liners Queen Mary and Queen Elizabeth, which carried over ten thousand troops at high speed either alone or with minimal escort, improved troop flow. All of this had to be carried out with both U.S. and British flag carriers, but without impacting the essential flow of cargo ships importing foodstuffs and other necessary goods to England. The rapid building of American liberty ships, plus the dramatic decline in ship loss after the spring of 1943, greatly helped BOLERO. Even then, ship losses in the arctic convoys to Murmansk and Archangel in Russia remained high until later in the war.



Commissioning ceremony for the “Liberty Ship,” SS *Patrick Henry*.

By September 1943, additional Army divisions began arriving in the United Kingdom. With the arrival of the 3d Armored and 101st Airborne Divisions, the flow turned on. By June 1944, they had been joined by 2d, 4th, 8th, 28th, 35th, 79th, 83d and 90th Infantry Divisions and the 4th, 5th, 6th and 7th Armored Divisions. Afterwards, a continuous flow would ensue, until a total of 61 divisions had reported to the European theater, coming either from the United States through the United Kingdom or from the Mediterranean.

British contributions to BOLERO were far from insignificant. They provided land, material efforts, and the selfless support of their population in accepting the “occupation” of their country by a million-man army with ten thousand planes, and a significantly differently pay scale, manner of doing business, and social customs. Among the tangibles contributed by the British were 133 airfields, 6.8 million tons of supplies carried by British shipping prior to the end of June 1944 in support of the invasion excluding fuel, 33 million square feet of open storage, and 56 million square feet of covered storage for equipment and supplies. Hospital accommodations and facilities for 100,000 beds were provided. Additionally, the British provided over 137,000 external fuel tanks, 27,000 armor plates for aircraft or tanks, and over 7 million “jerry cans” for fuel, all of which were constructed within the UK for the U.S. This saved precious shipping space for troops and equipment. The artificial harbors, codenamed MULBERRIES, that helped made the invasion possible were also constructed in Britain.

During the course of BOLERO’s execution, the United States Armed Forces grew to its maximum strength and most modern configurations in organization and equipment, having absorbed the lessons of the first two years of war. By 1944, the overall strength of the U.S. Army rose to ninety divisions encompassing nearly eight million soldiers including the men of the sixteen numbered



A British commando demonstrating how to properly handle the American Thompson sub-machine gun.

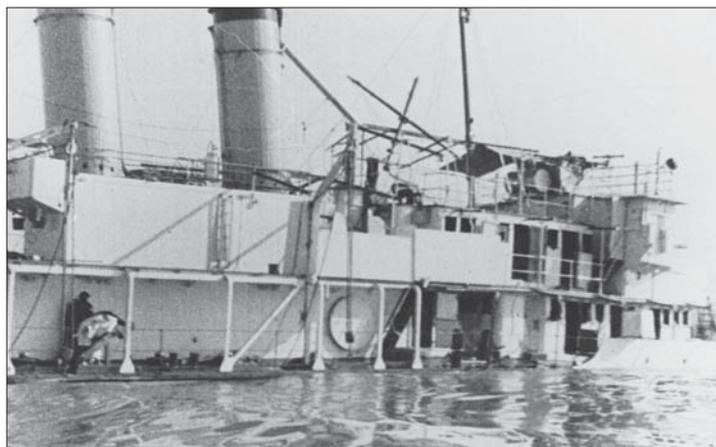
Army Air Forces. The Navy, including the Marine Corps and Coast Guard, likewise grew to a force of nearly three million men by the end of 1943 with the Marines deploying six divisions to the Central Pacific Theater. Of this massive total, by May 31, 1944, on the eve of OVERLORD, over one and a half million American men and women were serving in the ETO. By September 1944, that number grew to more than two million, and eventually would peak in April 1945 at more than three million. BOLERO had been a major success.

Battle of the Atlantic

1941- May 1943

President Franklin Delano Roosevelt declared a State of Limited Emergency on September 8, 1939, based on Germany's unprovoked invasion of Poland seven days earlier, and the subsequent declarations of war by the United Kingdom and France against Germany. War had come to Europe and would soon spread. Asia already endured a full-blown war in China when Japan invaded Manchuria in 1931. Full-scale war broke out between the two countries in 1937. That same year, Japanese planes sank an American gunboat, the USS Panay, on the Yangtze River in China. Despite Japanese apologies, war seemed imminent. The United States prepared its territories in the Philippines, Guam, and Hawaii for possible hostilities, although little funding was available to upgrade forces or material. The U.S. military was, as a whole, unready with an Army of fewer than 190,000 men including the Army Air Forces. Europe was a less immediate problem and many Americans favored avoiding another European war. Roosevelt used the "limited emergency" to expand the fleet and call reserve officers to active duty as needed. Unobtrusively, America evaluated its readiness for war.

U.S. military leaders sensibly asked for new equipment. They theorized a possible world conflagration in both the Atlantic and Pacific which called for a new strategic approach. American isolationist sentiment remained strong, however. In 1940 Roosevelt was elected to a third term in office promising he would keep America out of war. Roosevelt carefully crafted an increase in air and ground forces prompted by the Battle of Britain and the Fall of France in 1940, claiming they were necessary deterrents to war. Critically, he was able to push through the first peacetime Selective Service Act in American history in the summer of 1940 by a margin of only one vote in Congress.



USS Panay sinking in the Yangtze River in China, December 12, 1937.

The “draft,” as it was popularly called, permitted the induction of American men into one-year terms of service. This would allow the United States to train an army but would not allow forces to be sent overseas. Nevertheless, it became the basis for the massive military expansion that followed. Concerned about the ability of the British to fend off German attacks, President Roosevelt also engineered the Lend-Lease program to trade British bases for obsolete U.S. ships, and to also grant other forms of monetary aid so that a nearly bankrupt Britain could stay in the fight. Fortuitously, this encouraged a wide growth of U.S. industry which retooled before the country entered the war. This proved to be a great advantage in its later wartime expansion.



Secretary of War Stimson being blindfolded before selecting the first capsule in the U.S. draft lottery Oct. 29, 1940, at Washington, D.C. President Roosevelt (left) watched the drawing made from the same “goldfish bowl” used in the 1917 draft. The first number drawn was 158.

In addition, many state universities mandated military training for male students which provided the basis for an expanded Reserve Officer Training Corps (ROTC) program. This sizeable pool of reserve officers who, while admittedly needed further training when called upon, served as an essential cadre for the mass mobilization of a citizen army. The Protective Mobilization Plans and oft-criticized large Army school system suddenly loomed as a shrewd investment, whose dividends would be repaid in future victories at lower costs in casualties and time. An expandable Army, long a key part of the American military system, again would prove its worth.

In 1939, German military leaders believed that even the invasion of Poland would not provoke a direct confrontation with Britain and France. They planned to initiate war later. Hitler forced the hand of the High Command early, but U-boats, or submarines, were always considered a vital part of the German naval plan. In World War I Germany had launched 365 U-Boats, primitive at the time, and lost 178. But they had sunk over eleven million tons of shipping. Hitler’s own fascination with large capital ships such as heavy cruisers and battleships had slowed his Navy’s growth in submarines, giving him a mere forty-six ocean worthy U-boats to start operations in 1939 as opposed to the 300 planned. His navy did have two major battleships under construction, several “pocket” battleships (heavily-armed ships of lighter tonnage to slip under treaty restrictions), and some destroyers and surface raiders. His Fleet Commander Admiral Erich Raeder hoped to use these in an anti-commerce war against England to starve it out of the war. However, much of his plan was based on a High Seas Fleet that did not yet exist.



Admiral Erich Raeder

At the outset of war, Fascist Italy had a relatively large and modern fleet to balance the Mediterranean Fleet of the French and English. But Mussolini's modern ships, lacking radar, would soon be bested both at sea and in harbor by the British Navy. The German fleet lost heavily during the Norwegian operations, its only real naval operation, and its surface commerce raiders were soon dispatched or neutralized. Moreover, after the Fall of France in June 1940, the British decided to sink much of the French Fleet at its port of Mers-el-Kebir outside Oran, Algeria, rather than risk its surrender intact to the Germans. Later, this would lead to tensions between the British and the Free French. But before the American entry into World War II, these developments gave the British the advantage on the surface at sea.

The American Navy expanded and modernized its fleet after being released from a period of naval limitations caused by inter-war disarmament treaties. Limiting though they were, these treaties also provided an excuse for the Navy to shed its older, heavier ships, and acquire more aircraft carriers, a faster class of cruisers, more modern destroyers, and a new type of fleet submarine. Army and Naval aviation became a real strength, along with ground-breaking peripheral work by the Marines in the doctrine of amphibious landings, all of which would pay huge dividends in the forthcoming war. Conversely, antisubmarine warfare had not advanced since 1918 practice and in this area the U.S. Navy was relatively unprepared.

At the onset of war, combatant nations paid lip service to respect neutral shipping as dictated by international law. But the practicality of submarines stopping and inspecting ships of the warring powers, and placing their crews in a place of safety before their ship was sunk, proved both dangerous and impossible. Unarmed merchant ships were sunk from the outset, and armed "self-defense" became the immediate response which resulted in no-notice "sink at sight" practices used by all the combatants. By the end of 1941, Congress ordered the arming of all U.S. flagged merchant vessels with "armed guards," essentially a 5-inch/38 caliber gun with a U.S. Navy Ensign in charge of a gun crew. This Ensign was also responsible for teaching the ship's crew to man secondary batteries of machine guns and to provide reinforcements for his gun crew if they became casualties.



USS Yorktown during shakedown cruise in the Caribbean Sea, January 1938.

In 1941, the “Neutrality Patrol,” renamed the American Atlantic Fleet, was commanded by Admiral Ernest J. King. King’s mission was to protect the American seaboard as well as the Caribbean, but also to ensure the security of merchant shipping proceeding eastward into the war zone to a designated line. President Roosevelt had exceeded most interpretations of the neutrality laws by trading fifty mothballed destroyers to England for bases in the Caribbean. After his reelection to an unprecedented third term in November 1940, he



Admiral Ernest J. King

guided a Lend-Lease bill to passage through Congress. This provided war materials to Britain which essentially overturned, or at least severely undermined, America’s neutrality laws. Lend-lease allowed the provision to England of war-making essentials and especially food needed for Britain’s survival. Convoying ships carrying these goods nearly halfway to their destinations, far beyond any vestige of claimed national waters as part of a “neutrality patrol,” had no international precedent, and effectively allied U.S. naval elements with Commonwealth forces at war. As time progressed, having already conducted a neutrality patrol with Canadian ships to a mid-ocean meeting point, King went further and provided active U.S. naval war patrols to reach the British refueling base established at Iceland. American Marines also occupied Greenland to prevent its occupation by German forces. The sinking of U.S. neutral shipping had prompted the entry of the United States into World War I and Roosevelt, in essence, seemed to dare Hitler to face the same fate. Congressional knowledge of the extent of his actions is still unclear. Prior to mid-1940, no ships were sunk in U.S. waters, nor in the areas bordering any of the Americas. Through early 1941 Hitler specified that care be taken by U-Boat commanders to prevent their attack on U.S. escort ships.



British children with imported American lend-lease bacon and eggs.

Roosevelt dispatched U.S. flag officers to the United Kingdom to conduct unofficial talks with British military and naval headquarters in early 1940. The Army and Army Air Force established an Observers Mission there during the Battle of Britain to gather lessons from ongoing operations. At the same time, the Japanese, then neutral, had a mission in London, one of whose members later became a key planner in the Pearl Harbor attack. (On September 27, 1940, the Japanese signed the Tripartite Pact with Germany officially becoming a member of the Axis Powers and no longer neutral.)



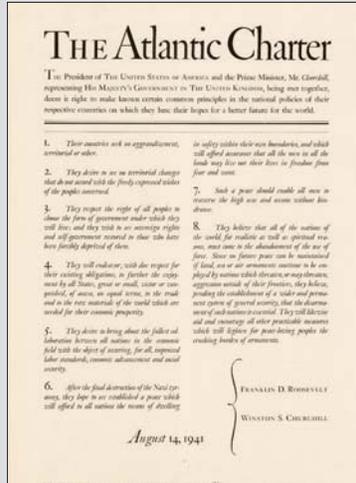
Destroyers *USS Shubrick* and *USS Leary* in Brooklyn navy yard preparing for neutrality patrols.

In March 1941 the U.S. and United Kingdom conducted high level staff talks in Washington lasting two months. Known as the ABC-1 (American-British Conversations) these included the Chiefs of the U.S. Army and Navy and their war plans officers, as well as senior planners from the Royal Navy, Air Force and British Army. These officers established a baseline agreement on a strategy if the United States was to enter the war both in Europe and the Pacific. This agreement included a strategic concept, command approach, tasks necessary for each country to share, and even a proposed command structure to guide grand strategy. The talks concluded with a memorandum of agreement. A follow-on period of discussions known as ABC-2 were similarly concluded with Canada, whose navy was already cooperating with the U.S. Navy in the neutrality patrols. While informed, and approving, Roosevelt did not sign any agreement, nor did he sign the subsequent RAINBOW 5 War Plan which was the U.S. contingency plan for a general war in both oceans.

Roosevelt also asked his Service Secretaries and their respective Service Chiefs to produce an estimate of “overall production requirements required to defeat all our potential enemies.” Not only would this guide his encouragement of civilian production, it became the basis for his grants of aid to Allies. He put the onus on his leaders to estimate potential Allied shortfalls, current and future, to keep them in the war, while not hamstringing American mobilization efforts for war preparation. This was the true groundwork for the “Arsenal of Democracy” that America became, and the remarkable impetus for the industrial output and national achievement that lay at the foundation of the Allied victory.

The President and his senior military and naval chiefs met with Prime Minister Churchill and his war leaders aboard the *USS Augusta* and the HMS Prince of Wales in Placentia Bay off Newfoundland between August 10 and 15, 1941. They ratified the ABC-1 staff talks in principle, discussed general war aims, and

The Atlantic Charter



President Franklin Roosevelt and Prime Minister Winston Churchill of Great Britain issued the Atlantic Charter, a statement of broad international principles, at the Placentia Bay conference, on August 14, 1941.

The charter was not an official document, but rather a joint statement which expressed beliefs shared by both countries; the right of self-determination, the right of all people to live in freedom from fear and want, freedom of the seas, as well as the principle that all nations must abandon the use of force and work collectively in the fields of economics and security.

The Atlantic Charter was one of the first significant steps towards the formation of the United Nations.

pronounced the Atlantic Charter, which promoted the “Four Freedoms” and other aspirations. Roosevelt left claiming no firm entanglements, no signed agreements. In reality, he had agreed “in principle” to provide increased war materials. He also committed to a “Europe First” (meaning Germany First) strategy in the event of global war, regardless of how the situation evolved in the Far East.

The retooling of American industry for armaments, as well as its expansion to give aid to our Allies, along with the growth of the armed forces, helped end the Great Depression. The Navy asked for an unprecedented four billion dollars to grow the U.S. Fleet in 1940, which when approved by Congress, began the keel laying for carriers, battleships, cruisers and destroyers that first saw service in 1942 and 1943. Roosevelt asked for 50,000 airplanes to be built, a hypothetical number, which soon was matched in reality. America had started too late to be truly ready for war, but plans for expansion were being executed, and lessons from the nations already at war were being absorbed. This eleventh hour effort, often decried in retrospect as too little, too late, meant the difference between staving off total disaster and having a base to begin a

comeback. It also was critical to sustain our Allies around the world during the dark days of 1942, and the rapid turn of the tide everywhere in 1943. Anything less might have spelled defeat or a longer war with more horrendous casualties.

General George C. Marshall assumed the post of Chief of Staff of the Army on September 1, 1939. He commanded an Army of only 174,000 men, spread over 130 posts, camps, and stations, with detachments as far afield as China, the Philippines, Hawaii, Panama, and Guam. No fully equipped and organized Regular Army division existed in its order of battle. The Air Corps had 2,400 aircraft of all types. Marshall moved quickly to build up the Army. By July 1941,



North American Aviation employees assemble B-25 bombers in Kansas City, Kansas, for the lend lease program.

the Army had absorbed all eighteen National Guard divisions that were federalized after the Fall of France in 1940. In total, the Army had grown to more than 1,400,000 men, including twenty-nine divisions, with an Armored Force of four divisions and four numbered Air Forces. Over 167,000 men were in the Air Corps, laying the basis for what would soon be a separate service in all but name. Furthermore,

Marshall reorganized World War I-era Army “square divisions” of four regiments into more efficient “triangular divisions” of three regiments which could be task organized into combined arms teams. The entire Army in the United States was restructured into the Army Ground Forces, the Army Service Forces, and the Army Air Forces. The system of divisions, corps and armies was supported by a “pool” of standardized units of combat, combat support, and combat service support elements that could be cross-attached as needed by higher headquarters. The pre-war system of powerful chiefs of Branches and Bureaus was soon abandoned, and the Army administration streamlined for war.

The Navy began its growth with the Two Ocean Navy Bill passed in July 1940. Considering that the French Fleet had been neutralized, and that Britain’s fleet was under siege and could disappear as a fighting force, America crafted a fleet to dominate both the Atlantic and Pacific oceans. This required massive industrial effort as well as an expanded naval training program for new seamen and officers. Advanced designs and new construction methods were needed to capitalize on the lessons of modern warfare and advanced technology, and to speed the construction of ships through what traditionally had been a long process.



General George C. Marshall, Chief of Staff of the Army, who would oversee the vast overhaul and restructuring of American forces.

Aircraft manufacturing likewise was expanded and modernized with new techniques. Large numbers of women and African-Americans undertook technical jobs in industry for the first time in history. This became key to the war effort both in providing war materials and technology but also in freeing able-bodied personnel to be soldiers, sailors, and airmen for the fighting fronts. Women and



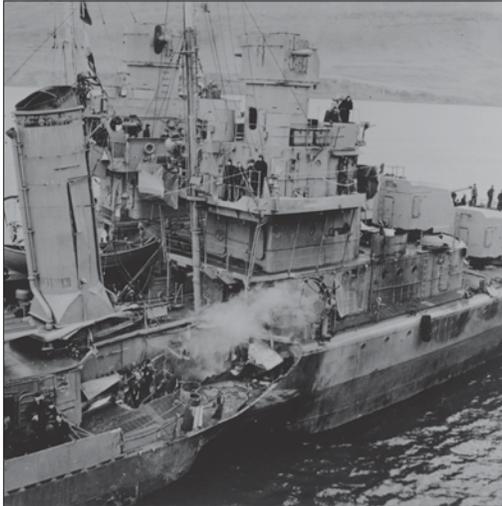
At the Vultee Nashville manufacturing plant in 1943, a woman is pictured here driving rivets on a "Vengeance" dive bomber.

African-Americans soon joined the Armed Services as nearly full-fledged members in large numbers and in key occupational positions. While women served in support roles, African-Americans, despite continuing challenges of prejudice, filled combat jobs, served on warships, crewed tanks, and fought as pilots, artillerymen, infantrymen, and Marines.

As this growth began, the Navy engaged in operations "short of war." Admiral King's escorts tracked U-Boats but did not engage one directly until the *USS Greer* was fired upon on September 4, 1941 near Iceland. During a tracking mission, a U-Boat damaged her with two torpedoes. This resulted in a "shoot on sight" order from the President for U-Boats or any enemy vessel attempting to interfere with American shipping. On October 15, the *USS Kearney* was struck by a torpedo but the ship made port, with eleven sailors killed. An American tanker was struck on October 30, east of Newfoundland, but did not suffer any losses. But on the next day the *USS Reuben James* was hit twice and sunk after breaking in two, with a loss of one hundred sailors.

While no other naval or merchant losses were suffered by the United States prior to December 7, 1941 in American-protected waters, the Atlantic Fleet comprised a fighting force operating on a wartime basis. King's sailors and the men of the American Merchant Marine had become America's first combatants in the war against Germany even though America still was at peace.

The war in the North Atlantic was well underway by the time Germany declared war on the United States in December 1941. Germany had already mobilized its entire fleet and had shifted from a twin strategy of surface and undersea operations against England to one primarily focused on unrestricted submarine warfare. Germany had already suffered heavy naval losses in its surface High Seas Fleet. The cruiser *Admiral Graf Spee* was scuttled to avoid British capture in December 1939 and the huge battleship *Bismarck* was sunk in May 1941. Raeder's strategy of surface raiders had failed to disperse the Royal Navy, so Hitler concentrated them to attack Arctic supply convoys to Russia, instead of widely threatening the Indian Ocean and the North, Central, and South Atlantic. This change in strategy was fortunate for the British, who could more easily counter the German Fleet by bottling them up in Norwegian fjords. British long-range aircraft patrolled these



USS Kearney shown in port at Reykjavik, Iceland, after suffering a direct torpedo hit.



Combat artist, Lieutenant Commander Griffith Baily Coale, depicts the sinking of the *USS Reuben James* after it was struck by two German torpedoes.

sites regularly, and friendly agents watched for any sorties to the open sea, which seldom came. The German Surface Fleet remained a force in being, much like the fleet in World War I. This left the U-boat “Wolf Packs” as the major threat.

German submarines in 1941 developed *Rudeltaktik*, the “Wolf Packs”, which were large groups of submarines that attacked convoys in a coordinated strike. A line of U-Boats using this strategy would assemble perhaps twenty or more miles apart. The first to spot a convoy would signal the location, and the other boats would converge on a target to attack the convoy, usually on the surface and at night. “Packs” were usually from 3 to 7 submarines, and often attacked on several successive nights. They retired at a distance to avoid detection during the day, when they were more vulnerable to air attack.

The nature of submarine warfare changed over time. The U.S. consistently used convoys to get large numbers of cargo ships across the Atlantic with heavy escorts. Even then, when discovered, they took heavy losses. Fast ships rarely were convoyed since they could outrun U-boats. They were only vulnerable if they zigged or zagged in the wrong direction at the wrong time. Nor were very slow ships convoyed, and they often proceeded independently trusting to luck not to be noticed. Early U.S. attempts to coordinate an antisubmarine war were hampered by disagreements between the Navy, which commanded the sea frontiers, and the Army Air Forces which provided defense for the East Coast, the Panama Canal Zone, and Caribbean areas. Additionally, eager attempts by the President to reinstitute the use of small craft such as the World War I sub-chasers prompted a call by the Coast Guard Auxiliary for volunteers. Soon, small craft such as sea going yachts, fishing smacks, and other boats were used for patrols which unofficially became known as the “Hooligan Navy.” Coast Guard cutters replaced most of

these small craft in many waters by 1943. Blimps and similar lighter-than-air ships covered large distances with their patrols along the 7,000 miles of sea lanes on the eastern seaboard, south and central America, and Gulf of Mexico. Despite these measures, many ships continued to travel independently, which led to numerous deadly German U-Boat attacks along the East Coast in early 1942, codenamed Operation DRUMBEAT. U-Boats later moved to the Gulf of Mexico when security improved and eastern coastal cities learned, at significant cost, to douse their lights at night to prevent the illumination of seaborne targets for U-Boats.



British and American warships moored beside one another at the U.S. Naval base in Londonderry, Ulster, Ireland.

After the Allied CASABLANCA conference in January 1943, Admiral King formed the Tenth Fleet for antisubmarine warfare with himself in command. This was a fleet without ships. It centralized all special intelligence such as ULTRA (high value British intercepts of strategic Germany communications) along with convoy information, and passed this information to convoys and escorts. With the advent of new light escort carriers and destroyer escorts now forming Hunter-Killer Groups, along with greater American access to ULTRA intercepts of U-boat operations at Bletchley Park, the Tenth Fleet men helped to turn the tide of the Atlantic war. While 1942 was a successful year for U-Boats, in 1943, with new ships and better intelligence, the advantage would shift to the Allies.



A member of the "Hooligan Navy" scans the seas for German U-boats from the bow of a CGR vessel.

One of the lesser known tactics of the Atlantic war involved sea mines. The sea mine lurked in the ocean depths as a silent and too often forgotten killer of war. Sown by all navies to cover known sea lanes to inhibit enemy traffic, and to limit or guard access, they could be laid and anchored by submarines, aircraft or specially modified merchant ships. They exploded on contact, or were triggered magnetically or by proximity depending upon their fusing. Mines rarely were permitted to drift except in permanently hostile waters as they were a danger to friendly shipping. Swept mines were destroyed by gunfire, as they could not be rendered safe easily and thus could not be brought aboard ship. Magnetic mines were countered by passing current

through a line around a ship, “degaussing” it, thus changing the ship’s magnetic field. Mines generally had to be anchored, and thus were used in relatively shallow waters or close inshore in channels. Approximately 6.5% of Allied merchant ships lost during the war were due to mine damage.



An Allied tanker torpedeed by a German U-boat in the Atlantic.

Perhaps the most dreaded of the Atlantic Convoy runs were those through the Arctic to Archangel and Murmansk, supplying the Russians with critical war goods. More than 60 of these convoys were initiated directly from British ports, but others started from Newfoundland, particularly after the initiation of Lend-Lease. The most disastrous was Convoy PQ-17, which departed from Reykjavik, Iceland on June 27, 1942 with two battleships, *HMS York*, and *USS Washington*, plus destroyers in escort. Thirty-three merchantmen, including twenty-two from the U.S., three rescue ships, and a fleet oiler comprised the convoy. A number of these ships had made the north Russia run before. The escort group was among the largest ever provided. Six destroyers, eleven corvettes, two anti-aircraft ships, and two friendly submarines accompanied the convoy as protection. Additionally, minesweepers and auxiliaries were to follow. The huge covering force was to counter any attempt to cut the lifeline to Russia. This was in fact the intent of the German Northern Fleet Commander, whose plan, “Knight’s Gambit” intended an air-submarine-fleet action to smother the convoy with attacks from air, sea and undersea.



British men and women work tirelessly to intercept German radio traffic to counter the impact of U-boats on Allied shipping.

German Naval intelligence decrypted merchant codes and alerted U-boat commander Admiral Karl Doenitz, who gathered a pack of eight U-Boats to intercept the convoy. ULTRA intercepts tipped the Admiralty to the sailing of German heavy naval units from their Norwegian fjords, including *Lutzow*, the *Admiral Scheer*, and multiple destroyers. These ships linked up with the battleship *Tirpitz*, sister ship to the *Bismarck*, in her nearby anchorage. Once attacked by U-Boats, the British First Sea Lord ordered the convoy to scatter. He apparently feared the convoy would be caught in a gun battle of heavy ships after the submarine attack, though the *Tirpitz* group never came north. This order

The East Coast Memorial

The East Coast Memorial commemorates the service, achievements and sacrifices of America's armed forces and Merchant Marine off the East Coast of North and South America during World War II. The memorial lists the names of more than 4,600 American servicemen considered missing in action, or lost at sea. Many died during the Battle of the Atlantic.



The memorial is located in Battery Park at the southern tip of Manhattan. Designed by Gehron & Seltzer of New York, the memorial consists of eight gray granite pylons. This axis is aligned with the Statue of Liberty, located just two miles south.

The pylons include the name, rank, organization and state of the more than 4,600 American servicemen lost at sea or missing in action in the western waters of the Atlantic Ocean during World War II.

Near the landward end of the memorial area is a bronze eagle 18 feet high, symbolically placing a wreath upon the waters of the Atlantic.

was disastrous, as escorts were instructed to close on the heavy ships and then retire as German air force elements joined the attack. Twelve merchant ships were sunk on July 5, 1942. The German heavy ships sortied but withdrew before entering the combat zone as the submarines and air strikes had already devastated the convoy, and remaining targets were too scattered to risk pursuit. The same day, four ships returning from Russia were lost in a friendly minefield. The war at sea claimed its worst day for the Allies. Twenty-four merchant ships were lost out of thirty-three in the convoy, along with the fleet oiler and one of the rescue ships. Two remaining rescue vessels managed to save nearly six hundred sailors from freezing in the Arctic waters.



Sailors stand at the bow as part of the ill-fated convoy, PQ-17, sets sail from Hvalfjord, Iceland.

The first months of 1943 demonstrated the volatility of the naval war. Doenitz's wolf packs sunk many Allied ships early on, as German intelligence could read the British Merchant code and determine sea routes. Using this information, U-Boats formed packs and intercepted convoys. In March, packs numbering



A German reconnaissance plane photographs convoy PQ-17 while it is underway.

from twenty to fifty submarines attacked two convoys each night, sometimes from within the convoy formations themselves. At the same time, Allied patrol bombers were able to sustain increasing losses on U-boats.

The advantage shifted to the Allies in May. Merchant losses dropped radically as Allied communications became more secure, and thus convoys became more difficult to find. Additionally, aircraft from the newly opened Allied airbase at Greenland, along with Light Carriers as part of the Hunter-Killer Groups, became more prevalent over convoy routes and successfully counter-attacked threatening U-boats. The tide suddenly seemed to change. Doenitz ordered a withdrawal out of the North Atlantic to waters safer for his boats and where targets might be more profitably found. It was a major turning point in the conflict and Allied losses dropped from then on.

The war, however, continued, albeit with fewer shipping losses. As the U-Boats moved to new waters, the *Tirpitz* and other surface raiders waited in their northern lairs in Norway. Arctic Convoys continued to brave air attacks from the Norwegian and Russian airfields held by the Germans. The seas remained a battlefield. Nevertheless, the war in the Atlantic was on the path to victory.



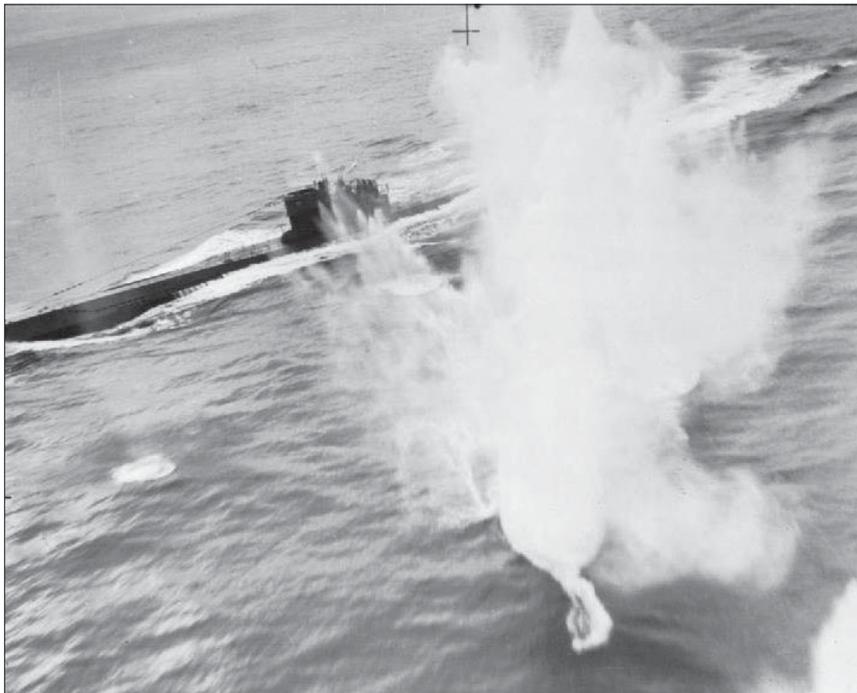
A German U-boat torpedoes a barrage balloon carrying steamship during the battle of convoy PQ-17 somewhere North of Norway.



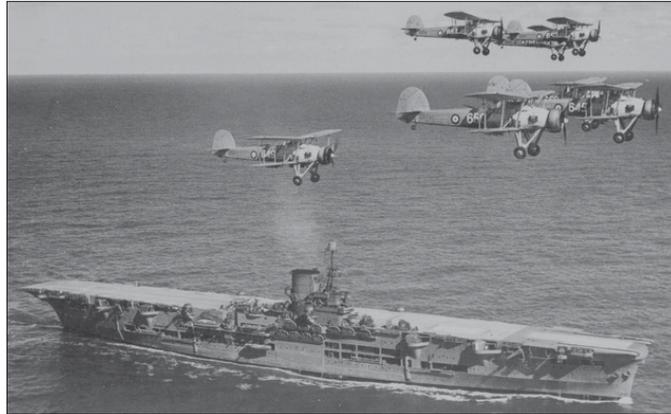
Members of the U.S. Coast Guard cutter *USS Spencer* watch as a depth charge they have dropped on German U-boat U 175 explodes off the stern of their vessel.

Battle of the Atlantic May 1943-May 1945

The Battle of the Atlantic turned dramatically in May 1943. Prime Minister Winston Churchill announced a “massacre of U-Boats” in his talk to the House of Commons at month’s end, without revealing the secrets of this change in the strategic situation at sea. A confluence of science, skill and numbers had turned the odds against Admiral Karl Doenitz’s undersea captains, putting them at a disadvantage from which they would never recover. Forty U-boats sank beneath the waves during that month from all causes. Doenitz withdrew his submarines from mid-Atlantic operations to waters he hoped would be safer and more profitable. He continued to carefully plot the “tonnage war” on his status boards, aspiring to increase sinkings elsewhere to recover his eclipse in the mid-Atlantic. Allied countermeasures, new tactics, intelligence, escorts, aviation and numbers now weighed against him.



An Allied gun camera shows the impact of a torpedo as it strikes the water towards its target.



Early anti-submarine bi-planes fly in formation over the light aircraft carrier which they were launched from.

The so called “Fish” code created by adding a fourth rotor to German Enigma code machines on U-boats in February 1942 had interrupted Allied decryption efforts at sea for more than ten months. The famous Alan Turing and his team at Bletchley Park, including some Americans, eventually cracked this code too. Decryption enabled convoys to avoid German U-Boats, thus making their hunting more difficult. Signal interceptions allowed Allied ships and planes to locate U-boats even more precisely when they surfaced to check in at night. Ever more prevalent Allied “hunter-killer teams” were now aided by “baby-flattops”, or light aircraft carriers. These teams hunted submarines aggressively while being free of escort duties. Meanwhile escorts with the convoys intercepted U-boats when they tried to attack. Long- range bombers with advanced detection equipment homed in on German radars as well as radio signals. At night airborne and seaborne “Leigh lights” were turned on at the last moment to throw a tremendous bright light across the surface. The surprise lighting silhouetted surfaced U-boats, rendering them easy targets. Improved tactics, specialized training, and operations research analysis were distributed to Allied captains after notable encounters and kills. This meant the Allies were steadily growing in skill and experience. Meanwhile the Germans were losing many of their most experienced and valuable U-boat captains. Many of the younger captains did not survive long enough to become skilled in U-Boat warfare.

May 1943 was the first month in which the losses of German U-boats exceeded those of Allied merchant ships. It was also the first in which Allied tonnage lost was exceeded by new tonnage launched in Allied shipyards. Doenitz would never again sink more ships than were being launched. Ship production rose dramatically and the number of ships lost dropped remarkably. The hunters had become the hunted. Doenitz sought to adapt by moving to safer waters and developing and employing new equipment.

Doenitz's analysis of U-Boat losses to date suggested that increased numbers and effectiveness of Allied aircraft and improved sonar (ASDIC) were the key factors involved in tipping the scales. Originally he feared his operations room had been penetrated by a security leak; he discounted the mathematical probability that the Allies had broken the four rotor Enigma system. The Allies kept ULTRA a secret, and Doenitz never recognized how compromised his encrypted communications had become.

The chance discovery of a crashed Allied bomber in occupied Norway in 1944 gave Doenitz information on Allied advances in radar technology to worry about as well. Assessment of the aircraft disclosed the secret of reverse beam reading used to guide "Leigh Light" equipped night bombers to transmitting targets with pinpoint accuracy. The war of electronic countermeasures with respect to radars was complex. The Germans never developed an immersible, high pressure and temperature resistant radar set, so their sets on submarines had to be remounted when surfaced. Their solution if spotted was multiple flak guns mounted on their older Type VII boats for defense. They were particularly vulnerable when refueling with a "Milk Cow" replenishment submarine. Their bigger Type IX boats could not be so modified due to design incompatibilities. This made them especially vulnerable to aerial attack. Additional anti-aircraft guns were mounted on later model U-boats and some U-boats added a second deck for additional guns. British patrol bombers began to add forward firing cannon or rockets to better fight with U-boats as they drove in to drop bombs or depth charges on them.



British Type 418 Wellington DWI Mark I Minesweeping plane. The large ring created a magnetic field designed to detonate mines planted in the shipping lanes.

The U.S. Navy and U.S. Coast Guard provided convoy escorts under the operational command of the Tenth Fleet. This was nominally commanded by Fleet Admiral Ernest J. King, the Chief of Naval Operations, who kept close control of the Atlantic Frontier through his deputy, Vice Admiral Royal E. Ingersoll. Tenth Fleet commanded the waters to the “chop line” in the mid-Atlantic where operational control reverted to the British. The British “Western Approaches” were commanded by Admiral Six Max Horton, a highly successful World War I submarine captain. Horton emphasized the rigorous training of escort commanders and a ruthless “lessons learned” process. He was determined to outmatch Doenitz at every level of technology, skill, and numbers. Horton’s information room “filtered” every known or assumed location of friendly and enemy ships at all times. It was manned mostly by female ratings and officers to release men for sea duty.

A new battle materialized when Doenitz withdrew his wolf packs from the mid-Atlantic. He now placed his faith in two new technical developments. One was the snorkel, which gave the U-Boat the ability to use its powerful diesel engines underwater. U-boats without snorkels had to switch to weaker electric motors when underwater. Using diesel engines increased speed and maneuverability while being underwater radically reduced the probability of detection. There was still the risk of raising greater ASDIC “noise” while moving more quickly. The second development Doenitz had hopes for was the acoustic torpedo. This homed in on engine noises. Unfortunately for Doenitz these could be “spoofed” by noisemakers. The Allies developed huge “ice tray” type arrays towed behind ships that could draw the torpedoes to useless targets.



German Admiral Karl Doenitz inspects German submariners in port.

Doenitz also laid great faith in faster, more advanced U-boats built for high speed. A few prototypes were produced and went to sea, but these proved to be too few and too late to influence the war. Rising numbers of Allied escorts and ever improving antisubmarine techniques kept the U-boats in a defensive stance. Many submarine pens and construction yards were bombed, and U-Boat repair and replacement was hampered in the course of the continuing Allied strategic bombing offensive. The priority of submarine manufacturing and infrastructure as targets fell off from being number one in 1941 and 1942, but these always remained among the top six target systems on Spaatz and Harris's bombing directives.

Anti-submarine aircraft such as Consolidated Catalinas and Martin Mariners were joined by the Consolidated B-24 Liberator reconfigured for the war against the U-boat. This soon became the workhorse of the US Navy Very Long-Range Patrols. It also made up much of the RAF Coastal Command, in which it shared star status with

the Short Sunderland Flying Boat. Air bases opened in mid-1943 in Greenland made a huge difference in coverage, as did escort carriers. The "air gap" in the mid-Atlantic virtually disappeared. This pushed U-boats toward the safer waters of the South Atlantic and off the African coasts. Even there Allied defenses moved rapidly to counter Doenitz's shifts. German moves were repeatedly "telegraphed" through ULTRA traffic. This enabled the Allies to respond quickly.



British Short S.25 Sunderland Flying Boat.



Consolidated PB5 Catalina.

Perhaps the toughest “runs” of the Atlantic war were those to Murmansk. These arctic convoys were considered essential to keep the Soviet Union in the war. Americans often thought of Lend Lease aid in terms of dollars. America’s Allies saw the aid in terms of airplanes, tanks, trucks, shoes, ammunition, gasoline, lubricants, clothing, food and other supplies to keep a society going when at war. The United Kingdom, Free France, the Netherlands, Luxembourg, Belgium, and other countries allied with or liberated by the United States received Lend Lease, but perhaps none needed it more than the Soviet Union. The Soviet Union suffered over 25 million dead in the war and fought the largest part of the *Wehrmacht*. To support this effort, the United States and the United Kingdom sent supplies without which the Soviet Union might well have succumbed. If it had, the full weight of the German war effort could have turned against the West.

Forty arctic convoys originated in Britain beginning in August of 1941. These generally sailed northwest to Iceland to pick up Canadian and American merchantmen and escorts. Then they braved the wide northern arc eastward to the Soviet Union. Over one hundred merchantmen and 600,000 tons of shipping were lost on this dangerous passage during the course of war, along with many of their crews. More than 800 Allied merchant sailors died. The contribution was great nevertheless. Over 5,000 tanks, 7,000 aircraft, and 16,529,791 tons of war material was delivered.

While fighting the war at sea along the Murmansk Route and elsewhere, ULTRA provided information but not capability. Sailors, ships, and capable, aggressive crews and captains were still at the heart of the battle. Merchant seamen, sometimes armed but often not, faced death or horrible fates when cast adrift. ULTRA intercepts improved the chances of their ships dodging U-boats, but did eliminate them.

ULTRA did provide unique target opportunities for aircraft, especially once more were available from aircraft carrier groups and expanded long range patrols. Exploiting intercepted locations of “Milk Cows” refueling other submarines, these aircraft targeted Doenitz’s supply chain. This interrupted the time on station of his boats, crippling his ability to find convoys and attack them. As air patrols became more prevalent and carrier aircraft roamed the distant circumferences of convoys, the safety zone for U-Boats on the surface virtually disappeared. The introduction of the snorkel gave more underwater protection to U-Boats, but did not much assist in finding convoys. With the use of direction finding and radar convoys could still be found, but with the attendant hazard of having one’s own signals detected. Doenitz’s captains still hazarded attacks but increasingly fell prey to Allied escorts who had perfected the skills of U-Boat hunting.

An incident from May 1944 illustrates the skill and initiative the Allies had achieved. Task Group 22.3 was a Hunter-Killer Group in the South Atlantic led by Captain Daniel V. Gallery aboard the light carrier USS *Guadalcanal*. It included five Destroyer Escorts: USS *Pillsbury*, USS *Pope*, USS *Flaherty*, USS *Chatelain* and USS *Jenks*. Gallery was vectored to the approximate location of *U-505* following up on decrypted intelligence from Tenth Fleet's submarine tracking room. After what appeared to be a fruitless two-week search of African waters Gallery headed for refueling at Casablanca. On the way USS *Chatelain* reported a sound contact, followed by its report, "am attacking!" The Group swung into operation, hoping to drive the sub to the surface as it had with a previous kill. Boarding parties on each ship were ready, as Gallery intended to capture the submarine. While the DE's fired hedgehogs, forward-thrown densely deployed small depth charges, Gallery's Wildcat fighters spotted the submarine in clear water. They redirected the ships to the target. Holed by a depth charge, the U-boat surfaced. Its crew scampered to man guns but strafing Wildcat fighters drove them overboard. Panic overtook the crew and they abandoned their U-boat, thinking it was sinking. Meanwhile a whaleboat skippered by Lt. (j.g.) Albert David with a boarding party from USS *Pillsbury* headed for the submarine. It was less than 700 yards away from the boarding party, locked into a circling turn near its lifejacketed crew. David jumped aboard, and with two men closed valves that the crew had opened to scuttle the submarine. They gathered papers and codebooks, secured the engines, and halted the boat. Pumps were put aboard, and a tow rigged. The boat, its secret papers, enigma machine, crew, and machinery were relatively intact, except for a hole in an outer ballast tank. *U-505* was towed to Bermuda, and the secret of her capture kept. Lt. David was awarded the Medal of Honor. Torpedoman 3d Class Arthur W. Knispel, and Radioman 2d Class Stanley E. Wdowiak received the Navy Cross, and a third sailor in the boarding party, Seaman 1st Class Ernest J. Beaver, was awarded the Silver Star.



A pair of British Fleet Air Arm Grumman F4F *Wildcats* (*Martlet* in British Service) being launched from a British aircraft carrier.

Despite such victories, the sea remained hazardous. In late 1944, Tenth Fleet's Eastern Sea Frontier found that snorkelers and new model U-boats were attempting to attack troopships moving towards Cherbourg



T.S.S. *Leopoldville*.

The most serious incident was the December 24, 1944 torpedoing of a coaster, the SS *Leopoldville*, carrying troops of the U.S. 66th Infantry Division. More than 2,200 men were aboard and 802 perished. Type XXI and XXII U-Boats, few in number but snorkel equipped and fast, were deadly when loose in the channel. Sinkings rose rapidly to 65,000 tons in February 1945. This was the highest since 1943. The Allies doubled down on the new threat. Six of the undersea wolves were sunk in rapid succession in March, and two more in April. Two U-Boats died on the last of April. The threat dissipated.

Overall, 781 U-boats were sunk of 1,200 built. Of those not sunk, many were destroyed in their yards or captured in their pens at war's end. Two made it to South America, refused to surrender, and were interned. For the Allies, 2,828 merchantmen of all nations were sunk. This represented 14, 687,231 tons of shipping. The United Kingdom and Commonwealth nations lost 158 warships, and the United States 29 in the battle for the Atlantic. The number of small craft, aircraft, and auxiliaries lost is unknown. 28,000 of about 30,000 U-Boat sailors lost their lives, and more than 30,000 Allied merchant seamen died. The United States lost 5,662 merchant seamen.



US F4F *Wildcat* fighter taxis onto position to launch from an aircraft carrier.

Despite the losses, the overall strategic result was an overwhelming Allied victory. Command of the sea was vital to their plans. Great Britain, momentarily on the ropes, recovered to become a sturdy platform for major offensives. The Soviet Union stayed in the fight. Increasingly massive amphibious assaults landed in North Africa, Sicily, Italy and France. Once ashore, these developed into gigantic campaigns that had to be sustained by sea. Millions of soldiers and tens of millions of tons of supplies flowed uninterrupted across the Atlantic. The massive industrial might of the New World made its presence felt. The first step towards victory was the securing of the sea.

Battles at sea seldom leave a visible trace. Wakes disappear almost as soon as they are formed. Ships and their crews are lost under the waves. Most of the U.S. Navy and Merchant Marine sailors lost in World War II appear on the walls of the missing in ABMC cemeteries or memorial chapels. Their bodies were never found. Convoy numbers and ship's names are more numerous than battlefields that can be visited, but less well known. Nevertheless, the consequences of the Battle of the Atlantic were so profound as to evoke eternal remembrance.

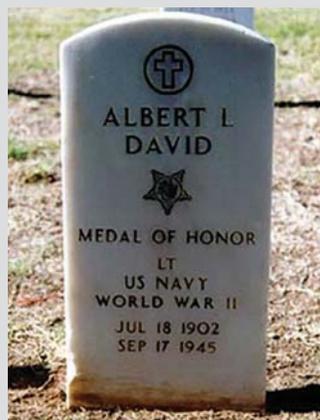
Lt. (j.g.) Albert L. David, *USS Pillsbury*

Albert L. David was born in Maryville, Missouri on July 18, 1902. He enlisted in the Navy in 1919 and served on numerous ships and stations over the next twenty years. He transferred to the Fleet Reserve on August 10, 1939 but was recalled to active duty six weeks later after Nazi Germany invaded Poland and precipitated World War II.

Serving as a machinist in a submarine repair unit, David was commissioned as an ensign in June 1942. He trained to be a diesel engineer and joined the crew of the newly built *USS Pillsbury* (DE-133), a destroyer escort designated for service in the Battle of the Atlantic.

On June 4, 1944 the *Pillsbury* and two sister ships encountered *U-505*, a German submarine, attempting to penetrate their screen around the escort carrier *USS Guadalcanal* (CVE-60) off the Cape Verde Islands.

Depth charges blasted through the outer hull of the submarine. Its crew surfaced, opened valves, planted delayed action demolitions, left the engine running, and abandoned ship. David led a daring boarding party that caught up with the circling U-Boat and stormed through its conning tower hatch into the hull. They quickly disabled the demolitions, closed the valves, stopped the engine, and captured the boat. Aboard they found two Enigma cipher machines, code books, and valuable charts and papers. Keeping the captured crew incommunicado, the U.S. Navy took full advantage of this intelligence windfall. Lt. (j.g.) Albert L. David was awarded the Medal of Honor for his courage, initiative, and exemplary leadership in perilous circumstances. Lt. (j.g.) David died of a heart attack in Norfolk Virginia and was buried at the Fort Rosecrans National Cemetery, San Diego California, Section Os, Grave 125a.



U.S. Navy Destroyer Escorts



The prolonged Battle of the Atlantic placed extraordinary demands on Allied shipping, as vulnerable merchantmen braved U-Boat infested waters to sustain Great Britain and operations overseas. The majority of these ships moved in convoys, protected by thin screens of warships and auxiliary vessels mustered by Allied naval commanders. Initially convoy escorts were a motley mix, with destroyers being the preferred choice insofar as they were available.

Employing destroyers as convoy escorts presented two concerns: their supply was limited in the face of numerous demands, and they committed more capability to the role than the mission required. Destroyers were designed to speed ahead of larger capital ships, identify and initially engage the enemy, and serve as capable auxiliaries in fleet actions. America's famous Fletcher Class destroyer, for example, featured ten 21-inch torpedo tubes, five 5-inch guns, ten 40-mm guns, ten 20-mm guns, and depth charge throwers and racks. It displaced 2,500 tons, moved at over 36 knots (more than twice the speed of an average convoy) with steam-turbine propulsion, had an operating range of 5,500 nautical miles, and required a crew of 329 officers and men. It was widely in demand, and often diverted from convoy duty.

Spurred initially by British commissions, American builders developed ships more optimized than destroyers for anti-submarine warfare. They called them destroyer escorts. The Evarts Class, for example, displaced but 1,140 tons and had a crew of 198. Its diesel electric drive gave it a speed of 21.5 knots, considerably faster than a convoy or U-Boat on the surface and over twice as fast as a submerged U-Boat. Although slower than a destroyer it was more maneuverable, had a tighter turning radius, and still had an operating range of 5,000 nautical miles. It was packed with the latest radar, sonar and other submarine detection equipment, Hedgehog spigot mortars firing up to 24 anti-submarine munitions with contact fuzes, and depth charge throwers and racks. It also had three 3-in guns, eight 20-mm guns, and a quad 1-inch gun. Thus, it was very capable against submarines and aircraft, considerably less capable against surface vessels or targets ashore, and far cheaper to build and sustain than a destroyer.

By mid-1943 the warships escorting a typical convoy increasingly consisted of two or three destroyers and perhaps twice as many destroyer escorts. The faster destroyers ranged along an outer perimeter, striving to detect and engage U-Boats early and perhaps pursue them. The nimbler destroyer escorts stuck closer to the plodding merchantmen, protecting them at shorter ranges and perhaps weaving in and out of the convoy in pursuit of penetrating submarines. Overlapping radar, sonar (effective at speeds of up to 20 knots) and high frequency direction finding umbrellas provided an envelope of security within which the escorting vessels did their work. Easy prey became a thing of the past for U-Boats, and their losses mounted while their kills plummeted.

By 1944 the hard-working convoy escorts were embedded in an increasingly elaborate anti-submarine architecture. Convoys were the bait luring U-Boats to risk unacceptable losses. Those that escaped the convoy escorts were relentlessly pursued by wide-ranging convoy support groups, many of these further assisted by aircraft carriers. Air coverage became thicker and more complete, attacking U-Boats directly or directing warships to them. The destroyer escorts, characterized as frigates by the British, became an invaluable complement to a vast apparatus for sinking submarines. They provided close-in protection that sped troops and supplies across the Atlantic with ever fewer losses.

Air Offensive Europe: July 1942 to December 1943

U.S. Army aviation traces its beginning to the ascent of U.S. soldiers in a balloon in 1861. The Army's generals, however, failed to fully appreciate the value of such air reconnaissance. After a hiatus of thirty years, balloons returned to the U.S. Army following wide experimentation with them in European armies. Five years after their first flight in 1903, the Wright brothers received the Army's first contract for a powered-driven aircraft, along with provisions to train its first aviators. One of these aviators was Lt. Henry H. Arnold. Within a year, the Wright '1908 Flyer' that had flown for an hour had increased its endurance to over three. With the World War and European advances with respect to aviation, a true capacity emerged to wage war in the air.



Henry Arnold pictured here in 1911 at Wright Brothers flight school in Dayton, Ohio.



General Henry Arnold pictured here in 1945.

General Henry H. "Hap" Arnold, Deputy Chief of Staff of the Army and Commanding General of Army Air Forces during World War II, did not serve in combat in World War I. The last flyer on active duty to wear the gold "Military Aviator Badge" originally designed for the very first pilots, Arnold became a staff officer for General "Billy" Mitchell during his fight for military aviation. Arnold was a general staff officer instrumental in creating the Army Air Service during the First World War, a recipient of a Distinguished Flying Cross for exceptional contributions to aviation, the pre-war Chief of the Army Air Corps, and the first Commanding General of the Army Air Forces (AAF) created in June 1941. He was a visionary, dynamic organization builder and an enthusiastic air power advocate.

With war approaching, Arnold and Army Chief of Staff George C. Marshall agreed that the air arm's fight for "independence" could set back mobilization and the war effort by years if it precipitated a split within the Army. A separate Air Force would subtract tens of thousands of non-flying specialists from Army ranks to support it. Without augmentation, the separate service would have no cadre save pilots and mechanics from its Air Corps specialists. Augmenting it sufficiently would be a personnel disaster for the growing Army, which needed its scarce experienced personnel for its own mobilization. Instead of separating, the Army Air Forces became a major command within the Army, with Arnold treated as equal to Marshall with respect to air matters. Marshall selected an airman as his Deputy, Lt. Gen. Joseph T. McNarney, to underscore the importance of air to the army. The Navy had its own air arm and Bureau of Aeronautics.

The lack of a separate Air Service became apparent during the creation of the Joint Chiefs, which were to meet as members of the Allied Combined Chiefs of Staff. The British Chiefs of Staff fielded three officers, one for each service, since the Royal Air Force had existed as a separate service since 1918. In order to have matched pairs for meetings, Arnold sat as the U.S. air representative and was a voting equal, even though he was in British eyes, "an Army officer." Marshall himself was generally considered to be "air minded". He had been "converted" to the importance of air power in any conflict by Arnold's Air Corps predecessor, Lt. Gen. Frank M. Andrews. Andrews was killed in an air accident in 1943 when serving as the Commander of U.S. Air Forces in the European Theater. Arnold, for his part, made sure his Air Force commanders, who reported directly to him from around the world, supported Army ground operations. He created separate Tactical Air Forces to support ground forces directly while protecting his heavy bombers from interference by also creating Strategic Air Forces. These reported to the Combined Chiefs, and thus directly to him. Arnold, as the Commanding General of the AAF, had a "stovepipe" relationship to the theater Air Forces wherever they were assigned.

Despite the emphasis of the RAINBOW 5 war plan on Europe, Arnold and Marshall hastily deployed B-17 aircraft to General Douglas MacArthur in the Philippines as war with Japan seemed imminent. They hoped to stock his airfields with up to 200 of the aircraft, nearly all of the operational bombers then available, prior to an expected Japanese attack. The Pearl Harbor attack halted this flow of bombers to the Pacific at the half way point and led to a painful reassessment of priorities. Britain urgently requested aircraft for its Bomber Command. It also asked for B-24 aircraft for its Coastal Command for antisubmarine operations. Plans to send aircraft to China were also in play. Every theater clamored for air units. Airplanes were frequently the only force that could rapidly take action against an advancing enemy.



Carl Spaatz depicted here as a General in the postwar period.

Planning for Europe

One of Arnold's major contributions was to prioritize air unit assignments to efficiently fight the air war in every theater. Although he had no combat experience, he capably oversaw the largest global air war in history. The initial plan for his air strategy had been drawn-up by a team of five experts headed by Col. Carl A. Spaatz. Spaatz was an Army aviator with excellent credentials including several aerial victories in World War I, a Distinguished Service Cross for heroism, and a peacetime Distinguished Flying Cross earned as the record holding pilot of the "Question Mark". This plane set

the endurance record for long term flight at the time and was the first aircraft to be refueled in mid-air. Sent to Britain as an observer, Spaatz reported on the Battle of Britain after watching it first hand in London and knew modern air warfare conditions and technology. He also knew the capabilities of the enemy. Spaatz and his "brain trust" that also included Col. Harold L. George, Lt. Col. Kenneth S. Walker, and Majors Laurence S. Kuter and Haywood S. Hansell created Air War Plan 1 (AWP 1). The Directive for AWP 1, updated throughout the war, became the basis for the Army Air Forces, its organization, general strategy, and operating principles. Its drafters all became key war leaders, although Walker would die young as a Brig. Gen. commanding bombers in combat in the Pacific.

AWP 1 assumed an early air offensive in Europe beginning in April 1942. However, production constraints and the time necessary to create and deploy a massive air organization delayed this considerably. In addition to the eventual destruction of the *Luftwaffe* and strategic bombing in Europe, the plan included creating initially defensive forces to fight in the Pacific as part of RAINBOW 5.

The basic outline of AWP 1, like most prewar plans, proved overly optimistic. Its forecasts of bombing effectiveness, antiaircraft lethality, German fighter opposition, and the total force needed for the desired effects proved to be off the mark. One of its concepts held that bombing could be conducted from the Near East by aircraft with a 4,000-mile radius, which had yet to be developed. This would have been a remarkable technical leap, impossible even for the B-29 "Superfortress" which appeared late in the war. AWP 1 was not an unalterable blueprint. It was recognized as a first draft that permitted the Army Air Forces to begin campaigning in each theater with a general scheme of operations. Plans could be, and were, modified within each theater to meet local conditions. As a "basis for change," and as a general operational concept, it proved essential.

The American Observer Group in England was top-loaded with Army Air Corps officers. Besides studying the ongoing air war and gathering technical and tactical intelligence, their job was also to gather requirements for the Royal Air Force with respect to potential purchases from American industry. When he first met his British counterparts during the Placentia Bay meeting off Newfoundland in 1941, Air Forces Chief Arnold wrote in his travel notes that British plans to produce a heavy bomber force with the assistance of U.S. production would probably prevent the United States from acquiring a sufficient number of bombers for itself. Arnold noted that civilian officials had also promised aid and airplanes to China, Russia, the British Colonies, and the Dutch East Indies. Arnold could often veto such offers as preventing essential war material from being acquired by the United States, but the build-up and creation of a combat ready air service nevertheless competed with maintaining the Allies in their fight against the Axis.

The problem of preparing America to fight while supporting Allies who were already carrying the fight required a wisdom not readily acquired in staff colleges. Allied production requests often conflicted with American training and mobilization needs. On the positive side, they also spurred larger retooling efforts that increased war industry capabilities faster than would have been the case in an American-only program. Thus, they favored long term growth beyond levels military planners could have anticipated.

Such massive production requirements were essential. By mid-1942 the Axis powers had conquered much of the Pacific, Europe, and Asia. This tide of Allied defeat was only reversed after three years of heavy fighting, largely by forces that did not exist before 1941, armed with equipment built after the start of the war. The technological advantages given the Allies by American production of all types of arms and armaments had huge consequences. Many of these related to air power, one of the dominant factors in every theater where the American Armed Forces were deployed or where American equipment was supplied to our Allies. In the earliest days, however, disaster loomed. Japan swept on in the Pacific and Asia and the British nearly lost the Middle East. Russia barely survived. The Atlantic War against the U-boat was nearly lost. President Roosevelt may have called for “50,000 military and naval planes” to be built, but in January 1942 the situation was bleak. There were nowhere near that number to be found to fly, fight, or give away to desperate allies.

The creation of the Army Air Forces (AAF) out of the old Army Air Corps on June 20, 1941, was a major organizational step in growing Arnold’s world-wide air force. The new organization was based on four previously existing numbered continental Air Forces designed for defense and training. The First and Fourth Air Forces protected the East and West coasts, respectively. The heavy burden of crew

and individual training fell on the Second and Third Air Forces. The Second Air Force focused on individual crew skills and the Third on producing trained crews and units ready for deployment.

The earliest overseas deployments oriented on the Pacific even before the attack on Pearl Harbor. However, the Declaration of War by Germany against the United States on December 11, 1941, reinforced the need for Europe to be the priority theater as designated by AWP 1. This was used to create a basic concept for a European air campaign. Newly promoted Major General Carl A. Spaatz led a small cadre of officers including Brig. Gen. Ira C. Eaker to England to lay the groundwork for the American bomber presence in that theater. Earlier diversions



Air Chief Marshal Arthur "Bomber" Harris.

of aircraft to Allied Lend-Lease support had received waivers. This became more problematic as training programs graduated airmen, crews were formed, and units organized. Britain requested bomber groups urgently for Egypt and to support operations in Burma. Arnold, citing the need to build the forces in the United Kingdom for the invasion of Europe, convinced President Roosevelt that three bomber groups and additional fighters and support should be the lead American air units for the United States Army Air Forces in the British Isles. This formed the initial contingent of what would later be the Eighth Air Force, which would

report administratively to the U.S. Theater Commander. Its operations would be overseen by Arnold through AAF channels, and indirectly by the Combined Chiefs. Brig. Gen. Ira C. Eaker, as the commander of VIII Bomber Command, was to align his efforts with his Royal Air Force counterpart, Air Chief Marshal Arthur "Bomber" Harris.

Air doctrine in the U.S. Army Air Forces was evolving, but commitment to a decisive strategic bomber offensive remained at its foundation throughout the war. World War I Air Service experience had been primarily in an air war that supported battlefield operations. "Air fighting" by "pursuit" aircraft proved necessary to create local air superiority for reconnaissance and to provide the bombing and strafing operations to support ground forces. By war's end the Royal Air Force had created the Independent Bombing Force, thus beginning "Strategic Bombing". Its air arm separated from the army and absorbed the naval air arm. Other European countries developed their own separate air forces.

U.S. Army flyers sought independence against the opposition of the Army and Navy, who each possessed its own air arm. The “Air Corps” as it was then named, developed its own doctrine absorbing and extrapolating on the “lessons of the Great War.” The Air Corps Tactical School at Maxwell Field, Alabama, declared the primary weapon in warfare in the future would be a bomber that could overpower any defense, destroy enemy industry, and destroy an enemy’s will and ability to fight. In consonance with the more extreme proponents of airpower such as Hugh Trenchard and Giulio Douhet, they believed the bomber would make fleets obsolete and armies unsustainable in the field. No technology yet existed capable of fulfilling this vision, however.



A German motorized detachment pauses during the *Blitzkrieg* across France.

The early campaigns of World War II demonstrated airpower’s strength and weaknesses. Tactical air assets provided impressive support to the German *blitzkrieg* and the Japanese naval and ground offensives of 1941 and early 1942. However, German air attacks on London during the “blitz” were costly to the *Luftwaffe* and failed to crush British morale. General Arnold, as organizer and visionary, co-authored books on aviation with then Colonel Ira Eaker detailing a realistic gospel of airpower in plain terms. Their book *Winged Warfare* called for the massive

expansion of a modern U.S. Air Force. This was not to be simply for strategic bombardment but was also to be a balanced force to cooperate with the other arms and services. Together they would defend the homeland and the nation’s Allies, and would mobilize based on an economic and industrial plan harmonized within a national strategy. The book, published after Europe was at war, was a sound explanation that illuminated, but did not give away, secrets. It enlightened a public whose newsreel watching of the *blitzkrieg* across Europe had already led to a recognition that modern warfare had an air dimension. This sentiment resonated when the President called for fifty thousand airplanes to be produced for the national defense.

The British Air War

RAF Bomber Command's war began by dropping leaflets rather than bombs due to the hopes of British policy makers that they could avoid destroying private property or incurring further retribution. This approach was soon dropped as the *Luftwaffe* unleashed its fury against population centers and industry alike. Bomber Command's early daylight strikes incurred such heavy losses that it rapidly shifted to night bombing missions against area targets. This remained its major operational technique for the remainder of the war.

The Royal Air Force bombing offensive began in earnest in May 1940. It originally planned to focus on oil targets in Germany with industrial sites as secondary targets. The relative ineffectiveness of such strikes, and the outcry from an enraged public calling for retribution for German air attacks, shifted the emphasis towards civilian targets. Bomber assets also focused on an intense four-month naval campaign to reduce losses due to submarines, mines, and surface raiders. Night bombing proved to be too inaccurate for such "selective targets." As England's sole strategic offensive weapon able to hit Germany at that stage of the war, Churchill demanded decisive action from his bombers. However, the technology that existed at the time did not support the type of campaign that could precisely destroy oil and industry targets at night. Air Marshal Sir Arthur "Bomber" Harris shifted to night area bombing, primarily of cities, to employ his command's strengths within the limits of its shortcomings.

Air Marshal Harris assumed command in February 1942 at a time when the German night fighter forces and German air defenses had reached considerable strength. A belt of radars, ground control "boxes" (sectors) for coordinating night fighters, and an extension of the Kamhuber Line (named after the general in charge) to block penetration routes made each nightly mission the equivalent of a major battle. Electronic countermeasures developed to spoof enemy radars or confuse enemy night navigation aids characterized the air war in the dark. Radar sets were mounted on German multi-engine fighters which were equipped with rockets and large caliber automatic cannon to attack bombers.

Harris rapidly became famous for "city busting." His directive to destroy German industrial and war making capability was "to focus attacks on the morale of the enemy civil population, and in particular, of the industrial workers." Because of the challenges posed by scattered industrial sites, enemy defenses, population density, navigation, weather, and limited resources, Harris concentrated on the four largest industrial centers in the Ruhr industrial region. He attacked these with incendiary bombing attacks. Fourteen other industrial cities in the rest of Germany comprised his secondary target list. His primary goal, defined in one of his reports, was to "first make the town uninhabitable, and secondly, we must make the people conscious of constant personal danger."



British propaganda poster highlights the deadly attributes of the Lancaster bomber.

Harris's force consisted of forty-seven medium and heavy bomber squadrons at the beginning of 1942. Fighters for defense had predominated in British industry up until then, so bombers were slow to appear. Many bomber squadrons were equipped with obsolescent aircraft and very few had the new four-engine Lancaster Bomber. This formidable aircraft would become the backbone of Bomber Command. It was capable of carrying a larger load of bombs than any World War II bomber. Bomber Command, due to its reach, was Great Britain's sole offensive force attacking into the heart of Germany. In 1942 approximately one third of the UK's war economy supported its aircraft production, air crew training, bomb production, and overall support to air forces. The Royal Air Force needed 155,000 men and women to maintain Harris's squadrons.

One of Harris's ideas in 1942 to dramatize the effects of Bomber Command was to conduct "Thousand Plane" raids. The first such massive deployment of bombers successfully burned the port of Lubeck on the German coast, since coastal towns were easily identified at night. Harris incorporated incendiary tactics of "fire-raising" into massive raids against a major, easily identifiable target. Cologne was targeted next as statistically most liable to be clear with respect to weather. To reach the dramatic and newsworthy "1,000 Bombers" number, Harris pulled aircraft from training squadrons and threw in all his operational spares and crews. Over 1,000 bombers were dispatched and over 900 made it to the target. They dropped 1,455 tons of bombs in 90 minutes. Aerial reconnaissance subsequently revealed that 600 acres of Cologne were razed during this 30 May 1942 raid.

Harris's organizational and technological improvements included advanced navigational aids using radio beams, the creation of a pathfinder force for target marking, and the employment of spoof raids, diversions, and radar jamming elements. This revolutionized night bombing, making it deadlier and more efficient. His techniques and advice considerably aided the Americans, but Spaatz and Eaker persisted in a commitment to daylight precision bombing. They believed sufficient bomber mass and new equipment and techniques could avoid the losses the British had experienced earlier in the war.

Harris perceived a need to demonstrate the physical damage caused by his attacks. He ensured that the results of his raids were recorded by photo reconnaissance. This attracted him towards area damage, such as his stress on "de-housing" the industrial population of the great industrial cities. He did not particularly see the value of ULTRA intelligence, the interception and decoding of high-level German military communications, as a means to produce information relevant to his bombing campaign. Subsequent U.S. bombing efforts would be guided by a targeting committee informed by civilian expertise in economics and reinforced by ULTRA-backed intelligence. For the Americans, photo maps, target folders, and dossiers supplied by the Royal Air Force were the main sources of industrial intelligence early in their air campaign.

Building the American Air Weapon

Arnold and Eaker built on the experience and successes of the British air effort while learning from their mistakes. Arnold became the force provider and Eaker the Commanding General of the first independent American bombing force, the VIII Bomber Command. This later expanded to become the Eighth Air Force. After service in England, Eaker went on to command the Mediterranean Allied Air Forces. With a grim determination, Arnold, Eaker, and the other air generals would together fight one of history's greatest military campaigns, the strategic air campaign against Germany in World War II.

Political attention to Eaker's mission in the United Kingdom led him to initiate an early bombing campaign with the few bombers then on hand. The first mission was mostly symbolic. It was staged with public visibility very much in mind; America needed to be seen as being in the war. On July 4, 1942, the 15th Bomb Squadron, flying six A-20 Havoc light bombers borrowed from the Royal Air Force, accompanied a like number of British aircraft in a sweep against four German airfields. Two American and one British crew were lost in an attack which led to, as the New York Times obligingly reported in glowing terms, "plowed up Nazi airfields, and blasted enemy planes and gunned German personnel."

Americans saw that "their boys" were in the war, but not a single American heavy bomber was yet operational in Britain. The British dedicated eight airfields for the arriving Yanks. More loaned airfields would follow, and others would be built. Units arrived, staged their equipment, maintained it, trained, and studied their enemy through target folders. Officers made frequent liaison visits and went along on authorized and unauthorized flights on Royal Air Force night bombing missions to gain experience. Intelligence arrived in bundles, on film, through briefings, in publications, on wall charts designed for crew training, and under guard by special courier. Specialized codes were introduced, and aerial photographs and maps of every city and industrial center in Europe on file came from British sources to the Americans. VIII Bomber Command was ready for major independent operations by August 1942.

In August, the heavy hammer of American strategic bombing first fell on Rouen in France. Col. Frank Armstrong led the raid. Before the bombers took off, Brig. Gen. Ira Eaker posed between the two pilots of "Yankee Doodle," a B-17E aircraft of the 97th Bomb Group which led the first raid of American "heavies" on Europe. The target was Rouen's Sotteville marshalling yards and the date was August 17, 1942. None of the twelve aircraft in the bombing element were lost, although their escorts traded two of their fighter planes for an equal number of enemy interceptors. The Rouen attack added 36,900 pounds of bombs to the nearly 72,000 tons previously dropped by the Royal Air Force in air attacks since 1939.



B-17E "Flying Fortress" aircraft of the 92d Bomb Group fly in formation during a training flight.

The Americans Enter the Air War in Europe

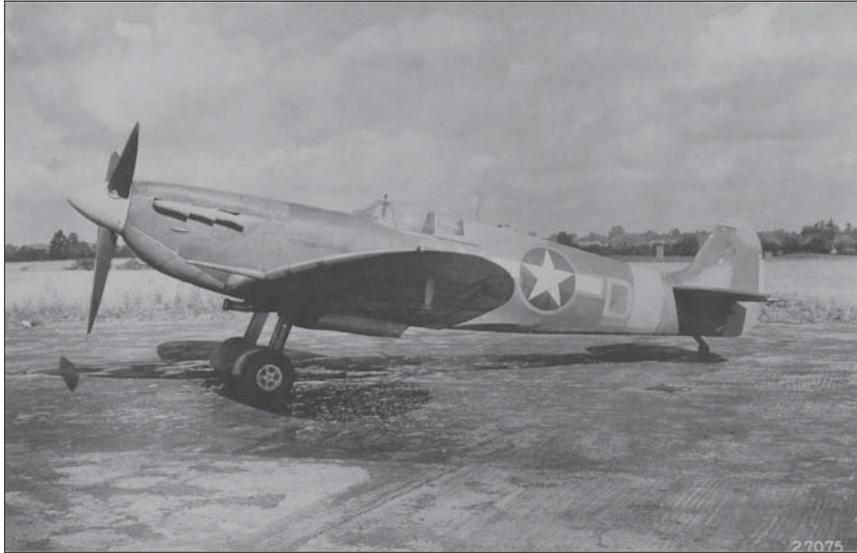
The Americans built their bombers around a concept of battling through to the target. The "Flying Fortress" was named to evoke Boeing's belief that its bomber was defensible without fighter escort. Possessing two power turrets with two guns each, a tail mount of two guns, and flexible guns on each side, the deployed B-17E bristled with .50 caliber machine-guns. These were called 'cannons' by the Europeans. Later models would add three more flexible guns, and the most prominent G models added a "chin turret" under the glass nose to deal with head on attacks. Bombers were stacked in echelons of 18 to 21 bombers in a bomber "box" designed by Col. Curtis E. LeMay of the 305th Bomb Group. This guaranteed an attacking enemy fighter would encounter a swath of bullets from virtually any direction from multiple gunners in several aircraft. It was intended to assure the safe dropping of bombs by aircraft in the formations. While the Eighth Air Force was famous for its photogenic Fortresses, it also had B-24 Liberator bombers. The B-24 similarly had nose, top, belly, and tail turrets. It had a longer range but a lower operational ceiling than the B-17. It was a rugged bomber much coveted by the RAF Coastal Command for overwater anti-submarine work.

The Rouen mission had been flown by a single group in squadron strength, but Eaker's command soon mounted missions in multiple groups. He learned early that a concentration of bombs on a target was necessary to achieve the desired results. A small formation bombing from high altitude could not provide the required concentration to destroy a target. Small formations also risked defeat in detail and thus the survival of the bomber force. Long trails of bomber boxes, some twenty miles long, known as bomber streams would leave white contrails of condensed air hit by their hot engines. These vapor trails streaked friendly and enemy skies as they moved across Europe. Bomber streams were visible for many miles and easy for the enemy to find. Their heads were pinpointed by radar and tracked. Enemy fighters vectored in along their length to intercept them as they made their turns at checkpoints to avoid flak concentrations or reorient towards selected target areas.

Fighters flew in escort along the flanks of the bomber streams to the limit of their range. Most were provided by Brig. Gen. Frank O'Donnell Hunter's VIII Fighter Command. His rule for his fighter pilots: "Stay with the bombers." A nine-victory ace from the Great War and one of the most heavily decorated men in the service, Hunter agreed with Eaker that bringing bombers back was essential for building an air force and for maintaining crew morale. During the interwar period, air theorist Captain Claire Chennault had stressed that the "pursuit" or fighter plane was also an offensive weapon in its own right. It achieved superiority by hunting its enemy. Chennault believed it could clear the air of attacking bombers and their escorts if permitted to attack. Conversely, it had to destroy the enemy's interceptors as part of the strategy for bombers to achieve their offensive goals.

As the VIII Bomber Command built-up, it lacked a long-range fighter to accompany bombers to distant targets. Even the addition of "wing" or "belly" tanks proved insufficient for the fighters then on hand. Fighters were told to stay close to the bombers to fend off attackers. However, the Germans concentrated for their heaviest attacks on the bomber formations after their escorting fighters broke contact to refuel. Once refueled, the fighters would return to meet the surviving bombers as they returned. The heaviest bomber losses were suffered during their time without escort.

After the bombers formed over England and headed across the Channel, the fighters initially providing them escort were British Spitfires and American P-47 Thunderbolts. Both of these planes lacked the range to go into Germany. It was not until the arrival of the P-51 Mustang in large numbers early in 1944 that the bombers finally had a fighter escort with sufficient range. Until then, the attrition of bombers due to enemy fighter attacks was heavy. German anti-aircraft guns also scored heavily with respect to both direct damage and by separating aircraft from formations. The resultant stragglers were often shot down by fighters since they were without the protection of the bomber formation. Flak itself claimed a large share of the victims, destroying bombers and killing or wounding crew members.



A British Spitfire fighter marked with U.S. stars on a runway in England.

VIII Fighter Command fielded its first unit, the 31st Fighter Group, with Spitfire aircraft obtained on “reverse Lend-Lease” and marked with U.S. stars. This was rapidly followed by the 4th Fighter Group constituted from the return of American pilots who had previously flown in the three volunteer “American Eagle” Squadrons in the RAF.

Eighth Air Force grew rapidly in 1942, occupying airfields in East Anglia north and northeast of London. Four B-17 Groups and two B-24 Groups comprised the command until May 1943, with an average of 36 bombers per group or nine per squadron in the four squadron groups. This organization would later be augmented to permit crew rest, aircraft maintenance, and continued operation while maintaining the original tactical design of the groups. The decision to invade North Africa in November 1942 drew aircrew and aircraft from the BOLERO buildup in the U.K., thus slowing the Bomber Command’s growth. The newly organized Twelfth Air Force in North Africa received units originally meant for the Eighth. More than 1,000 aircraft were diverted to General Eisenhower’s new command in the Mediterranean. This cut the average availability of heavy bombers and crews in England to about 100 for the rest of the year.



A Republic P-47C Thunderbolt closely escorting a friendly B-17E bomber.

The fighter situation was worse. TORCH diverted fighter groups planned for the VIII Fighter Command to the Twelfth Air Force in North Africa. These included three P-38 Lightning Groups in addition to four groups trained by the Eighth and released for Africa. This left three fighter groups in the Eighth, and four operational groups with P-47C Thunderbolt by the summer of 1943. The realization that long-range escorts would be essential for the daylight bomber offensive was driven home as makeshift ferry tanks and drop tanks did not add sufficient range to the P-47. Lack of numbers kept the Thunderbolts clamped close to the bombers, whose commanders demanded that they not break escort and leave to chase enemy fighters. This tactic had already proven a failure for the Germans over Britain in 1940. With fighters unable to fly all the way to the targets, only diversions and feints offered some relief to the bomber streams. Both subtracted bombers from the main targets, however, and reduced the tonnage of bombs available for critical strikes. Worse, the Germans were excellent at reading the situation, and were quick to concentrate their defenses and hit the actual bomber streams on their way in and out of the target areas. Few spoofs were effective.

The Eighth Air Force could muster too few aircraft to make major strikes until almost the end of 1943. This timing left it with a short bombing season wherein only one in twenty days was clear over European targets. For bombardiers and navigators trained in the clear skies of the American southwest, the European air war fought in subzero temperatures and in frequently overcast skies was especially difficult. Daylight bombing proceeded at a growing cost in crews and men. Bombing by radar would improve targeting opportunities in the future, but in 1943 that capability was still being developed and bombing through cloud cover was generally ineffective.

In November 1942, Maj. Gen. Spaatz accompanied Lt. Gen. Eisenhower to participate in TORCH as his senior American airman., He was designated Commanding General of the Allied Northwest African Air Forces. Eaker replaced Spaatz in command of Eighth Air Force, and Col. Newton Longfellow moved up from wing command to command VIII Bomber Command. Eaker retained a hands-on approach to bombing, and eventually replaced Longfellow with Brig. Gen. Frederick L. Anderson, a successful wing commander. Together they would shape the air bombardment campaign for the American daylight offensive.

At the Casablanca Conference in January 1943, Maj. Gen. Eaker had made the case for daylight bombing with a paper coining the term, “around the clock” bombing. This established the conceptual framework for the Combined Bombing Strategy that would remain in effect for the remainder of the war. It ended British attempts to absorb American assets into their night bombing efforts and reduced the level of conversion of American industry to produce aircraft for the Royal Air Force. Eaker theorized a harmonized Allied list of targets which could be hit day and night. This would maximize damage, strain enemy defenses, and work around weather and local conditions. Coordinated attacks by RAF Bomber Command and the U.S. VIII Bomber Command would exploit respective intelligence, fighter assets, and countermeasures to destroy the most important targets identified by the Combined Chiefs. Daylight operations would cause maximum destruction to the *Luftwaffe* and its aircraft production, aircrews, ground assets and facilities. They would force the *Luftwaffe* to fight in the air and would pursue it onto its airfields. Night bombing would continue the destruction of German cities. The Combined Bomber Offensive Plan was the ultimate statement of airpower advocates’ beliefs and strategy.

The airmen sought to build sufficient strength to maintain a force of 3,000 heavy bombers in the United Kingdom by the end of 1943. With evolving tactics and improving penetration capabilities, this would increasingly reduce the enemy’s ability to produce and distribute war materials. Day and night bombing would also, it was hoped, reduce civilian and military morale. The first air directive from the Combined Chiefs came through their executive, Air Chief Marshal Sir Charles Portal, Chief of the Air Staff, RAF, to VIII Bomber Command. Named POINTBLANK, it reflected the harmonized, air strategy called for by Eaker. It stated that the United States and British bomber forces were to conduct a joint offensive “to accomplish the progressive destruction and dislocation of the German military, industrial, and economic system, and the undermining of the morale of the German people to a point where their capacity for armed resistance is fatally weakened. This is construed as meaning so weakened as to permit initiation of final combined operations on the Continent.”

POINTBLANK listed six primary target systems in priority order: U-boat construction, yards and bases; the German aircraft industry; ball bearing factories; oil and synthetic fuel facilities; synthetic rubber and tire plants; and military transport and vehicles. The target types, divided by percentages, each had a goal for degree of destruction. Implicit in these goals was the ongoing destruction of the German daylight fighter forces which, if not checked, would continue to inflict heavy losses on bombers that could prohibit daylight precision bombing. Forced to fight, the *Luftwaffe* would eventually be destroyed. A study predicting the degree of “wastage” due to aircraft losses in battle and bombing was included in the directive.

Without an integrated attack, the Combined Chiefs believed POINTBLANK would fail to destroy the *Luftwaffe*. This would render the other objectives difficult to destroy. Variables with respect to weather, timing, numbers of aircraft dispatched, and local conditions were anticipated to give the RAF Bomber Command and the U.S. VIII Bomber Command the ability to coordinate their attacks. A realistic list of the aircraft units available to support the offensive in accordance with a timetable rounded out the plan. This estimated the U.S. force at 2,700 heavy and 800 medium bombers operational in the theater by the end of March 1944.

The first thirty missions flown by Eighth Air Force/VIII Bomber Command were considered necessary to break in the force. Of these, twenty missions were rated as effective. Enemy damage was rated as minimal and U.S. losses were approximately 7% of the aircraft flown per mission. Fighters were recognized as necessary for escort but were too short-ranged even with locally procured droppable tanks made of pressed paper. Fighter groups diverted to other theaters, especially North Africa and the Mediterranean, created a problem with respect to numbers, and more aggressive tactics were slow in developing with so few fighter aircraft available. Bombing accuracy improved and new models with technical improvements and added armament helped protect aircraft, but overall effectiveness did not keep pace with the German growth in fighter interceptor strength. A longer ranged fighter capable of deep penetration was needed to fight the *Luftwaffe* over Germany.

North Africa and the Mediterranean Theater drew off aircraft units originally earmarked for the BOLERO plan, although Eaker still pressed for as rapid a buildup in the U.K. as possible. He deepened and strengthened attacks after coastal targets seasoned his groups, and the planes moved on to targets inside Germany and beyond fighter cover by July 1943. Training improved bombing results and leadership became more effective over time, but the creation of an air force under fire was costly in the face of one of the world’s most effective combat air forces.

Refining the American Air Weapon

In his first report to the Secretary of War as Commanding General of the Army Air Forces, Arnold stated his overall strategy for the air war. “Our strategy is based on a blueprint of scientifically calculated attrition.” He had convened a group of civilian experts to study German industry through the available intelligence drawn from both U.S. and British sources. Experienced air officers participated as well. This Committee of Operations Analysts sought to estimate a progressive degree of degradation in German war-making capabilities achievable by bombing. Having identified 19 critical war industries, the committee could not agree on the point of catastrophic demise for each, or when they would be sufficiently crippled to permit invasion. Target selection, Arnold reasoned, had to be improved upon over the strategy thus far described.

In addition to applying operations research analysis and statistical methods to manage its burgeoning air war, the Eighth Air Force used systems analysis to study its own operations, to help phase its operations and improve tactics, and to shape the assessments provided by the Army Air Forces School for Applied Tactics. Bombing patterns, plane formations, and every other aspect of operations were studied to improve combat performance. This mirrored the analyses that the Air Staff applied to world-wide operations, but at a local level.

Eighth Air Force marked the anniversaries of its early missions with maximum effort attacks. On July 4th, 1943, Eaker sent 237 B-17 bombers to attack Nantes and LeMans to demonstrate how much the Eighth had grown from the borrowed six bombers which had first struck the year before. On the first anniversary of the Rouen bomber mission, August 17, 1943, Eaker sent 315 B-17s deep into Germany in two separate bomber streams. This was the famed “Double Strike” mission, also called Operation JUGGLER. One attack, with the 4th Bomb Wing’s seven bomb groups led by Col. Curtis LeMay, hit the Regensburg Messerschmitt complex of factories. The second attack, the 1st Bomb Wing with aircraft from nine bomb groups, hit the ball-bearing factories at Schweinfurt. With the intent of splitting the German defenses between the two raids, LeMay’s 4th Wing turned south and landed in bases in North Africa. They thus avoided being attacked on the return. Nevertheless sixty heavy bombers were shot down, each with a ten-man crew. Bad weather delayed the Schweinfurt attack by over four hours, ruining much of the effect of the dual attack. This permitted the German defenses to concentrate on each attack in turn.



A German aircraft plant in Regensburg, Germany, is targeted by Allied bombing.

It was inevitable that as the daylight bombing program improved upon its target list, the Germans would give a higher priority to defending key economic assets with heavier guns, radars, and fighters. These were coordinated in webs woven throughout belts of defenses spread across the German held continent. One of the most heavily defended targets was the oil fields around Ploesti, Romania. These critical targets would have to be re-struck repeatedly as damage was repaired after each Allied attack. High value targets in the Ruhr, chemical factories, Berlin, and crucial aircraft and armaments factories were surrounded by heavy defenses. Sound detectors, radar, and searchlights aided the Germans in night defense.

Arnold's analysis group eventually boiled down the campaign essentials into seventy-six targets in six major industries. Arnold believed the Eighth Air Force would be required to fly most of these missions, with a minimum of 300 bombers per mission. A force of at least 900 more bombers would be in reserve to keep a sustained mission rate feasible. This guidance from the Air Staff drove Eaker's strategy and targeting to a large extent.

During the early part of 1943, nearly 70 percent of Eighth Air Force's sorties were directed against submarine related targets. Early Combined Bomber Offensive directives gave priority to these targets. U-boats had to be defeated to win the Battle of the Atlantic. In addition, the submarine pens and support bases were reachable by the bomber force, and most of the targets were within fighter range. After priority changes in July, German fighter production moved to the top of the list. This called for deeper missions, when weather and other conditions were favorable. The change in priority reflected favorable developments in the war at sea and the necessity of destroying the *Luftwaffe* if the war in the air was to be won.

Meanwhile, Air Marshal Harris continued his operations to smash the Ruhr industries by "de-housing" the populace and destroying the maximum acreage of industrial property. In the first of three great aerial offensives that Harris described as "Battles," the Ruhr Battle was flown by numerous bombers at night from March 5th to July 30th, 1943. Beginning on July 24th, the port of Hamburg became the primary target for the second Battle.

During the Ruhr Battle, Bomber Command flew forty-three major missions. Civilian dead ranged from several hundred up to 3,000 during these raids. Bomber Command lost 872 bombers and approximately 6,000 aircrew did not return. More than 2,700 aircraft were damaged irreparably in the 18,500 sorties flown.

Harris achieved some improvements in precision in his night attacks with a new marking system. He professed a dislike for "panacea targets", as he characterized many precision bombing targets, but nevertheless developed capabilities for more precise strikes of his own. A case in point was his attack on the Ruhr dams during the night of May 16-17, 1943. A uniquely trained and equipped squadron

with special bombs, the “Dambusters”, destroyed two of the three dams chosen as targets. This caused significant flooding in the Ruhr, shortages in hydro-electric power, and industrial disruption throughout the Ruhr Valley. The overlap between Harris’s strikes during the night and Eighth Air Force’s selective targeting during the day stretched enemy defenses and delayed their recovery efforts. This was particularly true when complementary bombing could be achieved on the same or related targets.

The second of Harris’ Air Battles, the “Battle of Hamburg,” began on the evening of July 24, 1943 with a strike by 791 bombers and was more suited to the night tactics of the RAF. The British introduced “window,” aluminum strips later called chaff, dropped by their pathfinder and lead crews to confuse German radar. The Germans adapted to the use of “window” in part, but British losses were lower during night raids launched on the 24th, 28th, and 29th of July and the 4th of August. Eighth Air Force launched daylight raids on precision targets within Hamburg on two days, the 25th, and 26th. During this combined assault more than half of the 8,000 tons of bombs dropped were incendiaries creating a “firestorm”. The firestorm was a terrible phenomenon, formed as fires combined to generate hurricane force winds from air sucked in by the blaze. This pushed the fires to achieve ever greater power and raised their temperatures to over 1,000 degrees Fahrenheit. Approximately 42,000 civilians are believed to have died in the fire-bombing of Hamburg. Bomber Command flew 3,095 sorties in the battle with an aerial loss of 97 bombers and 552 aircrew. Eighth Air Force flew 235 sorties and lost 17 bombers during its two missions.



Civilians gaze upon the destruction of Lindernallee, Hamburg, from the firestorm bombing campaign.



The skeletons of buildings left in Hamburg.

In August 1943, Arnold's ideas concerning the global reach of airpower spanning theaters played out in two bold strikes. The first was a dramatic effort to strike German petroleum facilities at the Ploesti oil fields in Romania. It was flown by Ninth Air Force groups reinforced by three groups of B-24 aircraft from Eighth Air Force's 2d Bomb Division. Operation TIDAL WAVE, the Ploesti raid, was the second attempt to attack this oil installation. The first had been a small attack a year earlier. That raid prompted the Germans to create one of their best and most carefully integrated air defense networks around the site of that critical industry. As a result, in this second raid the 177 bombers involved suffered over a 30% loss, with 54 aircraft failing to return. 532 airmen were lost on the raid, with perhaps one third captured or interned. Results were disappointing, and the Allies did not note any appreciable diminution of oil production.

Despite the cost of TIDAL WAVE, the number of exposed targets in southern Europe, and the conversion of Italy to an ally caused Arnold to call for more and bigger bomber bases in the Mediterranean. These could support in-theater operations and the Combined Bomber Offensive, and could raid deeper into Germany and the Balkans. In October, Arnold stood up the Fifteenth Air Force under Maj. Gen. James H. Doolittle, leader of the daring raid on Tokyo in April 1942, to reinforce the European air war from its southern bases. Mediterranean based B-24s had hit the Messerschmitt factories at Wiener Neustadt, Austria on August 13. This had originally been a target planned for JUGGLER, but differences in weather between the theaters made coordination impossible. Two German targets were selected for the British based B-17s. The idea of hitting targets in Europe from the Mediterranean had been proven. Air Chief Marshal Portal had misgivings that this would slow the BOLERO air buildup, but Arnold nevertheless created Doolittle's Mediterranean based Strategic Air Force later that year.



Bombs being dropped on the Wiener-Neustadt aircraft production facility near Vienna, Austria.

The second of Arnold's August 1943 inter-theater strikes was embedded in Operation JUGGLER, discussed above. In this mission, LeMay's 4th Wing flew from Great Britain and landed in North Africa. This practice eventually evolved into separate basing rather than recurrent shuttles between theaters, but did foster the idea of multi-theater targeting. Bombers based in the United Kingdom and the Mediterranean would be coordinated by one headquarters for strategic strikes, not simply by general directives from the Combined Chiefs. As greater numbers of bombers became available, a grand strategic view emerged greater than a single theater's needs.

Eighth Air Force began again hitting targets beyond fighter cover in response to the POINTBLANK directive in September 1943. Several B-24 Groups diverted for the Ploesti mission returned to the 2d Air Division. While targets existed in France and Belgium, German industry and the other targets central to the air strategy could only be destroyed by sustained air attacks over Germany. The August "double strike" indicated that heavy losses would be incurred on long unescorted missions. Fall and winter weather limited the bombing days over primary targets and reduced the possibilities for attackers to deceive the German defense. Radar-directed bombing and navigation aids used by the RAF for night bombing were adapted for limited visibility bombing in daylight by the Americans. Special pathfinder crews trained to lead Bomber Groups.

Intelligence, including that available through ULTRA, suggested the relative modesty of the bombers' success thus far. Perhaps 12 or 13 submarines had been delayed in production. Some docks and stores had been damaged or destroyed in key ports, and up to 5,000 motor vehicles had not been produced. Coal and steel production were decreased by about 30% for the quarter. Thousands of workers had been diverted. Based on these estimates, strategic bombing was proving important but not yet decisive. However, the buildup of bombers was only at about one quarter of the final strength planned by the fall of 1943, and to stop the bombing in the face of losses would only allow the Germans to replace the damage. Eaker and Harris pressed on with their Combined Offensive.

Eaker sought to maximize the destruction of priority targets on the directive list despite numerous challenges to his force. The priority tug of war between Eisenhower's Mediterranean forces and the European Theater had shifted back to increase support for Eaker's Eighth Air Force and BOLERO. In late September 1943 some bombers were drawn back into the Mediterranean to deal with the Salerno landings crisis in Italy, but these returned in October. However, Eaker's bomber units were plagued by a low availability rate of aircraft due to damage, crew rest, combat losses, and maintenance. Studies indicated that larger formations suffered fewer losses, which suggested increasing the numbers and sortie rates of aircraft. Operations research studies were used to improve tactics, aircraft management, and planning. German losses reported by air crews were thought to be higher than those reported by other intelligence sources due to multiple sightings by different gunners. Bombing effectiveness was graded by photo and other evidence of hits within a given area, although the actual elimination of targets was hard to assess by photography alone.

Every attempt was made to be more efficient within the command by using statistical analysis, engineering improvements of equipment, and employing tactical analysis of friendly and enemy effectiveness. The problem of bomber survivability continued to revolve around long range fighters, whether in close escort or as hunters of enemy fighters. The answer would lay in two things, improved drop tanks and a new long-range fighter, the P-51 Mustang. This fighter had already been given in small numbers to the RAF as a close air support aircraft, but it was not effective as a long-range escort until a better engine was installed and it arrived in greater numbers.

Not pausing to give the Germans precious recovery time, Eaker pressed his attacks. German defenders had accustomed themselves to the Allied use of chaff, and night losses increased over large industrial targets. Eaker was also pressed to hit V-rocket sites for the first time, following a large British raid on the development plant for these German missiles at Peenemunde on the Baltic coast. Eighth Air Force targets were the launch sites for the V-1 rockets on the northern French and Belgian coasts.

Weather often determined the success or failure of bomber operations. Foul weather won out on September 9th when the Eighth Air Force launched its largest raid to date with 407 bombers. None reached the target city of Stuttgart, and only half succeeded in attacking alternate targets of opportunity after being ordered to turn back. At month's end, the Eighth flew its first "blind bombing" mission using the British developed H2S navigation system. It bombed through heavy clouds over Emden under the control of two specially equipped B-17 bombers. This was a departure from the precision bombing tactics preferred by U.S. bombers, a forced adoption of area bombing due to bad weather. Large numbers of incendiary bombs were used. P-47 Thunderbolts using newly designed belly tanks escorted the bombers all the way to a German target for the first time.

October 1943 proved to be a particularly consequential month. Bomber Command launched nine deep raids into Germany at night, hitting Kassel with a particularly deadly firestorm. The Northwest African Allied Air Forces launched heavy bombers into Germany and northern Italy, pioneering heavy bombing from the Mediterranean. Eighth Air Force matched these sorties in intensity. It hit seven targets in Germany.

The most important raid was against the ball bearing plant at Schweinfurt on October 14th. This became known as the "Black Thursday" raid because the Eighth Air Force lost sixty bombers, fifty-nine over the continent and one in the channel. Another five went down in England. Bomber crew loss was put at 642. The actual German air losses were thirty-one fighters shot down and twelve damaged beyond repair. Another thirty-four were damaged but reparable. American gunners and fighters claimed to have destroyed 186 aircraft. Their over-reporting resulted from a melee that was frantic and impossible to isolate into separate fights given the multiple viewpoints. The Schweinfurt plant was damaged but not destroyed, and the mission's value was diminished by a large reserve of ball bearings in German inventories. The subsequent dispersal of the German ball bearing industry prevented a



8th Air Force B-17 bombers target the ball bearing factories in Schweinfurt, Germany.

decisive restrike of the target. The Germans won this phase of the race to disperse a critical industry before the Allied air forces could destroy the key nodes in that industry.

Dispersal and dislocation made the attrition of any industry through air attacks difficult. Orchestrating numerous mutually reinforcing attacks against similar targets would be necessary to cause the collapse of key pieces of the economic system. Early air power theorists had believed attacks on a few key targets would cause economic collapse. The German economy and its captured satellite industries proved far too complex and robust for such a simple concept to work. Harris's belief in making large German industrial cities virtually unlivable, and hence unproductive, was based on an attrition model. This model for the bombing campaign became more broadly accepted in the latter part of 1943.

As the Ninth Air Force established its headquarters in the United Kingdom in October 1943, the first P-51 Mustangs and longer ranged P-38 Lightning fighters arrived. Initially American airmen, reinforced by testimony from RAF pilots, believed that a strategic-ranged single engine fighter would not be able to perform adequately against a shorter ranged but more agile interceptor fighter. The development of the long-ranged fighter escort, once started, centered on developing such capabilities in the P-51. It became one of the outstanding aircraft of the war, capable of competing with any German fighters while reaching as far as Berlin.

The bomber offensive in the European theater moved forward in November 1943 with the establishment of a second strategic air force, the Fifteenth, headquartered in Foggia, Italy. While stationed in the Mediterranean Theater, many of its missions would be flown against northern European targets. These missions helped divide German fighter defenses while opening the industries of southern Germany, northern Italy, the Balkans, and Austria to increased strategic attack. Mediterranean bases in the fall and winter enjoyed more favorable bombing weather than those in the United Kingdom. Within a 700-mile radius of its headquarters twelve enemy occupied countries contained lucrative targets, including facilities producing nearly twelve million tons of fuel oil annually. The Fifteenth Air Force brought to fruition Arnold's ideas concerning a "Theater Air Force" although it was still subject to Mediterranean Theater requirements in addition to the Combined Bomber offensive.

The Fifteenth Air Force was initially formed by taking the six bomber groups of the Twelfth Air Force. The Twelfth was then redesignated as a tactical air force. Later reinforcements would bring the Fifteenth to a full strength of twenty-one bomber groups. It initially was commanded by Maj. Gen. James H. Doolittle. Its early missions included ball bearing industry attacks in northern Italy and southern France.

Eighth Air Force conducted its first 500 bomber strike on November 3, 1943, attacking the German naval base at Wilhemshaven. It used the American developed H2X variant of the British night radar, the H2S. Bomber Command's sole mission to the Ruhr that month was on the same day, to Dusseldorf. After standing down for more than a week, Harris began the third of his "Air Battles," his "Battle of Berlin," with the first of 15 attacks that stretched over the next three months. While Harris also hit chemical targets and other cities, Berlin remained his principal target during this period. However, the 5% bomber loss rate per mission to his force bordered on unsustainable.

Eighth Air Force launched eight major raids during November 1943, six into Germany and two into Norway. The Norwegian strikes hit German heavy water plants supporting the development of suspected German nuclear projects. Some of the German strikes required bombing through the clouds against area targets featuring a heavy use of incendiary bombs. November's raids reached a 4% loss rate per mission. Eaker deliberately did not challenge the *Luftwaffe* deep in Germany that month. The Eighth's losses in October had been heavy and the force needed time to build. It was also awaiting the arrival of more groups of P-38s and P-51s for long-range escort.

Ninth Air Force began transferring its headquarters from the Middle East to the U.K. in October 1943 as part of the BOLERO buildup. It absorbed the Eighth Air Force Support Command of medium bombers and began to receive additional fighter bombers and transport aircraft for its IX Troop Carrier Command. Three B-24 Groups originally loaned to the Mediterranean were returned to the 2d Air Division, which controlled the B-24 Groups in the Eighth Air Force. The newly organized, 1st, 3d, 4th, and 5th Bombardment Divisions were equipped with B-17 bombers. The Bomber Divisions controlled the Bomber Wings, which were considered tactical organizations for mission planning and leadership.

General Arnold wanted Lt. Gen. Carl Spaatz to control the strategic bombers, a contradiction to the CCS agreement that envisioned Air Chief Marshal Portal as the executive authority for the Combined Bomber Offensive. The CCS did not accept Arnold's idea of designating a single commander and left the major components under national command. Arnold decided to create a separate American headquarters for strategic bombing at the first opportunity. This came at the end of 1943 with the naming of General Eisenhower as Supreme Commander Allied Forces Europe. Eisenhower named Lt. Gen. Carl Spaatz as Commander, United States Strategic Air Forces, an operational headquarters that stood astride both the European and Mediterranean Theaters. This put Spaatz in command of the Eighth and Fifteen Air Forces, as well as giving him administrative control of the United States Army Air Forces, Europe. Spaatz became the American theater commander for air and, as Arnold always wanted, Eisenhower's prime airman. His headquarters became fully operational on February 22, 1944.



In December 1943, Eighth Air Force conducted its last missions under General Eaker. Missions were flown to Bremen, Hamburg and Kiel. Maj. Gen. Doolittle was named as Commanding General of the Eighth Air Force to replace Eaker. Eaker was promoted to Lt. Gen. and transferred to the new combined command, the Mediterranean Allied Air Forces. With twenty-six bomb groups and long-range escorts arriving, Doolittle initiated tactics Eaker could not have risked. Brig. Gen. Hunter had been replaced at the end of August by Brig. Gen. William Kepner, whose new directive from Doolittle was to let loose the fighters to attack German fighters at will. One hundred seventy-one heavy bomber missions had been flown under Eaker's command. Each had been a massive "Battle in the Sky," and his contribution had been significant. He had forged the weapon. Arnold now had a fresh team in the Eighth Air Force to aggressively take the battle to the next level. He also had a big job for Eaker, who was to coordinate the entire southern prong of the air campaign.



Cambridge American Cemetery



The Cambridge American Cemetery site in England, 30.5 acres in total, was donated by the University of Cambridge. It lies on a slope with the west and south sides framed by woodland. The cemetery contains the remains of 3,811 of our war dead; 5,127 names are recorded on the Walls of the Missing. Rosettes mark the names of those since recovered and identified. Most died in the Battle of the Atlantic or in the strategic air bombardment of northwest Europe.

From the flagpole platform near the main entrance, the great mall with its reflecting pools stretches eastward. It is from the mall that the wide, sweeping curve of the burial area across the lawn is best appreciated. Along the south side are the Walls of the Missing, and at the far end is the memorial with a chapel, two huge military maps, stained glass windows bearing the state seals and military decorations, and a mosaic ceiling memorial honoring the dead of our air forces.

A new, 4,000-square-foot center visitor center opened in May 2014. Through interpretive exhibits that incorporate personal stories, photographs, films, and interactive displays, visitors will gain a better understanding of this critical campaign that contributed to the Allied victory in Europe during World War II. Download the free Cambridge American Cemetery smartphone app for suggested tours of the cemetery, maps, history, and other important details about the site.

History

The demands of World War II called again upon American youth to defend the liberties of free peoples. Young Americans lost their lives long before Pearl Harbor, as merchant seaman rallied to the British cause in the Battle of the Atlantic and American Eagle Squadrons joined the Royal Air Force in the skies above Britain.

Once the United States entered the war in December 1941, air, ground, and naval forces streamed into Britain. The Eighth Air Force made Britain its home, striking enemy targets in Europe from August 1942 to May 1945. More than 220,000 Americans were stationed here until 75 percent were sent to battle in North Africa, starting in November 1942. Campaigns to liberate North Africa, Sicily, and Italy governed troop commitments over the next year.

The mid-1943 decision to launch the cross-Channel invasion at Normandy in 1944 renewed the buildup in Britain—the “Friendly Invasion.” By June 6, 1944, 1.6 million Americans lived here. Within three months of D-Day, 1.2 million had surged into battle on the continent.

The U.S. commitment to liberty and democracy brought more than 3 million Americans to the British Isles in World War II. Separated by a common language, we learned about each other. Relationships built then remain strong in the 21st Century. Cambridge American Cemetery became a symbol of our nation’s sacrifice and a sacred meeting place to recall our mutual past.

The Air War by the End of 1943

Newspapers and magazines glamorized the air war right from the start as the first American air units arrived in the United Kingdom beginning in 1942. They built on the fame of the famous “few” in the RAF who had prevented invasion during the Battle of Britain, fought the Germans in the “Blitz,” and now flew daytime raids across the channel in bomber and fighter sweeps called “Rhubarbs.” The nighttime raiders of the Royal Air Force hit Germany in its largest cities, first with aircraft flown singly at various altitudes and then in “bomber streams,” conducting mass area bombing of enemy industrial areas. These hit factories and infrastructure and destroyed workers’ houses. America’s airmen, General Arnold promised, would do even better.

Daylight precision bombing called for specialized organization and equipment, and for a new type of warrior. The Army Air Forces, carved out of the prewar organization of the Army and using the Air Corps as its basic flying component, created the skills needed to grow into a near independent arm. This required not only flying and servicing aircraft, but also supporting a fully operational service component. Sixteen numbered Air Forces were created, with two assigned to the European Theater of Operations and two to the Mediterranean Theater. The latter often flew against targets in southern Europe. First to arrive in the United Kingdom was the Eighth Air Force.

Eighth Air Force bore the weight of proving the concept of daylight strategic bombing in Europe. The public viewed the Boeing B-17 Flying Fortress bomber as the embodiment of its campaign. Eighth Air Force had approximately 1,400 B-17s in its forty-one bomber groups. Serving along with these was the less photogenic, but equally deadly, B-24 Liberator. The B-24’s greater range and speed gave it different operational capabilities. When sufficient numbers were achieved, the B-24 equipped 2d Air Division sometimes flew missions independent of the B-17s. Both aircraft were accompanied into battle by P-47 Thunderbolts, and later by P-51 Mustangs and P-38 Lightning fighter aircraft.

The Eighth Force initiated the American air offensive in Europe and fought the lion’s share of its battles. It created the tactics, techniques, and tempo of the daylight strategic air war for the Americans. Maj. Gen. Eaker was the initial architect of these operations. Maj. Gen Doolittle later took over, launched larger missions, and released his fighters from close escort. He had longer ranged and more numerous aircraft and was far more able to sustain losses. Eaker pioneered the bomber war but the widely experienced Doolittle refined its execution.

The Ninth Air Force was reinforced by the medium bombers originally assigned to the Eighth after the Ninth transferred to the United Kingdom from duty in the Middle East. It had begun as part of the British Desert Air Force. It had flown the famous Ploesti oil mission in August 1943. The Ninth was a

Tactical Air Force. Its commander, Lt. Gen. Lewis H. Brereton, had begun the war in the Philippines with MacArthur. He had served in India, Burma, the Middle East, and the Mediterranean. When assigned to the European theater, he could claim to be the most combat experienced air general in the Army Air Forces.

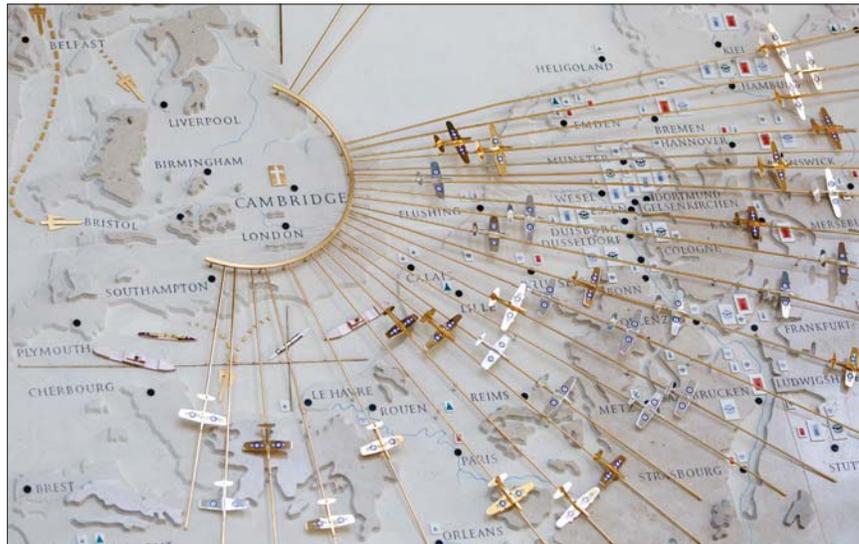
High altitude warfare placed great strain on air crews. The biological and psychological demands of long missions in sub-freezing, unheated, unpressurized bombers, required specialized equipment. It also mandated a systematic pattern of crew rest and physical observation, specialized training for key crew members, and the continued development of tactics and group training to meet *Luftwaffe* countermeasures and defenses. Allied airmen developed advanced navigation aids, blind bombing techniques, additional techniques for lead crews, pathfinder crews, advanced fighter sweeps, strafing attacks on German fighter fields, chaff, radio jamming against German air defenses, and real time interpretation of German fighter direction instructions to guide Allied fighters. All of this became part of a dynamic war that changed constantly despite its outward appearance of repetitiveness. Operations research analysis played a key role in the management of this large force and also in sharpening its combat skills.



American air crews listen during an operations briefing in England before a sortie.

Heavy losses on such major missions as the attacks on Schweinfurt, Regensburg, Ploesti, or Berlin greatly strained group morale. So did the constant attrition from dozens of more routine missions into Germany. Crew survivability and morale was a matter of great discussion. The twenty-five mission limit was believed to provide a 50 percent chance of survival. Later, as escorts and better planes improved the odds, thirty-five missions became the standard combat tour for heavy bomber crews. Actual survivability is harder to figure, as many downed aircraft crewmen survived as prisoners of war. By war's end, the air war in the European, African and Middle Eastern campaigns, which often overlapped theater boundaries in missions flown, cost 94,565 casualties, of which 30,099 were killed and 51,106 were reported as missing.

The most dramatic difference in the air war by the end of 1943 would be caused by the introduction of the long-range fighter. Capable fighters not only escorted bomber formations, they also hunted the *Luftwaffe* in its own skies. A great mistake made by the Germans in the Battle of Britain and by the Eighth Air Force in its early days, had been to dispatch bombers insufficiently covered by fighters. The arrival of the P-38 Lightning, later models of the P-47D Thunderbolt with larger drop tanks, and the P-51B Mustang in large numbers meant that fighters could fly all the way to the deepest targets and return. The quality of *Luftwaffe* pilots diminished as their losses increased and oil shortages reduced their flying hours when training. Vast numbers of American pilots arrived with better training and combat proven leaders to initiate them into combat. German fighter losses continued to rise, even though American losses due to flak and ubiquitous combat strain would always be present.



Interior detail of the memorial at the Cambridge American Cemetery shows the depth of Allied aircraft sorties flown from England against the Axis powers.

Formations evolved from the earliest groups of two Squadrons of nine aircraft flown in the fall of 1942 against the U-Boat pens. Leaders such as the Col. Curtis E. LeMay developed the famous bomber-box of three staggered squadrons of up to twelve aircraft each. This could fly as a “Javelin” of boxes two minutes apart or as a wing of several groups. By the end of 1943 these evolved into a division of twelve Groups flying in thirty-six aircraft bomber boxes each two minutes apart in the case of B-17s. The Eighth Air Force’s B-24 division, the 2d Division, flew twenty-seven aircraft boxes two minutes apart. These formations were considered to be self-defending, although easily escorted, and gave good bomb patterns if following an effective lead bombardier. They provided for maximum group control and the fastest passage through flak areas. The Fifteenth Air Force in Italy, whose force had the opposite ratio of B-24s to B-17s than the Eighth since its targets were generally further away, used the same formations.

The air campaign in Europe was in its infancy when American airmen arrived in early 1942 with few leaders and even fewer planes. Through technical and tactical ingenuity, trial and error, inspired leadership, and sheer heroic persistence, the air arm in that critical theater of war transitioned into a formidable and deadly force. It rained death and destruction upon German industry, military assets, and cities, and for a while, it was the only strategic force capable of hitting deep into the German heartland. The cost was heavy, but the now vast numbers of Allied bombers and fighters and their crews stood ready by the end of 1943 to deliver ever more decisive blows against the Third Reich.



North Africa: June 1942 – May 1943

Operation BOLERO, the long-term build-up of men and materiel in the United Kingdom for the invasion of northern Europe, was considered by many as the key to defeating Germany. American strategists focused on attempting such an invasion, possibly as early as 1942 but more likely in 1943 and considered every attempt by their British allies to involve U.S. forces in other theaters to be distractions. However, the dangerous British situation in North Africa in late 1941 and 1942 recurrently required compromises to the flow of forces to the United Kingdom and soon forced the Americans to engage decisively in that theater.

The British had been fighting the Germans and Italians in the western desert of Egypt and Libya since 1940. They had dealt handily with the Italian offensive launched from their colony in Libya in 1940, sending the poorly led and equipped Italians reeling back to their starting positions. Counterattacking, the British pursued the Italians deep into Libya, threatening Italy's hold on its colony. Faced with Italian defeat, Hitler intervened on behalf of his fellow dictator Mussolini and sent General, later Field Marshal, Erwin Rommel with his *Africa Korps* to retrieve the situation. Rommel accomplished this in a dramatic fashion, halting the British advance and then pushing it back almost to Alexandria in Egypt. Faced with the possibility of a catastrophic British defeat and the loss of the Suez Canal, President Roosevelt approved American support to the British, even at the cost of slowing the pace of the BOLERO build-up in the United Kingdom.



General Erwin Rommel (standing, left) with the 15th Panzer Division between Tobruk and Sidi Omar.

American support, primarily in terms of logistical assistance and air support, was slow to arrive in North Africa. This was mainly because of extensive worldwide calls upon U.S. assets in the first year of America's official engagement in the war. With German armies paused just short of Moscow and Japanese forces triumphant nearly everywhere in the Pacific, the United States was hard-pressed. From China to Russia, the Allies cried out for additional U.S. heavy bombers, tanks, trucks, artillery, and troops. Yet even with years of advance warning and the rapid build-up of American industry to provide Britain with materiel under the Lend-Lease program, there simply was not enough to go around. The United States could only provide limited support to China, the Soviet Union and Britain to keep them in the war while it built-up its own neglected military and expanded its industrial might. Politically, President Roosevelt also had to keep an eye on public opinion and the forthcoming November elections. He understood the political cost if he was perceived as starving "our boys" of vital equipment or air support which might increase U.S. casualties while helping its desperate Allies.

In response to British needs, in January 1942 the U.S. Army Air Forces (USAAF) began planning a buildup of American air power in the Middle East. It soon became apparent that it would take time for American air support to reach the theater. The British pushed for U.S. bombers to be transferred directly to them and offered to provide the pilots and crews. That meant that the build-up of American air force units would necessarily be slowed. Conversely, the greater the number of American units which were created, organized, and sent to the Middle East, the fewer the aircraft that would be immediately available for the RAF. The British certainly wanted American units but desperately needed the planes -- sooner rather than later given their fears that Rommel might overrun Egypt. The Americans promised to provide substantial numbers of American air units by October 1942, but the British feared that would be too late. Other solutions were needed.

A major American goal in the Pacific Theater of providing increased bomber support to China inadvertently led to early support to the British in the Middle East. A special group of B-24s, originally destined for China, was diverted to the Middle East in early June 1942. The AAF had created a special detachment of twenty-three B-24D Liberator heavy bombers commanded by Col. Harry A. Halverson to fly to China to provide bombing support to Chiang Kai-shek's Nationalists, operating out of forward air bases to bomb Japan. However, by the time the detachment was ready to deploy the Japanese had cut the main resupply road into China, the famous Burma Road. This made the logistical support of any such effort problematic. The U.S. diverted Halverson's detachment to Africa. Initially based in Khartoum in the Sudan, the bombers soon moved to Egypt to launch a surprise raid on June 11-12 against German oil refineries at Ploesti in Rumania, the first of many such operations. Although the raid inflicted little damage, it was a psychological victory. The unit then turned to providing the British air support for their own operations. The bombers stayed in Egypt and began flying missions against German and Italian targets.



A B-24 Liberator bomber flies above Ploesti Rumania during the bombing mission.

At about the time of the Ploesti Raid, General Marshall created a new headquarters to coordinate the U.S. support to the British in the Middle East: U.S. Army Forces in the Middle East (USAFIME). This unit would orchestrate the flow of American supplies, especially the tanks and air support desperately needed by General Bernard Montgomery's Eighth Army. It would also control the Iranian Mission that would transport huge quantities of supplies to the beleaguered Soviet Union through that country in what was to be called the "Persian Corridor."

In addition to air support, the United States began sending large quantities of vital war material to the British in Egypt, often materiel that it desperately needed itself. Despite the risks, Roosevelt and Marshall knew that it was critical to prevent British defeat in the region and often overrode the objections of U.S. commanders to keep the supplies flowing. The Americans provided the British some of the Army's latest equipment, including 300 M4 Sherman tanks and 100



Crew of M-3 Tank #309490, Co. D, 2d Bn., 12th Armored Regiment, 1st Armored Division at Souk el Arba, Tunisia.

self-propelled 105-mm artillery pieces. Since the equipment was so new, the U.S. also sent along a 150-man maintenance unit. The Sherman, with its 75-mm gun mounted on a fully rotating turret, was a much superior tank to the Lend-Lease provided M3 Lee (nicknamed the Grant when in British service) with a sponson (projected from the side) mounted main gun with limited traverse. The Sherman gave the British a tank equal or superior to the majority of German *panzers* facing the Eighth Army. The tanks, artillery, and support troops would not actually arrive in Egypt until early September, barely in time to participate in the key battles near El Alamein. However, they became a critical component of that victory and were an important symbol of growing U.S. materiel support.

Despite the needs of other theaters, American air assets continued to deploy to the Middle East to support the British. The 98th Bombardment Group (Heavy) arrived in mid-August followed by the 12th Bombardment Group (Medium) and the 57th Fighter Group. Very quickly the American airmen and the RAF established a close working relationship. British trainers worked smoothly to introduce U.S. pilots and crews to British procedures in order to create near-seamless air cooperation. U.S. bombers and fighters were soon operating against Italian naval units attempting to supply German and Italian forces in North Africa and dropping bombs in close support of British ground operations. The AAF learned a great deal about modern air support from their experienced British counterparts; knowledge that would prove invaluable in later campaigns supporting American infantry and tanks in Tunisia, France, and Germany.

As the theater matured and British lines stabilized, the American command structure continued to evolve. In October, HQ, U.S. Army Middle Eastern Air Force (USAMEAF) established the IX Bomber Command to coordinate all the heavy bombers in the theater, eventually obtaining operational support of all U.S. and British bombers. The next month, Lt. Gen. Frank M. Andrews, the new head of USAFIME, created the Ninth Air Force to replace USAMEAF. Under it he placed the IX Air Service Command, IX Bomber Command, and IX Fighter Commander.

The success of the British Eighth Army at El Alamein in battles from July through November 1942 reduced American fears that the British would be driven out of Egypt, but the Germans and the Italians still held strong positions in Libya. In addition, the pro-German forces of Vichy France held sway over Tunisia, Algeria, and French Morocco, potentially compromising Allied supply lines to the Middle East through the Mediterranean. Seeing an opportunity to secure the Mediterranean and its vital sea routes and hoping to topple one of the Axis powers (Italy) while neutralizing an Axis puppet regime (Vichy France), Churchill proposed to Roosevelt an Anglo-British invasion through French Morocco and Algeria.

American strategists were leery of attempts by the British to involve them more deeply in the Mediterranean. Focused on the build-up in Britain for the eventual decisive thrust into northern France and Germany, U.S. planners aspired to keep that operation on schedule. While reluctantly providing some air and supply assets to the British in Egypt, the American military pushed for an early invasion of northern France. They saw Churchill's proposal as an unnecessary diversion, an attempt to push forces into the putative "soft underbelly" of southern Europe, and perhaps even a cynical ploy to engage U.S. forces in support of British imperial plans and schemes.

President Roosevelt, however, had built up a strong rapport with Churchill and was sympathetic to British needs in the Mediterranean. He also faced a very real dilemma of his own. By late 1942, America had been at war for nearly a year. The bombing campaign from the United Kingdom was just getting underway. There had been serious reverses in the Pacific including the loss of the Philippines, only partially redeemed by the American naval victory at Midway and the still uncertain land operations on Guadalcanal and New Guinea. While still in favor of the "Germany First" strategy, President Roosevelt felt pressure from his Admirals and Generals in the Pacific and from the American public to send more forces to that theater, where America had been directly attacked. This pressure was especially strong since no major U.S. ground forces were yet engaged anywhere in Europe. With no prospect of a successful invasion of the continent in 1942, Roosevelt saw it as imperative to engage the Germans on the ground somewhere that year. That meant North Africa. He agreed to move forward on Operation TORCH.

Pre-Torch Negotiations with the French



American plans for Operation TORCH, the Allied invasion of French North Africa, were far advanced in late 1942 even though all diplomatic attempts to gain French cooperation or even non-resistance to the invasion had failed. The Vichy government of Marshal Petain maintained an uneasy relationship with Nazi Germany after the fall of France in 1940, but also retained a measure of internal autonomy in the southern half of France and in its colonies. Petain feared that any hint of acquiescence to an Allied invasion of Algeria and Morocco would jeopardize that situation.

In October, the War Department in Washington D.C. informed Lt. Gen. Dwight Eisenhower, Allied commander for TORCH, that there was a chance to bring the French partially on board. American Ambassador Robert D. Murphy, the American consul in Algiers, requested that Eisenhower send a high-level representative to Algeria to meet secretly with a group of pro-Allied French generals

to work out a possible surrender of the French military as soon as the Allies stormed ashore. It was a risky venture but too good a chance to pass up.

The Allied plan was to get this group of pro-Allied French officers to support a senior French officer, General Henri Giraud, who had just escaped from a German POW camp. They were to acknowledge him as the commander of all French military forces in North Africa. The French units could then follow his orders and surrender with their honor intact.

General Eisenhower sent his deputy, Maj. Gen. Mark W. Clark, his chief planner for TORCH Brig. Gen. Lyman Lemnitzer, along with logistics, naval, and civil affairs representatives to Algeria to meet secretly with General Charles E. Mast, military commander of Algiers. After midnight on October 21st, the British submarine H.M.S. Seraph surfaced off the coast about 80 miles west of Algiers with the secret delegation. At great personal risk, both from the hazardous seas and from the possibility of betrayal, General Clark and his party paddled ashore in collapsible boats where they met for several days with General Mast and Ambassador Murphy at a secluded villa. It quickly became apparent that the French navy, still smarting from the British attack on the French fleet at Mers-el-Kebir two years before, would oppose any Allied landing. However, the French army and air force supported the landings. Clark believed he had arranged for a quick surrender when the Allies attacked and for the acceptance of General Giraud as the French commander.

General Giraud, however, had less influence than he thought he had and Allied hopes that he would sway his fellow officers proved illusory. Picked up in Toulon on November 5th by H.M.S. Seraph, temporarily re-flagged as an American submarine with an American captain in deference to the anti-British sentiments of General Giraud, the French general was transported to Gibraltar and then, on November 9th, to Algiers. His attempts, with Allied support, to take command of all French forces in North Africa failed and his radio broadcasts to secure the surrender of French units fell on deaf ears. The Allies quickly turned to the real authority in North Africa, Vichy Admiral Francois Darlan, and made their deals with him despite the objections of Free French leader Charles de Gaulle. A cease-fire was achieved on November 10th. Building on his relationships with the French military, Maj. Gen. Clark continued his negotiations with Darlan and other former Vichy officials in Algeria. He sought to gain their full entry into the alliance and to have them take up arms against the Germans.

Planning for TORCH

The August 13th directive setting the strategic goals for Operation Torch, prepared by the designated commander of the operation Lt. Gen. Dwight D. Eisenhower, was nothing short of ambitious. Landings in Morocco and Algeria were to establish firm lodgments and seize bases. These would be used to eventually gain complete control of northern Africa from the Atlantic Ocean to the Red Sea. Allied landings in northwest Africa would pose an immediate threat to German forces in Libya and Egypt facing the British Eighth Army and would either force their retreat or cut them off and capture them. Using bases in northern Africa as a springboard, the Allies could conduct bombing operations against the Italians and Germans while keeping a watchful eye on fascist Spain, still sitting out the war. The strategic goal would be the “complete annihilation of Axis forces now opposing the British forces in the Western Desert and intensification of air and sea operations against the Axis on the European Continent.”

The operational plan for the invasion was remarkably ambitious in terms of the sheer distances involved. There were to be three major landings: at Casablanca in French Morocco (Western Task Force) and at Oran (Center Task Force) and Algiers (Eastern Task Force) in Algeria. The proposed landings at Casablanca in the west were separated from those at Oran and Algiers by nearly 1,000 miles. The Casablanca operation would be conducted by forces that came directly from the United States by sea, complicating the planning for the landings. Plans were further complicated by the necessity that the British provide the majority of naval forces along with a great many ground units. U.S. and British forces had not worked extensively together and had not developed all the mechanisms for coordination necessary for successful modern combat operations. This led to misunderstandings as the British and American forces learned to work together in combat.

Given French hostility to the British after the British attack on the French navy at Mers-el-Kebir in July 1940, the nominal commands were primarily given an American character in an attempt to defuse French resistance. Maj. Gen. George S. Patton, Jr., was selected to lead the Western Task Force into Morocco; Maj. Gen. Lloyd R. Fredendall would lead the Center Task Force into Oran; and British Lt. Gen. Kenneth A. N. Anderson would lead the Eastern Task Force into Algiers. American Maj. Gen. Charles W. Ryder, commanding general of the 34th Infantry Division, the “Red Bulls”, was selected to lead the initial landing force at Algiers that would first come in contact with the French. Naval support would be coordinated through the Royal Navy. Land-based air support would come from two commands, one British and one American. The American air component would be commanded by Brig. Gen. James H. Doolittle, already famous after his daring raid on Tokyo in April. General Eisenhower hoped to make these landings in late October, but as time and planning advanced D-day was set for November 8th.



Major General George S. Patton, Jr., Commanding General, Western Task Force, (left); and Rear Adm. H. Kent Hewitt, Commander Western Naval Task Force, (center) share a light moment on board USS Augusta, off Morocco during the Operation Torch landings.

Western Task Force

After studying maps and intelligence reports, General Patton and TORCH planners for the Western Task Force formulated a concept of operations for their landing. Rather than assaulting Casablanca directly, where an estimated 5,000 French troops were stationed with another 45-55,000 nearby in the rest of French Morocco, Patton decided to come ashore at three detached sites. Preceded by several battalion landing teams (BLTs, task-organized mixtures of infantry and armor), Patton's armored force would land at the port of Safi, 140 miles south of the city. Other landing teams would come ashore at Mehdia, 80 miles north of Casablanca, to capture the two airfields in the area. Most of Patton's infantry would land at Fedala, twelve miles north of Casablanca. Moving inland, the troops would swing around to the east side of Casablanca and, in conjunction with the armored force landing in the south, air support from the north, and naval gunfire offshore, advance westward on the city.

To accomplish its mission, Western Task Force would have 2 infantry divisions, 1 armored division, 2 separate tank battalions, and sufficient support units to maintain the total force of 34,871 officers and enlisted men. Naval support would come from an American task force of 1 aircraft carrier, 4 escort carriers, 3 battleships, 7 cruisers, and 38 destroyers along with troop and cargo transports and auxiliaries. This naval force would be commanded by Rear Adm. H. Kent Hewitt. The Navy would also provide air support during the landing phase until fields ashore could be secured for Twelfth Air Force squadrons.

To take Safi, Patton selected Maj. Gen. Ernest N. Harmon, commanding general of the 2d Armored Division (Hell on Wheels). Harmon's Sub-Task Force BLACKSTONE, or Force "X", consisted of the 47th Infantry, 9th Infantry Division, "Old Reliables"; two reinforced battalions of the 67th Armored



Safi, Morocco.

Regiment, 2d Armored Division; elements of the 70th Tank Battalion (Separate); and several artillery batteries. With support units, BLACKSTONE totaled 6,428 officers and men.

The naval convoy bringing BLACKSTONE to Safi halted eight miles offshore half an hour before midnight on November 7, 1942. The debarkation of the troops and equipment was conducted in silence and the landing was not preceded by a softening-up bombardment. General Eisenhower had decided that if French forces were going to oppose TORCH—their probable reaction to the Allied invasion was still unknown—they would have to fire the first shot. They did. As the boats turned toward shore, the French began firing on the transports and U.S. Navy ships immediately returned fire.

The first waves of landing craft went ashore on beaches code-named from north to south RED, BLUE, GREEN, and YELLOW. As naval gunfire pounded French batteries, the first American troops to land in French Morocco—Company K, 47th Infantry—came ashore at 0445 on GREEN Beach. By daylight, American troops controlled all port facilities and most of the major elements of the French supply, security, and communications infrastructure. Reinforced by continuing waves of landing craft, American troops extended their beachhead inland against minor opposition. Sunrise improved the accuracy of friendly naval gunfire and by 1045 all French batteries were out of action. The toughest fight came from a fortified French barracks at Safi, headquarters of the 1,000-man garrison. American troops surrounded the barracks, then moved past it to clear the rest of the town. American artillery was emplaced around the barracks and the French garrison commander, recognizing that he was heavily outnumbered, surrendered by mid-afternoon.



U.S. troops in assault boat just prior to landing in North Africa, November 1942. Note flags worn on uniforms during this operation.

The French surrender at Safi did not, however, spread to other French forces. French air attacks on the 8th did some damage and the Americans retaliated with an attack on a nearby airfield, destroying forty planes on the ground. On the 10th, Gen. Harmon fixed local French forces in place as he rushed an armored column past them to cut off Casablanca.

A separate series of landings on the coast to the northeast near Mehdia on the 8th was conducted by Sub-Task Force GOALPOST (Force "Z") commanded by Maj. Gen. Lucien Truscott. It consisted of troops from the 60th Infantry Regiment, 9th Infantry Division; 1st Battalion of the 66th Armored Regiment, 2d Armored Division; some tanks from the 70th Tank Battalion (Separate); and seven coast artillery batteries. After numerous delays, Gen. Truscott landed his forces on five separate beaches (RED, RED 2, GREEN, BLUE, and YELLOW) near Mehdia and struck inland towards his objectives: Port-Lyautey and the Port-Lyautey and Sale airfields. The airfields would provide important bases for Allied aircraft to support follow-on operations. French opposition was heavy with French planes attacking the beach landing sites and coastal artillery firing at the transports offshore. Supporting naval gunfire was unable to suppress the French fires. By nightfall on D-Day, the American troops were holding on to their beachhead but were pinned down short of their objectives.



First U.S. Flag planted on the beachhead at Fedala, Morocco 9 November 1942.

The next day saw American light tanks blocking counterattacking French units and following up on that success by moving forward against the airfields. The 1/60th BLT (1st Battalion 60th Infantry of the 9th Infantry Division) was crippled by unidentified artillery fire landing on them. This came along with a friendly fire incident as U.S. naval aircraft dropped bombs on their own column. In the middle of the sector, the 2/60th BLT (2d Battalion, 60th Infantry) was stopped by French forces. The 3/60th (3d Battalion, 60th Infantry) was similarly stymied when it squared off against determined French Foreign Legionnaires. The situation was improved during the night of 9–10 November when the destroyer-transport *U.S.S. Dallas* pushed up the Sebou River and landed a raider detachment to the enemy's rear. This led the assault on the main airfield. At daylight on November 10th the 1/60th BLT, reinforced by tanks, attacked the airfield from the west as the raiders landed by the *Dallas* prepared to attack from the east. American troops now occupied three sides of their objective.

The Mehdia fortress continued to fire on the American beachhead with machine-guns and other small arms even after naval gunfire had silenced the larger batteries. Navy dive bombers were called in and finally the beleaguered garrison surrendered. After claiming the fort and gathering prisoners, the 2/60th BLT closed the ring around the airport. By nightfall the American victory was assured, and the French agreed to a cease-fire starting at 0400 on November 11th.

Seventy miles south of Mehdiya the largest Navy convoy in the Western Task Force landed the 3d Infantry Division (Rock of the Marne) with armor support near Fedala. Maj. Gen. Jonathan W. Anderson's Sub-Task Force BRUSHWOOD (Force "Y") consisted of three regimental landing groups (RLG), based on the 7th, 15th, and 30th Infantry Regiments, 3d Infantry Division. Other combat elements included the 1st Battalion, 67th Armored Regiment, and the 82d Reconnaissance Battalion, both from the 2d Armored Division, and the 756th Tank Battalion (Separate). Each RLG consisted of three battalion landing teams, each with engineer, artillery, air liaison, and other support detachments. With support units, Sub-Task Force BRUSHWOOD totaled 19,364 officers and men.



Landing beaches at Fedala, Morocco, on the first day of landings.

The landings were complicated by the strong French coastal batteries in the area which would have to be neutralized before the attacks could proceed. The 1/7th BLT (1st Battalion, 7th Infantry, 3d Infantry Division) was to land on BEACH RED 2; 2/7th BLT (2d Battalion, 7th Infantry, 3d Infantry Division) was to land on BEACH RED 3; 1/30th BLT (1st Battalion, 30th Infantry, 3d Infantry Division) was slated for BEACH BLUE; and 2/30th BLT (2d Battalion, 30th Infantry, 3d Infantry Division) for BEACH BLUE 2. The 3d Reconnaissance Troop was to land at BEACH YELLOW to neutralize several anti-aircraft batteries that might interfere with air support for the landings.

The objectives of the landing were to seize the town and port of Fedala and then turn south to envelop Casablanca from the landward side. To achieve this, the individual BLTs were to come ashore over four beaches along a four-mile arc of coastline bounded by two rivers, the Nefikh on the east and the Mellah on the west. Known points of opposition included five coastal and anti-aircraft batteries with guns ranging from 75-mm. to 138.6-mm. French forces totaled 2,500 troops at Fedala and 4,325 at Casablanca, only twelve miles to the south. They were supported by over fifty fighters and thirty bombers. Casablanca was of particular concern to the U.S. Navy covering force off Fedala since it harbored French naval units including cruisers, destroyers, submarines, and the uncompleted battleship *Jean Bart*, whose operational 15-inch guns could easily reach the transports at the landing beaches to the north.

Although H-hour was set for 0400 on November 8th, numerous problems beset the landings. Unexpected currents carried transports up to seven miles out of position, delaying the operation. Inexperienced boat crews and treacherous waves ensured that fewer than half the landing craft reached assembly points on time.



USS Wichita (CA-45) engaging the French battleship *Jean Bart*, off Casablanca, Morocco, on 8 November 1942.

High surf and navigational errors disoriented many boats, landing men at the wrong beaches. Some of the craft crashed against rocky bluffs, drowning troops and destroying equipment. In the first wave alone, 57 of 119 boats were lost.

The first unit ashore was the 1/7th BLT, reaching Beach RED 2 before dawn at 0500. All of the other teams landed in daylight while under fire from coastal batteries. Most landing teams encountered more trouble from high surf and inexperienced boat crews than from enemy fire. Some, such as 2/7th BLT, were strewn over two beaches, while others stepped ashore miles from assigned beaches. Rather than take time to realign, most landing teams pursued assigned missions from where they landed or devised new missions based on their new situations.

With the troops ashore the pace of operations quickened. The companies of 1/7th BLT moved inland toward Fedala and captured a surprised contingent of the 6th Senegalese Infantry Regiment along with ten even more surprised Germans. By 0600 the town was in American hands. Silencing the coastal batteries proved more difficult than capturing the town. Naval gunfire suppressed many of the batteries, but individual guns continued to strike the beachhead. The French battery at the mouth of the Nefifikh River was particularly troublesome, but an element of 2/7th BLT which landed at the wrong beach coordinated with 2/30th BLT to take it from different directions by 0730.

On the western edge of the landing area, a French battery at Cap de Fedala held out for five long hours despite naval and air bombardment. Fortuitously, Col. William H. Wilbur, returning from a dangerous drive through enemy lines to deliver a personal message from Gen. Patton to the French commander in Casablanca, took charge of the situation. Col. Wilbur took Co. A of 1/7th BLT and four tanks of the 765th Tank Battalion and personally led an assault on the battery from the land side. In twenty minutes, he and his men forced the surrender of the position. Col. Wilbur was later awarded the Medal of Honor for his dynamic leadership and heroism.



Shells from a French shore battery fall near USS AUGUSTA (CA-31) during the action off Casablanca, on 8 November 1942.

Back at the landing beaches, at 0700 a French cruiser, seven destroyers, and two submarines attacked the naval vessels guarding the beachhead. The ships were supported by French aircraft and by fire from the *Jean Bart*. U.S. Navy planes soon drove off most enemy aircraft, but the naval battle raged for over four hours. By 1130 the French ships were driven off and the *Jean Bart* temporarily silenced by American dive bombers and the 16-in. shells from the U.S.S. *Massachusetts*. The French battleship renewed its fire support on November 10th but was finally sunk in harbor by U.S. Navy bombers.

While the naval action offshore and the two battles against coastal batteries at the ends of the landing site continued, several battalion landing teams pushed inland in the middle. The rest of the 7th and 30th RLGs came ashore late in the morning of D-day, and the 15th RLG landed that afternoon. By nightfall the troops had pushed far inland but were still three miles short of their planned objective. The next morning Gen. Anderson deployed his troops in a four-battalion front and began moving south along the coast into assembly areas for the attack on Casablanca. The Americans hoped the French would not try to defend the city of 200,000 inhabitants, knowing the potential for high civilian casualties.

The movement towards Casablanca was slowed by the continuing supply problems at the beachhead. By 1700 on D-day 39 percent of the troops had landed, but only 16 percent of vehicles and 1.1 percent of supplies were ashore. Moreover, when Maj. Gen. Anderson started south, he had no land-based air support, and most of his tanks were still on the transports. Short of trucks to cover the growing distance between troops and supplies, Anderson halted his assault battalions in the afternoon six miles short of the Casablanca defensive perimeter.

Western Naval Task Force Marker

The bronze plaque, mounted on a solid block of Moroccan granite, commemorates the United States Western Task Force, which successfully made opposed assault landings at Mohammedia, Safi and Kenitra on November 8-11, 1942. This first ever trans-oceanic amphibious operation embarked from Hampton Roads, Va, and was composed of American troops transported and covered by more than 100 United States naval vessels. The landing was made near Casablanca on the Atlantic coast of French Morocco.



General Patton, concerned about the slow movement of supplies off the beachhead, personally took charge of the situation the morning of November 9th. Through a combination of forceful leadership and rapid-fire orders, he managed to get things moving forward from the beaches. He also requested a heavier flow of supplies and equipment from the transports despite continued fire from coastal guns. At 1430 the tanks of the 67th Armored Regiment finally began unloading at Fedala. By 1700 on the second day, 55 percent of BRUSHWOOD troops, 31 percent of its vehicles, and 3.3 percent of its supplies were ashore.

General Anderson's troops resumed the advance on Casablanca at midnight, November 9-10, with the 7th RLG on the right along the coast, and the 15th RLG inland. The nighttime attack worked well until the two lead battalions were hit with artillery fire near the village of Ain Sebaa. On the left, the 15th RLG detected a French position of unknown size near Tit Mellil and hesitated to advance on it in the dark.

The attack continued at first light on November 10th. Troops of the 7th RLG overran several machine-gun positions and reached the outskirts of the Casablanca. Here they were stopped by intense artillery and small-arms fire. Inland, the 15th RLG enveloped Tit Mellil and then wrapped around the landward side of Casablanca. By 1700 Anderson's battalions had encircled the French defenses on the east and south of Casablanca. When General Harmon's tanks arrived from Safi, the city would be completely surrounded. However, the day cost the Americans 36 killed and 113 wounded. Patton planned to conduct a major assault on the city the following day, but a cease-fire on the 11th halted the attack.



U.S. Army Troops go over the rail of their transport, to descend into assault craft for the Algerian Invasion, 8 November 1942.

Center Task Force

As the Western Task Force struggled to take Casablanca, the Center and Eastern Task Forces conducted their landings. On the same day that Western Task Force troops assaulted the beaches near Casablanca, Center Task Force landed one reinforced division at Oran, and Eastern Task Force put ashore two regimental and one battalion landing teams at Algiers.

The Center Task Force objective was the Algerian city of Oran. Commanded by American Maj. Gen. Lloyd R. Fredendall, the Task Force consisted of the 1st Infantry Division, the “Big Red One,” with the 1st Ranger Battalion attached and Combat Command B of the 1st Armored Division, “Old Ironsides”. Fredendall’s troops were to land at three beaches along a fifty-mile stretch of coastline: Beaches X and Y lay west of Oran, Beach Z to the east. Once ashore the troops would take roads, villages, and two airfields in the area, converge ten miles inland from Oran, and move on the city from three sides. Naval and air support would come from a British task force of 61 escort vessels, including a battleship, 3 aircraft carriers, 3 cruisers, and 13 destroyers, as well as 43 transports. A city of 200,000, Oran had formidable defenses including 13 coast artillery batteries, 16,700 troops, about 100 planes, and several destroyers.

H-hour for Center Task Force was 0100, November 8, 1942, but again the ocean currents delayed operations. The transports found that an unexpected current had pushed them farther out to sea than expected. The surprise arrival of five civilian cargo ships in the landing zone caused additional confusion. Despite these problems, all assault troops reached shore, although late and at varying distances from assigned beaches. Follow-on logistical support was also challenged by a sandbar some 360 feet offshore. Deep-draft tank lighters became hung up on the sandbar and engineer attempts at laying a pontoon bridge to the lighters ended up short of the beach. In addition, unloaded boats had to be pushed off the beach by bulldozers and this damaged their propellers and rudders. Ten of thirteen supply lighters were taken out of service within hours, further slowing the movement of equipment ashore.

Once the infantry and tanks were ashore, the Americans assembled a column of twenty tanks with support vehicles and started toward the village of Lourmel, ten miles inland. One French armored car blocked the road but surrendered shortly after being taken under fire. By noon Lourmel was in American hands. Beach X had served its purpose of receiving a sizable armored force for follow-on operations.

At Beach Y, fifteen miles west of Oran, Brig. Gen. Theodore Roosevelt's 26th Regimental Combat Team (RCT) of the 1st Infantry Division experienced similar problems. Approaching the beach, landing craft crews discovered a sandbar just offshore, but managed to find a way around it after some delay. Three French armored cars attacked the advancing troops at 0800 but were quickly destroyed. Landing at Y GREEN and Y YELLOW beaches, Roosevelt's troops quickly pushed inland and took two villages by midmorning. They were stopped, however, by enemy artillery fire from the high ground five miles behind the beaches.



U.S. Troops landing on a beach in French Morocco, November 8, 1944.

The most hazardous and ultimately unsuccessful Allied landing of the Center was Operation RESERVIST. This risky operation called for 400 men to assault directly into Oran harbor to prevent sabotage and, possibly, precipitate the surrender of the city. American troops from the 6th Armored Infantry Regiment, 1st Armored Division were transported to Oran on two British cutters, *HMS Walney* and *HMS Hartland*. Entering the harbor at 0245 on November 8th, the two ships were spotted and quickly taken under fire from alert shore batteries and naval vessels. The *Walney* was soon crippled by enemy fire. Persisting in the attack, *Hartland* tried to ram a destroyer but exposed itself to withering enemy fire which killed or wounded nearly half of the American troops and British crewmen on board. Both cutters were sunk in the harbor. Only 47 American troops eventually struggled ashore at the cost of 189 American soldiers killed and 157 wounded. The Royal Navy suffered 113 killed and 86 wounded and 12 U.S. Navy personnel aboard were also killed or wounded. The operation was a fiasco.

Another attempt to seize strategic targets by a coup de main led to the first American combat assault to be conducted by airborne forces. To assist assaults on the two airfields near Oran, the U.S. 2d Battalion, 509th Parachute Infantry Regiment under the command of Col. Edson Raff (the cocky paratroopers styled themselves “the apes of Raff”) was flown from England on November 7th. It did not go smoothly. The thirty-nine C-47s carrying the troops were nearly at the limit of their range and got scattered crossing the high mountains in the north of Spain. Bad weather and faulty communications caused six of the planes to land at Gibraltar, French Morocco, Spanish Morocco, and several points along the Algerian coast. Sixty-one paratroops from another plane were accidentally dropped in Spanish Morocco, only to be interned by the Spanish government. The thirty-two planes which reached Algeria were so low on fuel that several had to airland on dry lakes near the objectives. Only around 300 troops were actually able to parachute to the ground. Some of the troops quickly became prisoners of civil police, while the rest were too dis-organized to contribute to the fight. These pioneering paratroopers learned many valuable lessons from this operation that would contribute to future successes in Sicily, Italy, France, and Germany, but in the battle for Oran they virtually had no impact.

Beach Z, twenty miles east of Oran, received most of General Fredendall’s troops. The 16th and 18th RCTs of Maj. Gen. Terry Allen’s 1st Infantry Division, the attached 1st Ranger Battalion, and most of Combat Command B (CCB), 1st Armored Division under Brig. Gen. Lunsford E. Oliver transferred smoothly from transports to landing craft. Led by the Rangers, the 7,092 men of the 18th RCT landed unopposed between the villages of Arzew and St. Leu and quickly moved inland. The Rangers infiltrated behind two coastal batteries and took both after a brief firefight. The troops of the 18th RCT quickly seized the town of Arzew. However, as they moved toward Oran, they were stopped at the village of St. Cloud and two attempts to take the town failed.



U.S. Troops landing on the Algerian Coast, from British landing craft, in November 1942.

To the east the 5,608 troops of the 16th RCT got off to an even faster start, taking two villages ahead of schedule. By early afternoon it had overcome an Algerian unit and set-up a defensive line eight miles inland. With the beachhead secure, the armor came ashore and drove on Tafaraoui airfield, twenty-five miles inland. The tankers quickly overran the airfield and took 300 prisoners. By 1630 Twelfth Air Force Spitfires from Gibraltar were landing on the captured airfield and providing support to the ground forces. As night fell on D-day, the Americans were well established on all three beachheads and held one of two key airfields.

On November 9th the French mounted determined attacks on Maj. Gen. Allen's 16th and 26th RCTs. A strong infantry attack hit the 16th RCT at the eastern end of Beach Z, while a lesser assault slowed the 26th RCT between Beach Y and Oran. Both attacks were halted by mid-day. A more serious threat developed near Tafaraoui airfield, where French tanks attacked Oliver's armor and infantry task force that had seized the airfield. A platoon of tank destroyers provided a decisive advantage to the Americans, driving the French back with the loss of fourteen tanks. Shortly after this action, the Americans took the airfield at La Senia when the French abandoned it.

As the day wore on, French resistance concentrated at three points around Oran: St. Cloud to the east, Valmy to the south, and Misserrhin to the southwest. With American casualties mounting, Fredendall and Allen devised an expedient. Leaving some forces to hold the French in place, the 18th RCT and an armored column bypassed St. Cloud and Misserrhin in a successful night maneuver. In the morning on November 10th, Fredendall attacked Oran from three sides. By mid-morning, an American armored column had penetrated French defenses from the south and seized both the French commander's headquarters and the port. A cease-fire went into effect at 1215, followed by the surrender of all French units in Oran.



U.S. reinforcement troops landing on the Algerian Coast, from British landing craft, on 10 November 1942.

Eastern Task Force

The third leg of the Allied stool, the Eastern Task Force, went smoother than the other two. The Task Force, with its heavily British composition, dropped anchor off Algiers in the last hours of November 7th. The majority of air and naval support was provided by the British along with 23,000 of the total of 33,000 troops. The 10,000 U.S. Army troops landing at Algiers would consist of Col. Benjamin F. Caffey, Jr.'s 39th RCT from the 9th Infantry Division; and Col. John W. O'Daniel's 168th RCT and Lt. Col. Edwin T. Swenson's 3d Battalion, 135th Infantry, both from the 34th Infantry Division. In deference to French sensibilities and in the hope of mitigating their opposition to the landings, all of the American and British Army units in the initial landing were under the command of U.S. Maj. Gen. Charles W. Ryder, commander of the 34th Infantry Division. Naval support included a Royal Navy flotilla of 3 aircraft carriers, 4 cruisers, an anti-aircraft vessel, 7 destroyers, and 15 transports. French strength was estimated at 15,000 soldiers with a few obsolete tanks, 91 fighters and bombers at two airfields, and 12 coastal batteries and a few destroyers.

Both the geography and concept of operations at Algiers closely resembled those of Oran. The city lay in an arc of beaches and bluffs gradually rising to low hills ten miles inland. Allied troops were to land at three points along a fifty-mile stretch of coast: Beaches APPLES and BEER lay west of the city, Beach CHARLIE east. After clearing the beaches, the troops were to converge behind Algiers to attack the city from three sides.



U.S. Troops move inland from the Surcouf "Charlie" beaches during the landing at Algiers, on 8 November 1942. Note U.S. Flag at left. Boat on right is from USS Almaack (AK-27).

The Formation of the U.S. Army Rangers

One of the few bright spots in embattled Britain in 1941 was the record achieved by “independent companies” of elite soldiers, later styled commando units, who raided into occupied Europe. Although they seldom achieved strategic results and often suffered heavy casualties when their raids were discovered prematurely, the British public loved the idea of a few brave men striking back against the Germans



even as their backs were against the wall. When the U.S. Army began to arrive in the British Isles in early 1942, some American commanders were inspired to emulate their new allies and create a special, commando-like unit of their own.

The term “commando” had its origins in the Dutch colony of South Africa when militia units were organized and called up, or “on commando”, for short term military action. In the Boer war, the descendants of those Dutch settlers, the Boers, created small raiding units and called them “commandos.” The term was later adopted by the British and commando companies were soon placed underneath the Combined Operations Headquarters (COHQ), commanded for a time by Lord Louis Mountbatten, a close relative of the royal family. Among their more successful operations, the British commandos seized German radar equipment at Bruneval on the coast of France and conducted a daring operation that rammed an obsolete destroyer into the heavily defended docks at St. Nazaire, putting them out of action.

Anxious to create similar units, then Col. Lucien Truscott, the U.S. liaison to COHQ, worked to create an elite force of infantrymen to conduct raids and special operations behind enemy lines. Drawing upon the American military tradition of Roger’s Rangers from the French and Indian Wars, Truscott styled the new unit the 1st Ranger Battalion. He selected Capt. William O. Darby, an artillery officer who was then aide de camp to Maj. Gen. Russell P. Hartle, commander of the 34th Infantry Division, as the first commander of what became known as Darby’s Rangers. The battalion was activated at Carrickfergus, Northern Ireland on June 19, 1942.

Drawing upon volunteers from the 34th Infantry (Red Bull) and 1st Armored Divisions, units which had arrived in Northern Ireland in early 1942 as the first of many U.S. units to deploy as part of Operation BOLERO, Darby built his unit using the British commandos as a model. He organized a headquarters company and six line companies of 67 men each. The Rangers were configured for amphibious light-infantry operations and thus initially lacked organic transport or artillery. The volunteers went through tough physical training in northern Scotland, which had also been the training ground for British commandos. They were trained in small unit tactics, weapons, hand to hand combat, patrolling, and night operations. During the training, a small group of 50 Rangers accompanied British commandos and some Canadian units on the Dieppe Raid on 19 August into France. The raid was a disaster, with 3,400 of the 5,000 men taking part being casualties or captured. The raid was a baptism of fire for some of the Rangers. With additional training they were deemed ready for their first missions as a battalion in Operation Torch in November 1942.



U.S. Troops landing on the Surcouf "Charlie" beaches near Algiers, on 8 November 1942.

Landings in the Algiers area were generally successful. The British 11th Infantry Brigade Group landed at Beach APPLES on schedule with no mishaps. By 0700 the unit had moved twelve miles inland and taken its objective, Blida airfield. At Beach BEER, high surf, boat crew inexperience, absent beach guides, and engine failures scattered the 168th RCT over fifteen miles of coastline. Fortunately, landings at both APPLES and BEER were unopposed. At the third landing at Beach CHARLIE, however, coastal batteries fired on transports as the landing craft neared shore. High waves scattered the 39th RCT, smashing some boats against coastal rocks. Despite these problems, most of the troops of the 39th were able to land and move eight miles inland to take the airfield at Maison Blanche by 0830.

As at Oran, the British attempted a daring antisabotage mission by charging into the heart of the harbor. Operation TERMINAL called for Lt. Col. Edwin T. Swenson's 3d Battalion, 135th Infantry, 34th Infantry Division, to sail directly into Algiers harbor on two Royal Navy destroyers, *HMS Broke* and *HMS Malcolm*. Counting on the element of surprise, they were to seize the port facilities intact for future Allied operations. However, as the two ships moved into the bay at 0140 on D-day, they were discovered by alert French naval units. Hostile fire drove *HMS Broke* back to sea in flames with thirty-five casualties. Ignoring its sister ship's fate, *HMS Malcolm* ran through the intense fire, tied up along a breakwater, and debarked Swenson and half of his battalion. By 0800 the troops had secured several objectives and seemed on the verge of success when the ship, waiting for their return, came under fire. A few men made it aboard as the ship pushed off, but the rest of the unit was left behind and surrounded. Running low on ammunition and with no relief force in sight, Swenson was forced to surrender his 300-man force seven hours after entering the city. They were prisoners of the French for the next two days.



Anti-aircraft fire during a German air raid at night Algiers, Algeria.

Algiers presented Allied commanders with a variety of political and military problems, with French ambivalence to the invasion on full display. Some French units openly welcomed the American troops although they were less cordial towards the British soldiers. Other units put up only token resistance while still others fought fiercely. It was often difficult to know which response would be in evidence when approaching French positions. This confusion manifested itself with frustrating clarity for the 168th RCT on its seven-mile advance from Beach BEER to Algiers. On the morning of D-day Colonel O'Daniel's men were met by French troops openly assisting the advance. But around noon, the pro-American French commander was replaced by a pro-Nazi officer, and the 168th found itself receiving intense fire from soldiers of the same French units that had earlier welcomed them.

In the midst of combat operations, American hopes for a cease-fire bore limited fruit. Attempts by President Roosevelt to gain cooperation directly from Marshal Petain in Vichy failed, but Petain did authorize Admiral Francois Jean Darlan, commander of all French Forces in North Africa, to act as he saw fit. Resistance in Algiers collapsed first, and a cease-fire was put into effect there at 2000 on 8 November. Oran did not follow suit until 10 November and Casablanca on 11 November as Admiral Darlan grappled with his conscience and with the probable consequences for Vichy France. Finally, he capitulated with the agreement that he and most of the Vichy administration in Algeria and Morocco would be left in place. The guns in almost of all of French North Africa fell silent and, within days, French units in Algeria and Morocco joined the Allies in the war against the Axis. Despite a few acts of scattered resistance, hostilities in Algeria and Morocco were at an end. TORCH was a success.



Moroccans unload army supplies at Safi, Morocco, November 1942. Contents of these boxes include: dried eggs and milk, pineapple juice, field rations, and .50 cal ammunition. Note guard at right, assigned to prevent pilferage.

Into Tunisia

Almost as soon as the invasion of North Africa began, German and Italian forces moved to occupy Vichy-controlled Tunisia. As early as November 10th, Italian planes moved fighters to Tunis and began an airlift of 15,000 men to occupy the country. Upset by what he deemed as insufficient resistance to the Allies by the Vichy forces in North Africa, Hitler also sent his forces to seize the remainder of unoccupied France. The puppet government of France based in Vichy had maintained a semblance of autonomy over the southern half of the country. That façade was now gone, making it easier for French forces in the colonies to declare for the Allies. Italian and German forces moved quickly to occupy Tunisia and build up units and supplies to defend that critical bridgehead into Africa. By the end of November, three additional German and two additional Italian divisions had landed along with their supplies. This made any Allied attack on Tunisia more and more difficult as time went on.

Once the Allies had established a firm lodgment ashore in Algeria and Morocco and dealt with the status of French military forces, they faced two main problems, one military in nature and the other political. Militarily, it was critical that Eisenhower orchestrate a major build-up of forces to launch an offensive into German-occupied Tunisia as soon as possible. It was important to put pressure on the Axis forces in Tunisia and Libya before they got any stronger. A successful attack into Tunisia would either cut off Rommel's retreat from the advancing British Eighth Army or, as a minimum, force him to divide his forces between two fronts. This would give the Allied forces in both the east and west opportunities to attack.

Numerous political issues were even more pressing. Negotiations between Admiral Darlan and American General Mark Clark acting as Eisenhower's representative were slow and complicated. Admiral Darlan had agreed to cooperate with the Allies, provide forces to help liberate Tunisia, and eventually join the alliance fully to help liberate France. These agreements, while potentially beneficial to both sides, were made without the support of Free French leader Charles de Gaulle. De Gaulle saw Darlan and his followers as traitors to France and supporters of an illegal regime. Despite such concerns, Eisenhower, President Roosevelt, and Prime Minister Churchill recognized the need to bring Darlan and the Vichy administration in North Africa onto the Allied side. No advance into Tunisia could be contemplated if a hostile regime was in the Allied rear. For the time being, the French government in North Africa would be headed by the former Vichy official, Admiral Darlan. In less than two months Darlan would be assassinated by a French monarchist, rendering concerns for his legitimacy moot. He was mourned by virtually no one.

Once in Tunisia, the United States Army for the first time had to conduct major land operations on the African continent. The task brought Americans into terrain much different from what they had found in along the coasts of Morocco and Algeria. Some 400 miles east of Algiers, Tunisia enclosed a much smaller area, stretching only 160 miles from east to west and 500 miles from north to south. Hills and mountains in the north leveled down towards the south to meet the northern reaches of the Sahara Desert. With the northern coast of Tunisia most accessible to the Axis, it was apparent that most combat would occur there. The port cities of Bizerte and Tunis lay on separated coastal flatlands interrupted by lakes and marshes and surrounded by hill masses extending from higher ranges to the west. Half-a-dozen rivers radiated west and southwest of the two ports. Because these rivers afforded the best routes through the mountains, the most heavily traveled roads and rail lines ran along their banks and through critical passes.

German and Italian forces in Tunisia were initially commanded by German *XC Corps* commander General Walter Nehring. He answered to Field Marshal Albert Kesselring, Commander in Chief, South, who was in overall command of Nehring's operations in Tunisia and Rommel's in Libya. Since the majority of Axis forces in north Africa were Italian, Kesselring in turn answered to the often-dysfunctional *Comando Supremo* in Rome, Mussolini's headquarters. German command difficulties would lead to many lost opportunities for the Axis forces in north Africa.

German and Italian forces were initially concentrated in the Bizerte and Tunis areas and approximately 24,000 strong. However, reinforcements were strengthening the Axis forces almost daily. The Allied navies and air forces, despite overall superiority in the Mediterranean, slowed but did not stop the troops and supplies coming by air and sea from Italy through nearby Sicily to Tunisia.

The Allied plan was for the units in the Eastern Task Force to move rapidly into Tunisia while Axis forces were relatively weak and while Rommel's *Africa Korps* was still tied down by British Gen. Montgomery's Eighth Army in Libya. If the forces moved quickly enough, they might capture Bizerte and Tunis and neutralize Nehring while cutting Rommel's supply lines. British Lt. Gen. Kenneth A. N. Anderson would be in command of the operation since most of the Allied ground forces from the Eastern Task Force were British. The British 78th Infantry Division would attack east on three axes of advance with a brigade-sized unit supported by American armored units on each axis. The 36th Infantry Brigade Group with Co. E, 13th Armored Regiment, 1st Armored Division would be on the northern, or left flank of the advance. In the center was Blade Force, a British brigade-sized unit supported by the American 1st Battalion, 1st Armored Regiment, 1st Armored Division. On the southern axis of advance on the right flank, the British 11th Infantry Brigade Group would be supported by three American units: the Reconnaissance/Intelligence platoon and the 2d Battalion (-) of the 13th Armored Regiment, 1st Armored Division; the 175th Field Artillery Battalion of the 34th Infantry Division; and Company C of the 701st Tank Destroyer Battalion.

The Allied attack began the night of November 24th-25th when the 11th Infantry Brigade Group troops in the south moved toward the town of Medjez el Bab. They were soon stopped by heavy fire and driven back. A second element of the brigade was also stopped while approaching the town from another direction. To the Allies' surprise, however, the Germans withdrew the night of November 25-26. After an artillery preparation, the soldiers walked into Medjez el Bab unopposed on the 26th. Quickly resuming the advance to the east, the 11th Group took the town of Tebourba in the early hours of the 27th. After fighting until nearly dark, the Germans withdrew to Djedeida.

In the center of the Allied attack, Blade Force jumped off at 0700 on the 25th with more than a hundred British and American tanks in the lead. The 1st Battalion, 1st Armored Regiment, soon ran into enemy reconnaissance patrols. The next day the first American-German tank battle of the war developed at the Chouigui Pass north of Tebourba. Skillfully coordinating infantry, antitank, and tank forces, the Americans knocked out seven German tanks and drove off enemy ground troops at a cost of six friendly tanks.



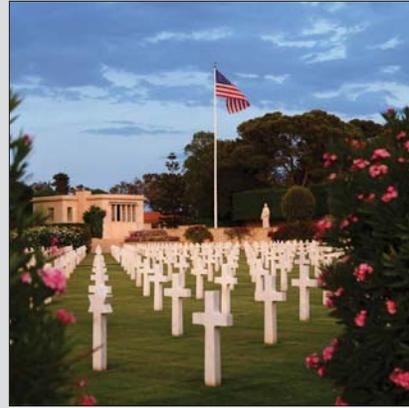
Crew of M-3 Tank at Souk el Arba, Tunisia.

On the northern axis the 36th Infantry Brigade Group was delayed for a full day, only beginning to move out the night of November 25th-26th. The brigade cautiously advanced for two days without even seeing the enemy.

On November 28th the Allies began to encounter stronger Axis defenses. Near the coast the 36th Brigade Group hit a concentration of German machine-gun positions near Djefna, thirty miles west of Bizerte. Their attack failed with a loss of thirty men killed and eighty-six taken prisoner. In the south the 11th Brigade Group ran into a strong German force at Djedeida with four new Mark VI Tiger tanks, armed with devastating 88-mm main guns, in their first field test. The Germans stopped the brigade in its tracks with a loss of five tanks. The U.S. 5th Field Artillery Battalion, recently arrived from Oran, ran into an ambush and lost its command group. The next day both the 36th and 11th Groups renewed their attacks, but again they were stopped before any substantial gains.

North Africa American Cemetery

The cemetery is located in close proximity to the site of the ancient city of Carthage, which was destroyed by the Romans in 146 B.C. At this ancient and hallowed site rest 2,841 American war dead, most of whom lost their lives in military actions ranging from North Africa to the Persian Gulf. Along the southeast edge of the burial area is the Wall of the Missing with 3,724 names listed as missing in action, lost at sea, or buried at sea. The chapel and the memorial court contain large maps in mosaic and ceramic depicting the operations and supply activities of American forces across Africa to the Persian Gulf.



The situation was about to get even worse. A German counterattack on December 1st hit Blade Force, forcing them to retreat. In the next four days, the German and Italian forces pushed the Allies back to Tebourba and then on to Djebel el Gussa, a dominant hill south of Tebourba. The U.S. 6th Armored Infantry Regiment was severely mauled as the Allied line slowly pulled back to a defensive line east of Medjez el Bab. In ten days, the Allies had over 1,000 men taken prisoner during the retreats and lost 73 tanks and 70 artillery pieces.

In mid-December there was one small bright spot. The night of December 16th-17th, eighty selected volunteers from Company L from the U.S. 26th RCT conducted a raid on enemy positions at Maknassy. Led by Lt. Col. John W. Bowen, the raiders struck the town from the left and rear, completing surprising the defenders. Twenty-one Italian prisoners from the *50th Special Brigade* of the *Ariete Division* were taken.

Not deterred by enemy advances, the Allies planned another attack on Tunis for December 22nd. By now, 20,000 British, 11,800 American, and 7,000 French troops were in the front lines facing about 35,000 enemy. However, the Axis still possessed dominant air support, making Allied tactical movements risky. On the 22nd, American and British troops attacked in the rain up 900-foot Longstop Hill which, if taken and held, would allow them to dominate the river corridor to Tunis. The 18th Regiment Combat Team and an element of the British Coldstream Guards took the hill but were forced to give it up two days later by counterattacking Germans. By the 26th, the Allies were again forced to retreat with heavy losses. All of their gains were lost.

The attempt to seize Tunis by a quick thrust had failed. The hastily organized British-American brigade-sized elements were simply no match for the experienced German units. The Allies now paused their operations in order to bring forward more replacements, organize them into stronger divisions and corps, and train them to fight the still potent foe. The American and British armies would have to be stronger, better equipped with more tanks and artillery, and better trained if they were to win. They would also have to build up their own air power to counter Axis supremacy in the skies. Finally, the offensive would have to wait for better weather since rains were severely complicating the movement of their forces.



Herbert M. Sifford, of Greensberg, Pa., assistant field director of the American Red Cross, grinding coffee at an ARC camp near Tebessa, Tunisia before heading out to visit the soldiers. February 1943.

Eisenhower moved quickly to transfer as many units as possible from Morocco and western Algeria to build up his forces for future attacks into Tunisia. He also reorganized his command structure. Gen. Anderson established the British First Army on the northern Allied flank consisting of three new divisions along with the veteran 6th Armoured Division and 78th Infantry Division. On the southern flank, the French organized their two newly formed divisions into the XIX Corps commanded by French General Louis-Marie Koeltz. In the center, Eisenhower activated the U.S. II Corps under the command of Maj. Gen. Lloyd R. Fredendall. The newly established corps would have six divisions: the 1st, 3d, 9th, and 34th Infantry Divisions and the 1st and 2d Armored Divisions.

Meanwhile, the Germans and Italians continued to receive reinforcements and themselves reorganized to cope with the Allied threat. General Hans-Jurgen von Arnim, commander of a newly formed *Fifth Panzer Army*, incorporated Gen. Nehring's *XC Corps* and several Italian formations into a formidable force in Tunisia. Nor was Rommel a spent force. As he stubbornly retreated across Libya, he was already making plans to link up with von Arnim and go on the offensive. He believed that his and von Arnim's combined forces could turn and attack in the west and at least delay the Allied advance or, perhaps, even push them back into Algeria. The Allies were also concerned that Montgomery, often slow and methodical in the advance, might not be able to prevent the highly mobile Rommel from accomplishing such a feat while he held off Montgomery's forces with a small delaying force.

As the Allies expanded their frontage to the southern reaches of Tunisia to cope with a possible thrust from Rommel, the terrain became critical for the operations of both sides. Key mountain passes provided natural chokepoints which, if held by the Allies, would stymie any possible German offensive. The Allies pushed forward into the Eastern Dorsale of the Atlas Mountains and French units occupied the key passes at Fondouk, Faid, and Gafsa. Not really expecting a German attack, the British in the north, the French corps in the far south and the American corps in the center scattered their forces over a wide area with only a tenuous hold on the critical passes.

General Fredendall was no exception, dividing his forces into small packets. One battalion of the 1st Infantry Division was helping the French at Gafsa and another blocked the road from the Fondouk pass to Sbeitla. Combat Command A (CCA) of the 1st Armored Division commanded by Brig. Gen. Raymond McQuillin was stationed behind the forward positions at the key town of Sbeitla. Combat Command B (CCB) was concentrated at Tebessa while Combat Command C (CCC) commanded by Col. Robert I. Stack was moved to Gafsa to prepare to attack towards Maknassy.



Four soldiers work on digging fox holes at Thelepte Field, Tunisia.

Battles in the Passes

In late January, a German attack along the French-British unit boundary near Ousseltia punished the French units involved by destroying 21 tanks and taking 52 artillery pieces along with 200 vehicles and 3,500 prisoners. The U.S. Combat Command B, 1st Armored Division, commanded by Brig. Gen. Paul M. Robinett, moved north to assist the French. In the ensuing operation it took 202 casualties while destroying 9 enemy tanks and taking 211 prisoners.

In these initial attacks, Axis units puzzled Allied commanders by limiting their own advances and often abandoning key positions. Soon, however, von Arnim displayed more determination. Gaining control over Rommel's *10th* and *21st Panzer Divisions*, he sent the *21st Panzers* against Faïd Pass on January 30th. The German tanks blasted through the 1,000 French defenders. A simultaneous attack at the Rebaou defile ten miles to the south was equally successful, surrounding the French positions. The next day the beleaguered French were forced to surrender.

The German attack on Faïd Pass interrupted preparations for an assault by the U.S. II Corps on Maknassy thirty-two miles south. Maj. Gen. Orlando Ward, commander of the 1st Armored Division, was in Gafsa helping prepare the operation but had no control of most of his scattered division. British Lt. Gen. Anderson ordered Gen. Fredendall to restore the lines at Faïd so Fredendall communicated directly with CCA Commander Gen. McQuillin at Sbeitla. As his CCA moved forward on the 30th to counterattack, German airplanes attacked his columns and severely disrupted his advance. American planes coming to the rescue accidentally bombed McQuillin's command post, further delaying operations. McQuillin directed a small armored infantry force under Col. Alexander N. Stark, Jr. to attack towards Faïd and another force under Col. William B. Kern to restore the situation at Rebaou. Attacked by German airplanes on the 31st, the attacks went nowhere. Meanwhile, another German attack on Fondouk Pass tied down the troops of Robinett's CCB of the 1st Armored Division in the north and kept it away from the battles around Faïd Pass.

By February 3rd, von Arnim and Rommel had the results they wanted: the Allied counterattack on Faïd had failed, the II Corps attack on Maknassy had been stopped and recalled, and Allied units were withdrawing from the Eastern Dorsale. As a bonus, dissension appeared in the Alliance when the French protested ineffective American support and the British openly questioned the competence of American commanders.

Sidi bou Zid

While Eisenhower struggled to contain the squabbles on the Allied side, the Germans refueled their tanks and prepared to continue west. The two German *panzer* divisions led the way. On the 14th, 200 German tanks attacked around both hills just north of the Faid Pass, cutting off the American units holding blocking positions on the hills. An ineffective American counterattack later that day failed to link up with the positions. Two battalions and over 2,000 men of the 168th Infantry of the 34th Infantry Division commanded by Col. Thomas Drake and Lt. Col. John K. Waters were now surrounded. The 168th, poorly trained and equipped, was unable to stop the German advance, and was cut off on Djebel (Hill) Lessouda and Djebel Ksaira. The cut-off infantrymen had no effective means to counter the German armored assault. A shipment of a new anti-tank weapon, a rocket launcher nicknamed the “bazooka”, had arrived the night before the German attack but no one had any training in how to use the new weapon. The remaining American troops not cut off on the hills fell back to Sidi bou Zid to the west.

The failed American counterattacks by the CCA of 1st Armored Division on the 14th and 15th led to the loss of over forty tanks to no effect. Col. McQuillan, fearing for the security of his command post, made the fateful decision to pull back from Sidi bou Zid to Sbeitla. The retreat turned into a rout as men panicked, units became mixed together, and German dive bombers hit them. By the end of the day on the 15th, American losses added up 44 tanks, 59 half-tracks, 26 artillery pieces, 6 killed, 32 wounded, and over 2,000 officers and men missing.

Just before dark on the 15th, American pilots flew over the cut-off troops of the 168th on Djebel Lessouda with a message to the commander to attempt a breakout. Lt. Col. Waters had been captured during the fighting so the acting commander of the 2d Battalion, 168th Infantry, Maj. Robert R. Moore, took charge of the entire position and in the dark led about 300 men over the desert to American positions to the west. The rest, along with their equipment, were captured by the Germans. Col. Drake on Djebel Ksaira received a similar message the next day and at night on the 16th attempted to lead his men to safety. The distance was greater than he anticipated, and at daylight his column was discovered in the open just short of friendly lines. The Germans captured all but a few. Overall, some 2,200 soldiers that had been stranded on the hills were captured.

The “Bazooka”

“Bazooka” was the popular name given to a man-portable rocket launcher which fired a shaped-charge warhead. It made its first appearance with the Russian Army on the Eastern Front in late 1942 and with the U.S. Army in North Africa in 1943. Unfortunately, it was quickly captured by the Germans, who reverse engineered a variety of similar anti-tank rocket launchers for later use against the Allies.



The bazooka had its origins in the closing days of World War I when American rocket pioneer Dr. Robert H. Goddard developed a tube-fired rocket for the Army. He and his co-worker, Dr. Clarence N. Hickman, successfully demonstrated their invention to the U.S. Army Signal Corps at Aberdeen Proving Grounds, Maryland, on November 6, 1918. The war ended just 5 days later and further development ceased.

The shaped charge, the second key component of the bazooka, was a technique of molding the explosive agent of a warhead using a hollow space to focus its kinetic energy against a small point on the target. Originally used in the M-10 anti-armor hand grenade, it initially proved impractical. Although the shaped-charge grenade could penetrate 60-mm of vehicle armor, it weighed 3.5 lb. This limited its range and general usefulness. The M-9 Rifle grenade was developed to compensate for the problem of range, but it lacked penetrating power.

In 1942, Lt. Edward Uhl combined the rocket with a shaped charge warhead and, in a moment of inspiration, noticed a metal tube on a scrap pile that could hold the rocket and warhead. Thus, the rocket could be fired while resting on the shoulder of an infantryman. The back-blast of the rocket would be carried by the tube away from the soldier, although this would be dangerous in confined spaces or if troops were standing behind the weapon. By late 1942, the improved M1A1 Rocket Launcher was introduced to the Army. It was 54 inches long and weighed only 12.7 lbs. It could defeat most armor existing at the time if the operator was accurate. Although there many teething issues, especially with the rockets and the warheads, improved munitions continued to be introduced. These increased the weapon’s effectiveness even as enemy armor grew thicker as well.

When the weapon was going through its original trials at Aberdeen, Maj. Gen. Gladeon M. Barnes, Chief of Research and Engineering in the Ordnance Department, was credited with assigning the Rocket Launcher its nickname. General Barnes purportedly stated that it looked like “Bob Burns’ Bazooka.” Burns was a popular radio comedian who invented and played a novelty musical instrument he called a bazooka, which consisted of a long metal tube with a funnel attached. The name stuck.

The bazooka, although introduced to American troops in North Africa the day before the German attacks towards Sidi bou Zid and the Kasserine Pass, was not immediately effective. Troops were not trained on the new weapon before the attacks and it had only a minimal impact on the rest of the campaign. However, over time, the M1A1 Rocket Launcher and later, larger caliber, iterations of rocket launchers, missile launchers, and recoilless rifles changed the shape of anti-tank warfare.

The main body of the Americans was forced to withdraw twenty-five miles back from Sidi bou Zid to the town of Sbeitla. After this move, enemy pressure eased temporarily, but on the 16th the *panzers* resumed their westward push, seizing Sbeitla from 1st Armored Division's CCB on the 17th and forcing the Americans into another retreat. Again, the troops panicked and retreated in confusion. The Americans struggled to establish a new defensive position, this time at Kasserine Pass. Four days of successive defeats had cost II Corps dearly. The Americans had lost 2,546 missing men, many of them now prisoners, 103 tanks, 280 vehicles, 18 field guns, 3 antitank guns, and 1 anti-aircraft battery. Morale was extremely low as it seemed that the Germans could not be stopped.

The succession of II Corps defeats did not end with the loss of Sbeitla. Rommel now sensed an opportunity to keep the Allies off-balance and pushed Field Marshal Kesselring for permission to make a deeper attack into Allied positions, perhaps as far as Le Kef or even Oran. Finally receiving permission from *Comando Supremo* in Rome thanks to the intervention of Kesselring, he regained control of the *10th* and *21st Panzer Divisions* and was also given the Italian armored *Centauro* Division. However, he was given no authority over any of Von Armin's other units nor did those two commanders communicate their intentions clearly to one another. Luckily for the Allies, the resulting German offensive would fail in part from confusion over objectives and lack of coordination.

Kasserine Pass

Rommel's *German-Italian Panzer Army* struck the II Corps at Siba, northeast of Kasserine Pass, on February 19th. Initially unsuccessful in this attack, Rommel, now personally on the scene, shifted his main attack towards the pass at Kasserine. Despite attempts by the 19th Engineers to lay mines in the pass and by the American defenders to cover the minefields with artillery fire, the German's initial attacks on the 21st bypassed the minefields and seemed on the verge of success. However, Allied reinforcements, on the move since the start of attacks in early February, finally arrived on the scene to stop the assault. Elements of the 1st Infantry Division, the 9th Infantry Division, and the remainder of the 34th Infantry Division flowed toward the area of the imminent German breakthrough along with nearby British units. American Sherman tanks, just arriving in numbers in theater, were able to backstop the Allied defenses. More critically, newly arrived British armor under the command of Brig. Gen. Charles A. L. Dunphie established a blocking position near Thala. They suffered heavy losses from German attacks but held. Finally, concerned that the British Eighth Army might attack his positions at Mareth in Libya while he was engaged in the west, Rommel halted his attack. He ordered a retreat on February 23rd and turned his attentions and forces back to the east. There was no pursuit by the battered Allies.

The fighting around the passes at Faid, Sbietla, and Kasserine was very costly to the Americans in terms of men, equipment, and national pride. The untested American Army was simply not yet a match for the battle-hardened men of Rommel's *Afrika Korps* or Von Arnim's *Fifth Panzer Army*. Of the approximately 30,000 Americans engaged in this action, around 300 were killed, almost 3,000 wounded, and 3,000 captured or missing. II Corps lost 183 tanks, 104 half-tracks, 208 artillery pieces, 512 trucks and jeeps and mountains of supply. It was only some consolation that the Americans had inflicted significant losses on the German attackers. They had 200 killed, almost 550 wounded, and 250 missing and lost 14 guns, 6 half-tracks and 20 tanks. In addition, the Allies took over 600 prisoners. However, there was no doubt that the Americans had sustained a bloody nose in their first encounter with Axis forces in the European Theater of Operations (ETO).

The uneven performance of Allied operations in both northern Tunisia in December 1942 and around the Eastern and Western Dorsale passes, especially at Faid, Sidi bou Zid, Sbeitla, and Kasserine in February 1943 came as a shock to the Allied command. It forced a total reexamination of Allied organization, leadership, and plans. In short order General Eisenhower restructured the Allied command and changed key personnel. A new command—the 18th Army Group under British General Sir Harold R. L. G. Alexander—tightened operational control over the combat corps and armies of the three Allied nations. With the



M-3 American tanks advance to strengthen Allied positions, Kasserine Pass, Tunisia.

British Eighth Army now close enough to the Allied southern flank to affect Axis operations, the three national commands in Tunisia narrowed their battlefronts and shifted north.

In late February and early March, additional Allied replacements flooded into theater. The British were reinforced by two new divisions and gained additional stocks of American tanks. The French XIX Corps was resupplied with new U.S. equipment to replace their less effective prewar materiel. The U.S. II Corps gained additional replacements for its lost men and equipment along with a new commander, the dynamic if often rash Maj. Gen. George S. Patton, Jr. Finally, more Allied air assets flowed into North Africa to help redress the imbalance between Allied and Axis air support. Mediterranean Air Command was organized in late February commanded by Air Chief Marshal Sir Arthur Tedder. The command soon included the U.S. Ninth and Twelfth Air Forces and four Royal Air Force commands.

Additional German counterattacks in late February and March against the British in northern Tunisia and against Montgomery at Medenine just over the Tunisian border from Libya were handily dealt with. Montgomery followed up with a major attack in mid-March at Mareth. His offensive slowly ground forward against the German-Italian forces of Rommel, pushing over 150 miles north in the course of a month.

Deeper into Tunisia

Seeing an opportunity, Eisenhower launched a new offensive with his now strengthened and revitalized army. Patton's II Corps, now almost 90,000 strong, drove directly east into the Axis flank to assist Montgomery's push. His forces pushed toward the hills around Gafsa. Maj. Gen. Orlando Ward's 1st Armored Division led the attack which took Gafsa on March 17th as the Germans retreated without contesting the town. Pushing on, Ward and his attached 60th Regimental Combat Team took Sened and Maknassy by March 22nd before halting.

While the tankers rushed eastward the infantrymen found themselves in a major battle forty miles back to the west at El Guettar. Kesselring had released the *10th Panzer Division* for a counterattack on II Corps. The attack hit Maj. Gen. Terry Allen's 1st Infantry Division hard. From March 21st-24th, Allen's men turned back two strong German attacks, often engaging in hand to hand combat. Going over to the offensive, 1st Division troops pushed the Germans out of their fighting positions and off hilltops. By now Allen's men could call on strong air and artillery support to assist. Massed artillery and tank destroyers knocked out nearly thirty enemy tanks while mines stopped eight more. American casualties were heavy but the *10th Panzer Division* was forced to withdraw.

Anxious to move beyond El Guettar, Patton planned a two-division attack by his corps to the sea that would divide the enemy forces. The experienced 1st Infantry Division would advance in the north. On the southern flank, Maj. Gen. Manton S. Eddy's 9th Infantry Division would make its first attack as a full division. The 9th planned on attacking at night to minimize casualties. However, night attacks are notoriously difficult to coordinate, especially when attempted by an inexperienced unit in uneven terrain. When the attack began before dawn on March 28th, three battalions of the 9th quickly became disoriented. Two battalions remained out of touch for the next thirty-six hours. On the left the 1st Infantry Division made faster progress but was unable to push too far ahead of Eddy's men without exposing their flanks to possible enemy counterattack. Soon both divisions found themselves stymied by well-dug in enemy units. In nine days the 9th Infantry Divisions alone lost 120 killed, including 5 battalion commanders, 872 wounded, and over 800 other casualties.

Patton next sent an armored column from the 1st Armored Division on March 30th towards the seaport of Gabes in another attempt to divide the enemy forces. After three days of fighting it had lost thirteen tanks and failed to make substantial progress. Replacing Maj. Gen. Ward, the 1st Armored Division commander, with Maj. Gen. Ernest N. Harmon, formerly the commander of the 2d Armored Division, on April 5th, Patton hoped to reenergize his offensive as the Germans began withdrawing into a shrinking pocket around Tunis.

Near Maknassy, Maj. Gen. Ryder's 34th Infantry Division attempted to retake the pass at Fondouk. Attacking on March 27th, the men of the "Red Bull" division were halted in their tracks for three days. On April 8th, a multinational attack was launched with British armor attempting to push through the pass but confusion on each side led to severe coordination issues and mutual recriminations. These further tested Allied patience with each other. The tanks finally cleared the pass late on April 9th but failed to trap the retreating Germans.

By mid-April Axis forces had been pushed into a small perimeter at the northeast corner of Tunisia. The initiative in North Africa had clearly swung toward the Allies. While Allied forces had gained experience and strength over the last six months, Axis units had been worn down by growing Allied air and naval raids on their supply line from Sicily. Axis supplies reaching North Africa fell below the minimum needed to sustain operations. Even in the enemy's weakened state, however, much hard fighting remained before the Allies could declare victory.

General Alexander laid out several missions for the next phase of the campaign: tighten the enemy perimeter, split the Tunis and Bizerte objective areas, seal off the Cap Bon peninsula, take Tunis, and then capture Bizerte. The American's role in the plan was to take Bizerte. To carry out its mission, II Corps would have the same three infantry and one armored divisions plus three battalions of the French Corps d'Afrique. During April 14th-18th these units repositioned to the northernmost Allied sector some thirty miles west of Bizerte. Before the offensive could begin, on April 15th, Maj. Gen. Omar Bradley, deputy commander of II Corps, took command of the corps, allowing Patton to begin planning for the upcoming invasion of Sicily.

With the Allies still preparing their next move, the Germans tested the British V Corps in a strong attack by the *Hermann Goering Division* the night of April 20th-21st. Although they penetrated five miles into British lines at some points, they were unable to break through and returned to their lines with British tanks in pursuit. On the 22d the British 46th Division struck back at the *Hermann Goering Division* with the goal of taking Tunis, about thirty-five miles away. Losses were high on both sides but the British inched ahead. On the 23d, Bradley launched the American part of 18th Army Group's attack. Both the 9th Division along the coast and the 1st Division to the south found enemy defenses very strong despite American artillery superiority. As in World War I, progress was measured in yards, not miles. Some units like the 2d Battalion, 18th Infantry in the 1st Division area had to retake the same hill three times against determined German counterattacks.

Only extraordinary personal courage enabled the II Corps to maintain its advance. Sgt. William L. Nelson gave his 9th Division comrades one such example on April 24th. From an exposed position, Nelson directed effective mortar fire to stop a German counterattack, an act which brought down on him a rain of enemy grenades. Though mortally wounded, Nelson crawled to another position and directed more devastating fire on the enemy. For his heroism and self-sacrifice, Sergeant Nelson was posthumously awarded the Medal of Honor. Convinced of American determination by acts such as Nelson's, enemy units withdrew on April 25th.

The 34th Division re-entered the line between the 1st and 9th Divisions on April 26th and attacked east. The division mounted a determined assault the night of April 26th-27th on a cluster of ridges topped by Hill 609. At the same time, the 1st Division to the south attacked Hill 523. Both divisions were supported by several battalions of the 1st Armored Division and by the 27th, 68th, and 91st Field Artillery Battalions. The Americans faced a strong German defense and took heavy casualties. Often progress came because of dramatic displays of personal courage. On the 28th, Company A of the 6th Armored Infantry Regiment was pinned down by German machine guns. Rather than await support, Pvt. Nicholas Minue crawled through the enemy line and attacked the enemy guns with only a bayonet. He destroyed several positions before he was killed. For his heroism Minue was posthumously awarded the Medal of Honor.

After nearly three days of continuous combat the Americans had achieved their objectives, albeit at heavy cost. Allen's and Ryder's divisions had lost 183 killed, 1,594 wounded, and 676 captured or missing. But after getting intelligence indicators that the Germans and Italians were running short of supplies, Gen. Bradley believed the enemy was near the breaking point. He organized his corps with four divisions on line: from north to south, the 9th Infantry Division, 1st Armored Division, 1st Infantry Division, and 34th Infantry Division. On the morning of 30 April, Bradley kicked off a general offensive. As American infantry overran Hills 609 and 523, tanks of the 1st Armored Division pushed east. After nightfall on 1 May the Germans again withdrew, this time into Mateur. Two days later General Harmon's tanks drove the enemy out of that position as well. The Americans had won an important urban center only twenty miles from their ultimate objective of Bizerte.

The final American offensive of the campaign began on 6 May. The 1st Armored and 9th Infantry Divisions coordinated an envelopment of Bizerte and the next day took the city. At nearly the same time the British V Corps entered Tunis. To the south the 1st Infantry Division found strong opposition but maintained sufficient pressure to prevent the enemy from reinforcing other areas. Enemy troops began surrendering in such large numbers that they clogged roads, impeding further advance. In the second week of May enemy prisoners totaled over 275,000, most of them Italian. When Axis generals began surrendering on May 9th, the six-month Tunisia Campaign entered its final days. The remnants of the *Afrika Korps* surrendered on 11 May and German General von Armin capitulated the following day. The *Italian First Army* surrendered *en masse* on May 13th, ending hostilities in Tunisia.

The Allied liberation of North Africa was an incredibly complex operation, militarily and politically. Untested U.S. units had to cross thousands of miles of ocean from the United States and the United Kingdom and conduct near simultaneous amphibious landings along a hostile coast. Attempts to defuse the initial French resistance failed and hundreds of casualties resulted before an uneasy truce could be established. Then the Allies had to bring in thousands of reinforcements with all of their equipment, keep them supplied and organize a multi-national army including U.S., British, and French soldiers, that could work together. Once organized and equipped, those units had to “learn on the job” to coordinate their operations as they hurriedly pushed hundreds of miles east to face an experienced and battle-hardened foe. There were mistakes made at all levels, including strategic and operational mistakes by the high command and tactical blunders made in the battalions, companies and in the foxholes of platoons and squads. The American Army learned some harsh lessons and paid for those lessons in blood. But the American soldier was now truly “blooded” and victorious, with a firm foothold in North Africa. That foothold would serve as a secure base to launch another amphibious assault, this time into Sicily.

Sicily and Operations in Southern Italy: July 9, 1943 - January 8, 1944

The elimination of Axis forces in North Africa was a major Allied triumph that opened up the door to many operational possibilities. The Casablanca conference in January 1943, attended by American President Franklin Roosevelt and Prime Minister Winston Churchill and their military advisors, had anticipated the victory in North Africa and already weighed many of the options available after the securing of Tunisia. While Roosevelt's advisors still championed a return to the continent in northern France in 1943, he joined Churchill in focusing on invading Sicily and clearing the Mediterranean routes to Egypt and the Middle East. This might well knock Italy out of the war. He agreed with Churchill that rather than using scarce transportation assets to move the thousands of Allied troops with their supplies back to Britain, the forces already in place in the Mediterranean would best be used to launch an immediate attack on the junior Axis partner. The Trident Conference in Washington in May confirmed this strategy.

The island of Sicily was a traditional invasion route from Africa to Italy. It was only ninety miles from Tunisia and was separated from the Italian mainland by a mere two and a half miles at Messina. It would provide numerous air strips to support any follow-on operations in Italy. Its seizure might also trap substantial Axis forces. Given the powerful Allied formations already in North Africa, it was a logical next step in the attack on the Axis.

The Allied 15th Army Group was assigned the mission to take the island. This group was commanded by British General Sir Harold Alexander. It consisted of the U.S. Seventh Army commanded by Lt. Gen. George S. Patton, Jr. and the British Eighth Army commanded by General Sir Bernard Montgomery. The operation was codenamed Operation HUSKY and was planned to kick-off in July 1943.



British Lieutenant General Bernard L. Montgomery (left) and U.S. Army Lieutenant General George S. Patton Jr. look over a map of Sicily, circa July-August 1943. Montgomery's hand is near the port of Palermo, taken by Patton's forces on 22 July.

Plans for Sicily

Sicily was a mountainous island of approximately 10,000 square miles, roughly triangular in shape. The key strategic point on Sicily was the city of Messina at the far east of the island which was the primary transit point between Sicily and the mainland. Allied planners looked there first to see if there was a way to land forces close enough to seize Messina and trap German and Italian forces on the island. However, the beaches around Messina were rocky and narrow. In addition, the city was heavily fortified and, what was worse, just outside the range of most Allied tactical air support aircraft. These factors forced Allied planners to focus on landing their units on the better beaches on the southeastern and southwestern shores of the island.

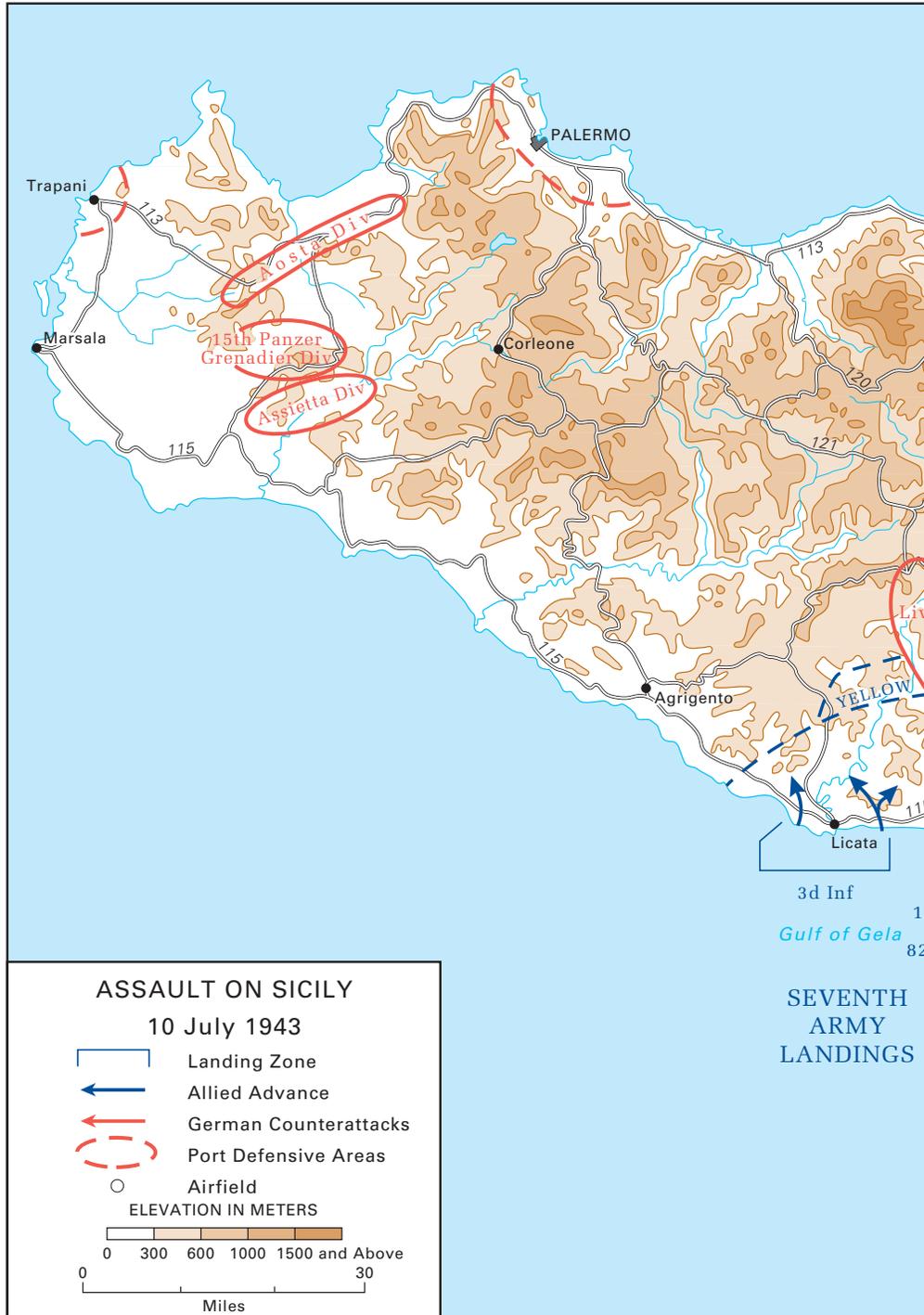
The final invasion plan for HUSKY had seven divisions landing along 100 miles of beaches in southern Sicily. The British Eighth Army was given the principal mission of landing on the southeastern beaches and driving up the coast to seize Messina. Montgomery would initially have four divisions and an independent brigade along with a parachute and commando force that would land by glider just south of Syracuse to seize that city. To the west, Patton's Seventh Army would come ashore with three divisions in the Gulf of Gela supported by elements of the 82d Airborne Division. Patton was to drive north to seize the airfields at Licata, take the high ground inland, and protect Eighth Army's flank. The Americans were decidedly in a secondary role of supporting Montgomery, who was to be the main effort. However, Alexander's operational plans for after the landings were so vague that they were to leave open a number of options as the campaign unfolded.



Allied officers on board ship off Gela, Sicily Left to right- Vice Admiral. H. Kent Hewitt, USN, Brigadier General Albert C. Wedemeyer, Colonel Hawkins and Lieutenant General George S. Patton, Jr.

The American landing force consisted of, from right to left, Maj. Gen. Troy Middleton's 45th Infantry Division linking into the British left flank, Maj. Gen. Terry de la Mesa Allen's 1st Infantry Division in the center with two battalions of Rangers, and Maj. Gen. Lucian K. Truscott's 3d Infantry Division on the left reinforced with another Ranger battalion and Combat Command A of 2d Armored Division. Supporting the invasion were the 505th and 504th Parachute Infantry Regiments of Maj. Gen. Mathew Ridgway's 82d Airborne Division. Patton provided direct supervision of the 3d Division while assigning most of the 45th and 1st Divisions to Lt. Gen. Omar Bradley's II Corps. The reserves consisted of the remaining regiments of the 1st Infantry, 2d Armored and 82d Airborne Divisions, the 9th Infantry Division, and a battalion of French Moroccans.

Facing the Allied forces were approximately 300,000 Italian troops of doubtful reliability and 30,000 Germans commanded by General Hans Hube under the overall command of Italian General Alfredo Guzzoni. His *VI Army* included six poor-quality coastal divisions, some local militia, and four infantry divisions. Hube's German units included the *15th Panzergrenadier Division* and the understrength but still dangerous *Herman Goering Division*.





Sicily and Operations in Southern Italy: July 9, 1943 - January 8, 1944



6 inch guns of a "Brooklyn" class light cruisers bombard enemy forces at Licata, Sicily, during the allied landings, circa 10 June 1943.

The Landings

On the night of July 9th-10th, an Allied armada of some 2,590 vessels launched Operation HUSKY, one of the largest combined operations of World War II. Included in this total was American Admiral H. Kent Hewitt's fleet of over 580 ships, British Admiral Sir Bertram Ramsay's fleet of some 795 ships, and the support fleet of 6 battleships, 6 cruisers, and 24 destroyers commanded by British Vice Admiral Sir Algernon Willis.

Accompanying the fleets in convoy were numerous smaller ships and transports of types that had been introduced since Operation TORCH and which would revolutionize amphibious warfare. These were LSTs (Landing Ship, Tank), LCTs (Landing Craft, Tank), LCIs (Landing Craft, Infantry), and LCVP (Landing Craft, Vehicles and Personnel). These innovative vessels would do much to ease the rapid arrival of men, supplies, and armored vehicles over the shores when an amphibious landing was at its most vulnerable. In addition, the armada included dozens of the new DUKW vehicle, commonly call the "Duck", which could roll off a larger ship into the water, swim ashore, and then move men and supplies at high speed deep inland without offloading. It was, in short, an amphibious 2 ½ ton truck and was to prove its worth on many future battlefields in Europe and the Pacific.

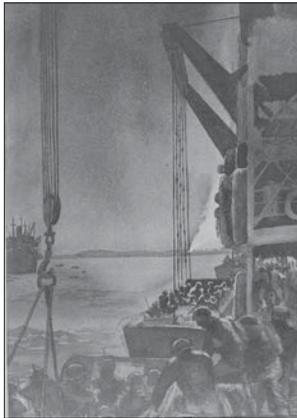


"Invasion craft. Sicilian invasion. In an Allied invasion craft bound for the beach at Sicily, steel helmeted men huddle together. Ahead lies the enemy and, for some, death" Painting.



Troops on LST receive last minute instructions before landing on Sicily.

As the armada closed on Sicily, it was hit by a fierce gale. The storm scattered the convoy and induced a great deal of seasickness in the soldiers. The gale also disrupted aerial operations and bombing support of the landing. The British gliders were thrown way off course with only 12 of 144 landing on their LZs while 69 crashed into the sea. The 82d Airborne Division landings in the American sector beginning at 2330 on July 9th were equally scattered. The commander of the 505th Parachute Infantry, Col. James M. Gavin, jumping with his regiment, found himself landing twenty-five miles away from his drop zone.



"The first wave. Sicilian invasion. "H" hour of the "D" day draws near and the first wave of men to invade Sicily prepare to debark from Allied transports lying four miles off shore. Landing boats, swung to deck level, are loaded with men and equipment." Watercolor painting.

The plan was for the Americans to land large elements of three divisions ashore almost simultaneously. The 3d Infantry Division was to come ashore at RED, YELLOW, BLUE and GREEN beaches bracketing the city of Licata. The 7th Regimental Combat Team (RCT) was to land at RED beach and the 2d Battalion, 15th RCT with attached 3d Ranger Battalion and artillery was to move onto GREEN Beach. The rest of the 15th RCT was to land on YELLOW Beach and to their right, the 30th RCT was to hit BLUE Beach. The 1st Infantry Division was to come ashore at Gela with a specially configured X Force of engineers and Rangers which would land on the beaches directly in downtown Gela to seize that city. To the east of that task force, the 1st Division's 26th RCT was to hit YELLOW and BLUE beaches and on their right flank the 16th RCT was to land on RED 2 and GREEN 2 beaches and strike towards Niscemi. The 45th Infantry Division was to land at their own RED, GREEN, and YELLOW beaches with the 180th RCT on the division left flank, the 179th RCT in the center, and the 157th RCT on the far right.

The British, landing on southeastern coast on the other side of the Pachino Peninsula, were to come ashore with four division equivalents and a separate brigade along with some glider infantry. From north to south these were the 5th Infantry Division, the 50th Infantry Division, the 51st Infantry Division, the 231st Infantry Separate Brigade, and the 1st Canadian Division.

Despite the bad weather and scattered airdrops, the landings went ashore on schedule on the 10th. The British stormed ashore with minimal opposition and many Italian units surrendered with only token resistance. Syracuse was taken by the depleted glider troops without a fight. The Americans were not so lucky. Several Italian tanks supported by infantry managed to penetrate the U.S. positions before the Rangers, assisted by naval gunfire, drove them off. Later attacks by tanks from the *Herman Goering Division* were even more dangerous. Naval gunfire again came to the rescue, but not before German Tiger I tanks and two motorized infantry battalions overran the 1st Battalion, 180th Infantry of the 45th Division, capturing many Americans including its commander.



Beach group signalman directs LST-314 to her landing place on a Sicily beach.

Despite the German and Italian counterattacks, by the end of the first day the Seventh Army had established a reasonably coherent beachhead four miles deep and fifty miles wide. The Americans captured over 4,000 prisoners with the loss of 58 killed, 199 wounded, and 700 missing. To support the landings, the logistical systems of the Army and Navy quickly pushed supplies ashore, bringing over 66,000 troops, 17,000 tons of supplies, and 7,000 vehicles to the beachhead within the first three days.

German attacks were more serious and coordinated on the 11th of July. Both the *Herman Goering Division* and the Italian *Livorno Division* attacked towards Gela in the center of the American line. Fighting was fierce as the Americans organized a hasty defense out of Rangers, paratroopers, cooks, clerks and Navy shore personnel. German *panzer* units at one point closed to within a few thousand yards of the beaches. However, with great effort, the Americans continued to hold the beachhead, although at the cost of over 2,300 casualties.

In need of reinforcements after the day's battles, Patton ordered a regimental combat team of the 82d to parachute into the beachhead the night of July 11th. A number of circumstances including poor coordination efforts led to tragedy as the troop transports flew over the invasion fleet. Having suffered through a recent aerial attack by Axis bombers and fighters, nervous Allied naval and ground anti-aircraft gunners fired upon the C-47s of the air armada as it flew towards the beaches in darkness. They shot down twenty-three friendly aircraft and damaged dozens of others. Some of the damaged planes managed to drop their paratroopers over the British or American lines while others crashed into the sea. It was one of the worst friendly fire incidents of the war, leaving almost 100 Americans of the 504th RCT dead and hundreds more wounded or missing.



American cargo ship exploding after being hit by Nazi dive bombers in an air raid on a convoy in the invasion of Sicily.



Crew from the tank "Eternity" check their vehicle after landing at Red Beach 2, Sicily.

Change in Plans

Despite the failed airborne operation, Patton began pushing out of the beachhead starting on July 12th. The 1st Infantry Division moved into the nearby hills, gaining a measure of depth and protection from enemy artillery for the vulnerable landings. The 45th Infantry Division pushed north and east towards Ragusa while the 3d Infantry Division pushed past its initial objectives. Despite stiffening resistance, the British managed to penetrate up to Vizzini in the west and Augusta in the east. Their attack began to bog down soon thereafter, however, prompting Alexander on the 13th to change boundaries between the American and British Armies, giving Montgomery more room to his left to advance inland past German strongpoints. It was clear that Alexander considered the Eighth Army to be more qualified than the U.S. Seventh Army for the main effort. Not only did this infuriate Patton, it mandated a slow-down in operations as the complex shift in the lines took place, causing a loss of momentum in the Allied attacks.

The Americans, cheated (in their mind) of participating in the main effort, quickly gained permission for a "reconnaissance" towards Agrigento and the western part of Sicily. Patton then got Alexander to allow him to push towards Palermo to the northwest before going east along the coastal road towards Messina. Without significant opposition, Patton struck north with II Corps to cut the island in half while three divisions under a provisional corps commanded by Maj. Gen. Geoffrey Keyes rushed to take Palermo. The city fell on July 22nd and the north coastal road was cut by the 24th. All of western Sicily was now in American hands as Patton reoriented his forces east to assist Montgomery's attack on Messina.

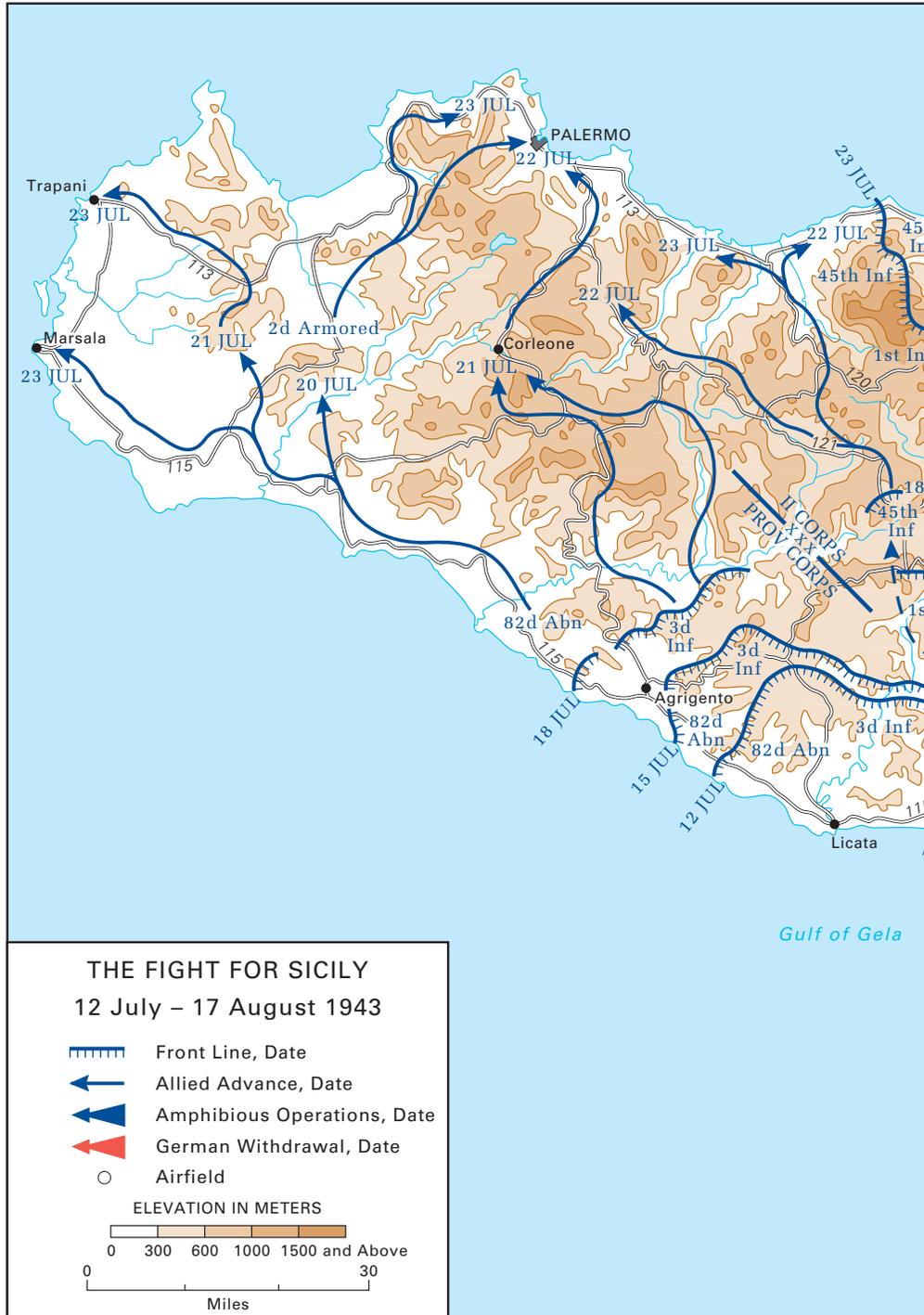


Major General Geoffrey Keyes, talking with Italian Brigadier General Giuseppe Molinero at Palermo, Sicily, during the city's surrender ceremonies.

The news of the fall of Palermo coincided with reports that the Italian dictator, Benito Mussolini, had been stripped of his authority. On July 25th, he was removed from power and a new government under Italian Marshal Pietro Badoglio was established. Mussolini was placed under house arrest on orders of King Victor Emmanuel III. The new regime did not immediately sue for peace, but the situation held promise for the Allies and highlighted the first cracks in Axis solidarity.

Montgomery's drive towards Messina had bogged down near the city of Catania as Axis resistance stiffened. The lava fields of nearby Mt. Etna channeled the British forces towards the coast and limited American movement on the northern road. The Germans had also established a series of strongpoints called the Etna Line from Catania north towards San Fratello. The Axis forces planned to hold this line as long as possible as their units withdrew from Sicily across the straits of Messina. Italian General Guzzoni objected to this plan, hoping to defend Sicily to the end, but the poor state of his units weakened his position. General Hube, now in command of the newly formed *XIV Panzer Corps*, exercised real control over the remaining capable Axis forces. His main striking forces were the *1st Parachute*, the *Herman Goering Panzer*, the *15th Panzergrenadier*, and the *29th Panzergrenadier Divisions*.

General Alexander redrew the Allied boundary lines between the two armies again before beginning the final advance on Messina. Patton was to attempt to penetrate the Etna Line from the west and approach Messina along two main roads: Route 120 from Nicosia through Troina to Randazzo and Highway 113 along the northern coastline. Montgomery would continue to drive north and east along the Andrano-Randazzo road west of Etna while still pushing directly north against stiff German resistance on Route 114.







Tired and foot-weary from his march to Brolo, Sicily, Sgt. Norwood Dorman, of Benson, North Carolina, falls into the pose of the statue on this memorial to the Italian soldier of World War I.

Patton's advance along both the coastal Highway 113 and the interior Route 120 was slow and torturous. The mountainous terrain and narrow roads provided numerous opportunities for the Germans to set up roadblocks and delay any advances. Illness in the form of malaria and other fevers knocked out over 10,000 American soldiers in a matter of weeks. The brutal heat of Sicily also took its toll on the American soldiers, with many suffering from heat exhaustion as they pushed east. Patton tried to advance with two divisions abreast with the 45th Infantry Division operating along the coastal road and the 1st Infantry Division fighting through the mountains to the south. Supported by naval gunfire as it moved along the coast road, the 45th seized the "Bloody Ridge" at Santo Stefano on July 30th. The 1st Division seized Nicosia on the 28th and pushed on to attack the key city of Troina.

The attack of the 1st Division against Troina proved to be the toughest fight of the campaign for the storied division. The hill town was a key defensive position of the Etna Line and was held by the *15th Panzergrenadier Division* and elements of the Italian *Acosta Division*. The Germans and Italians were well entrenched on the rocky and barren mountain sides along the main avenues of approach. This left little cover for the advancing “Big Red One” soldiers.

The 1st Division attacked Troina on the 31st of July but was handily repulsed by the alert Axis troops. Realizing the strong nature of the defense, II Corps commander Lt. Gen. Bradley pushed more assets into the fight. The 1st Division was joined by a regiment from the 9th Infantry Division and an infantry battalion from the French Moroccans, all supported by over 165 artillery pieces and Allied airpower. Over the next week, the battle swung for and against the Americans with each hilltop being the scene of brutal hand to hand fighting.

The fighting for Monte Basilio was particularly intense. The 26th Infantry Regiment under heavy German fire managed to get one battalion on top of the hill by August 3rd, only to have German artillery pound them relentlessly. A German counterattack against the isolated battalion was barely repulsed. Low on ammunition and supplies, the Americans attempted to resupply the unit by air with only mixed results. The Germans attacked again on August 5th and only the heroic efforts of men like Pvt. James W. Reese staved off total defeat. He moved his mortar crew into an advanced position and rained fire down upon the advancing Germans until his crew’s ammunition was nearly gone. Ordering his men to the rear, Pvt. Reese advanced with the last three rounds and used them to destroy a German machine gun position before being killed. He was awarded the Medal of Honor posthumously for his actions. The Germans retreated from Troina the night of August 5th-6th.

While the 1st Infantry Division was battling for Troina, the 3d Infantry Division replaced the 45th Division in the north and attacked the German Etna Line at San Fratello starting on 3 August. They were faced by the well-entrenched *29th Panzergrenadier Division*. Attempting an end run of the enemy position, Truscott launched the 2d Battalion, 30th Infantry Regiment, commanded by Lt. Col. Lyle Bernard and augmented by additional tanks and artillery, in an amphibious assault at Sant’ Agata behind the German lines the night of August 7th-8th. The Germans skillfully retreated from San Fratello before the Americans could cut the coastal road. Some 1,000 prisoners were taken, and the position was unhinged, but the attempt to bag the enemy division was a failure. The Germans retreated slowly towards Messina as General Hube orchestrated a careful withdrawal in good order.

Another attempt by Patton to trap the *29th Panzergrenadier Division* on 11 August by an amphibious end run was only partially successful. The same infantry battalion that had conducted the earlier operation hit the beaches near Brolo, achieving surprise. However, the Germans struck the landing with the full force of their trapped division. Fighting off the counterattacks throughout the long day assisted by intermittent naval gunfire and some artillery fire from the nearby 3d Infantry Division's "Long Tom" 155-mm guns, Lt. Col. Bernard's men held their own but could not cut off the enemy units. The majority of the *panzer grenadiers* pushed their way past the American unit to safety before the rest of Truscott's 3d Infantry Division could link up with the beachhead. The men of the 2d Battalion, 30th Infantry suffered some 177 men killed, wounded, or missing in the amphibious operation with German casualties roughly equal.

The combined forces of Patton's Seventh Army and Montgomery's Eighth Army slowly converged on Messina, but the Axis forces were able to escape across the straits of Messina with most of their units intact. Allied air was at the limit of its range, German defenses were too strong, and their ground forces had delayed the Allies just long enough. Elements of Truscott's 3d Infantry Division entered the city on August 17th just hours after the last German and Italian elements had boarded ships for the short trip across the straits to safety. The Americans had won the "race" to Messina, but the enemy had pulled off a successful evacuation and would have to be brought to battle another day.

The fighting in Sicily had been hard and had taken its toll on the Allied forces. The American units had suffered 2,237 killed and 6,544 wounded or captured. British losses included 2,721 dead and another 10,000 wounded or captured. The Allies had inflicted over 29,000 casualties on the Axis forces and captured over 140,000, many of them from the Italian Army whose morale continued to fall as



Private Roy Humphrey of Toledo, Ohio, is being given blood plasma by Private First Class Harvey White of Minneapolis, Minnesota, after he was wounded by shrapnel, on 9 August 1943 in Sicily.

the Mussolini regime tottered and fell. The Allies had won a major victory and learned valuable lessons about amphibious operations, combined maneuvers, and coordinated air and naval power. With Italy seemingly in political chaos, the Allies felt that now was the time to invade the Italian mainland and exploit their success. Despite the imminent collapse of the Italian war effort, however, Sicily was just the beginning of what was to be a long slog up the "boot" towards Rome.

AVALANCHE

The Allied success in Sicily prompted the refinement of an ambitious plan to move onto the Italian mainland and knock Italy out the war. The plan had its origins in early July when it seemed likely that Italy was on its last legs. With the Italian army on the verge of total collapse, General Marshall on July 16th proposed an amphibious landing to seize the port of Naples and then move quickly to take the airfields at Foggia, some 100 miles southeast of Rome. The concept was codenamed AVALANCHE. Initially shelved, the fall of Mussolini reoriented Allied planners to again consider such a landing.



The initial Allied plan was for a two-prong attack from the south to coincide with an amphibious attack on Naples. The British would attack directly across the straits of Messina into the Calabria region of Italy (Operation BAYTOWN) while Lt. Gen. Clark's U.S. Fifth Army would conduct an amphibious assault directly on the port of Naples. Seizing the port would dramatically enhance the logistical situation and would un hinge most of the German and Italian defenses south of Rome. With the removal of Mussolini from power in July as the Sicily operation was still underway, Allied hopes were that such a landing in force would drive Italy out of the war and, perhaps, onto the Allied side.

As lucrative a target as Naples was, there were problems with landing directly at the city. Naples was outside the range of Allied fighter aircraft even from newly captured advanced bases in Sicily, making close air support impractical. In addition, the beaches nearest to Naples were not suitable for landing operations. They were rocky and too close to major defenses along the volcanic slopes of Mt. Vesuvius. Instead, Allied planners looked fifty miles to the south for better beaches near the town of Salerno. There the beach was twenty miles long with favorable slopes and was well-positioned near the major highways to Naples and Rome. The downside was that the high ground just inland from the beaches provided for numerous enemy observation posts capable of coordinating heavy artillery fire on the landing troops. In addition, the Sele River divided the landing beach into two halves, requiring rapid bridging of the divide lest the separated forces be cut off and defeated in detail.



45th Infantry Division Troops and vehicles being loaded on LSTs in Sicily to be taken to Salerno.

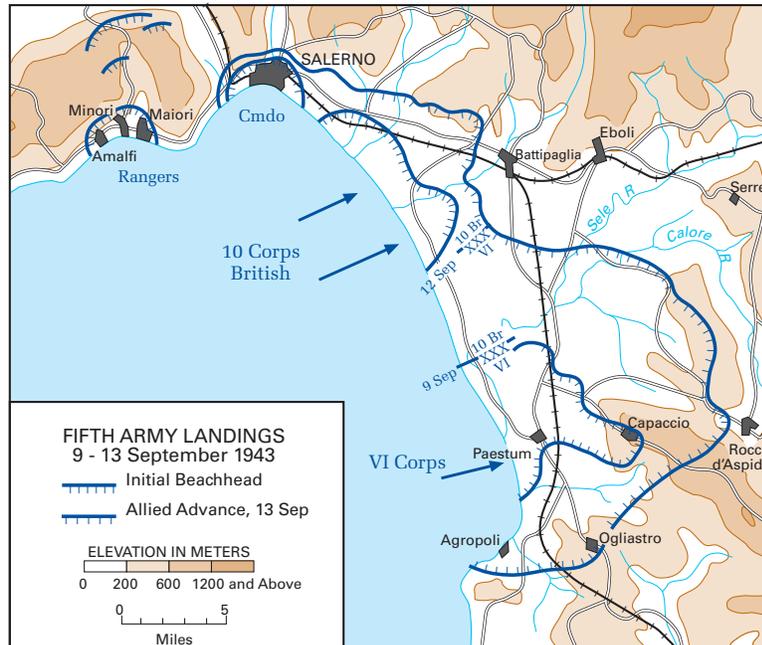
Meanwhile, the Germans faced the imminent problem of Italian defection from the Axis. Appointing Field Marshal Albert Kesselring as the commander of the defense of southern Italy, Hitler also had Field Marshal Erwin Rommel join with Kesselring to make plans to seize roads and passes in the north and disarm Italian forces if they switched sides. Additional German forces including five infantry divisions and two *panzer* divisions were sent to Italy despite protests by

the new government of Marshal Pietro Badoglio. The *German Tenth Army*, some 45,000 strong, was established under the command of General Heinrich von Vietinghoff and placed under Field Marshal Kesselring to defend southern Italy.

The British moved quickly and attacked across the straits of Messina on September 3rd against light resistance. That same day, the Italian government signed a secret armistice agreement and announced it publicly on the 8th of September. The Germans moved at once to implement a plan called Operation *ACHSE* and disarmed the Italian units with only minor opposition. The Italians had had enough of the war and the Germans took over the defense of the entire Italian peninsula.

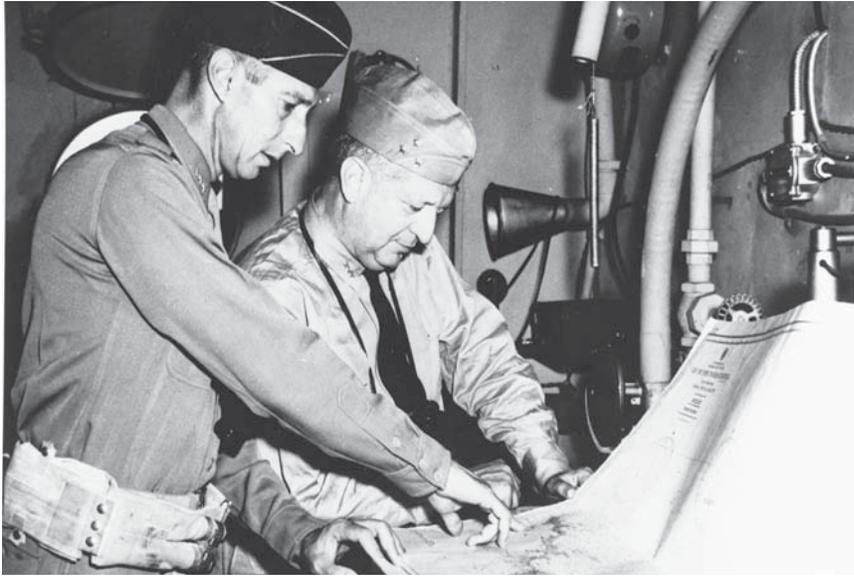
The day after the formal announcement of the Italian surrender, 450 ships engaged in Operation *AVALANCHE* assembled off the coast of Italy near Salerno. Under the Clark's Fifth Army was the British X Corps commanded by Lt. Gen. Sir Richard L. McCreery and the U.S. VI Corps commanded by Maj. Gen. Ernest J. Dawley. The landing forces were to be the British 46th and 56th Infantry Divisions from X Corps and the U.S. 36th Infantry Division, "Arrowhead", a Texas National Guard division commanded by Maj. Gen. Fred L. Walker. The 36th Division had arrived in North Africa in April, too late for combat in the theater but just in time to be diverted from training to guard German and Italian prisoners. *AVALANCHE* was to be their first combat action. The Army Rangers, by now expanded to form three battalions and commanded by Lt. Col. William O. Darby, were also in the assault force. In floating reserve were two regiments of the 45th Infantry Division commanded by Maj. Gen. Troy Middleton. Ridgway's 82d Airborne Division was also made available to General Clark as a reserve force. Clark hoped to land 125,000 Allied troops within the first three days of the operation before pushing too far inland. He hoped to land the 1st Armored Division, commanded by Maj. Gen. Ernest N. Harmon, directly at the port of Naples by D plus 13 but this turned out to be overly ambitious.

The British X Corps was to land on the northern part of the beach closest to Salerno with the American VI Corps to the south near Paestum. The Rangers were to assault the coastal road near Amalfi to prevent reinforcements from reaching the beachhead from that direction. A number of plans were floated to involve the 82d Airborne Division in the operation rather than just keeping them in reserve. One of these plans was a rather fanciful one to drop on airfields and DZs near Rome and seize that city in a coup de main. Neither this plan nor other ideas about dropping them to take crossings over the Volturno River were determined to be feasible.



Air support for the landings was provided by Maj. Gen. Edwin J. House's XII Air Support Command, although he was not given control of the air mission over the convoy as it moved towards Salerno. He only had control of the actual air support to the landings on D-Day. This reflected the still-immature joint planning procedures of the Allied forces, which did not yet integrate air and ground operations effectively. Although aspects of the air support mission included planes from the Northwest African Strategic Air Force, the Northwest African Tactical Air Force, and the Coastal Air Command as well as the XII Air Support Command, ground forces commanders had no one headquarters that could resolve coordination issues that might arise in support of the entire operation.

Air missions in support of AVALANCHE began before the end of the Sicily campaign when Allied bombers struck Axis airfields south of Rome. So successful were these attacks that the Germans and Italians were forced to withdraw their own planes from all airfields below Rome except for those at the critical airfield complex at Foggia near the east coast. Daily air attacks on the enemy began in earnest in September with bombing over a wide area to prevent Axis intelligence from knowing the actual invasion site. The Allies were able to bring to bear about 350 heavy bombers, 400 medium day bombers, 120 medium night bombers and 670 fighters, a total of over 1,500 aircraft, in support of the operation. Although the Axis had similar numbers of planes, they were scattered all over Italy, Sardinia, Corsica and southern France. In addition, many of the Italian planes were obsolete and no match for the Allied aircraft while German planes suffered from a shortage of spare parts.



Lieutenant General Mark W. Clark, U.S. Army (left), Commanding General, Fifth Army, confers with Commander, Western Naval Task Force (TF 80) On board USS *Ancon* (AGC-4) during the landings at Salerno, Italy, 12 September 1943.

Naval gunfire support to the landings was to be provided by ships commanded by Vice Admiral H. Kent Hewitt, who was in command of the amphibious portion of the landings until both corps were established ashore and Lt. Gen. Clark could assume command of the land operation. His fleet was divided into a Northern Attack Force, primarily with British ships, under Commodore G. N. Oliver, Royal Navy, and Rear Admiral Richard L. Conolly, and a Southern Attack Force, mainly American ships, commanded by Rear Admiral John L. Hall. Hewitt's invasion fleet consisted of over 80 LSTs, 34 LCIs, 9 APAs (attack transports), and 4 AKAs (attack cargo ships) supported by 3 cruisers, 11 destroyers, and 8 mine sweepers. They were supported by naval gunfire and air from four Royal Navy battleships and two fleet carriers. From the bridge of his flagship, the *U.S.S. Ancon*, Admiral Hewitt would orchestrate the landings before surrendering control to Clark.

To aid in achieving a measure of surprise, the Allies launched two naval deception operations. One effort involved sending 16 Patrol Torpedo boats, a destroyer, 2 Dutch gunboats, and 6 motor launches into the Bay of Naples as a demonstration to distract the enemy from the real operation. The other mission involved four subchasers and five motorboats with a detachment from the 82d Airborne Division who were to cruise off the beaches in the Gulf of Gaeta near the Volturno River feigning a possible landing. Both missions were launched without incident on the 7th and 8th of September, the later mission also captured a German radar station on the island of Ventotene. Their actual impact on German perceptions was unclear.



LCVPs from USS ANDROMEDA (AKA-15) head for the Salerno beach, 9 September 1943.

In a further attempt to achieve surprise, in what a historian of the U.S. Navy called “the most unfortunate” decision, General Clark ordered that there be no preliminary naval bombardment of the Salerno beaches in the American sector. He hoped that the recent armistice made with the government of Italy would ensure no immediate opposition to the landings. Clark and Allied planners estimated that up to 100,000 German troops might be in place to attack the landings within three days, but it was possible that they would not move fast enough to attack the beaches immediately. As it happened, the Germans were well aware of the approach of the Allied convoy and the likely landing beaches and surprise was not achieved.

The landings near Salerno began early in the morning of September 9th. The Rangers hit the beach near Amalfi at 0310 along with the British Commandos who captured the town of Salerno against light opposition. The British X Corps, unlike their American counterparts, opened their landings with a heavy naval bombardment of the beaches. Nevertheless, they instantly faced strong opposition as they fought their way ashore on six beaches, from north to south, RED and GREEN, AMBER and GREEN, and another AMBER and GREEN.



USS CHARLES CARROLL (APA-28) is silhouetted against the glow of a burning ship, off the Southern invasion beaches on “D-Day,” 9 September 1943.



U.S. Army troops prepare to disembark from a coast-guard manned Navy transport, off Paesternum, just south of Salerno, September 1943.

To the south of the British landings, the U.S. 36th Infantry Division landed roughly on schedule near Paestum. The beaches, from north to south, were RED, GREEN, YELLOW, and BLUE. The troops landed without supporting naval gunfire and found the Germans in place and well-prepared for the invasion. Despite taking heavy casualties in the lead waves, the untested 36th was mostly ashore by 0610, strongly supported by the new DUKWS which quickly carried artillery ashore. No fewer than 123 such amphibious vehicles made it ashore in the first two hours of the invasion, considerably adding to the buildup of firepower. Contrary to Allied hopes and troops rumors after the Italian surrender, the invasion was to be no walk-over.

German infantry units successful slowed down the movement of Allied troops ashore and set the stage for an initial counterattack towards the beaches by the *16th Panzer Division*. Fifteen tanks from the German division attacked at 0700 and were only driven off by naval gunfire and artillery along with desperate attacks by infantry and engineers. Smaller German counterattacks during the rest of the day disrupted the landing beaches and slowed the movement of tanks and artillery ashore. However, by nightfall, the British X Corps was three miles inland and the U.S. VI Corps had advanced five miles to Capaccio. Disturbingly, however, both corps were still separated by the Sele River. They operated independently but both had open and vulnerable flanks.

The Germans rushed additional forces towards Salerno to contain the beachheads while retreating from the south of Italy as quickly as possible in the face of the British advance from Calabria. The *LXXXVI Panzer Corps* of the *Tenth Army* re-oriented its front rapidly and moved against the beachhead. General Vietinghoff believed he could crush the landings before the slow-moving troops of General Montgomery could advance to their rescue. This seemed like a possibility since the ever-cautious Montgomery halted his advance for two days starting September 9th to rest and resupply his forces.

Lt. Gen. Clark meanwhile pushed ashore his floating reserve from the 45th Infantry Division on September 9th and solidified the American position. However, the British X Corps faced heavy opposition in its sector. To help the British focus their efforts and prepare the way for the push to Naples, Clark moved the U.S. VI Corps boundary four miles to the north, stretching the area of responsibility for the 36th Division to thirty-five miles, well beyond doctrinal limits.

General Veitinghoff, perhaps sensing the weakness of the Allied perimeter, launched a series of strong counterattacks starting on September 13th. The *Hermann Goering* and the *15th Panzergrenadier Divisions* attacked the British sector while elements of the *26th* and *29th Panzergrenadier* and *16th Panzer Divisions* drove against the American lines. The German tanks pushed through American lines in the afternoon on the 13th, overrunning a battalion of the 36th Infantry Division and threatening the American rear. The situation was so tenuous that General Clark directed his staff to prepare a contingency plan for withdrawing the American units and moving them by sea over to the deeper British beachhead. However, American resistance stiffened in the evening with artillery, tank, and tank destroyer units blunting the German attack and driving them back. The Americans were greatly assisted by naval gunfire. General Veitinghoff reported to Marshal Kesselring that his offensive was mainly blunted by naval gunfire hitting “[w]ith astonishing precision and freedom of maneuver... at every recognized target with overwhelming effect.”

The situation at Salerno was still precarious, so General Clark directed that one regiment from the 82d Airborne Division immediately reinforce VI Corps. Seaborne reinforcements would take too long, so the airborne units were his only recourse. During the night of September 13th-14th, 1,400 soldiers parachuted into the beachhead to support the 36th Division, this time without suffering any attacks from friendly naval and ground anti-aircraft batteries.



Coast Guardsmen and Navy Beach Battalion men hug the beach at Paesternum, South of Salerno, as a German Bomber attacks, Sept. 1943. An explosion can be seen in the background.

German attacks continued the next day, but Allied bombers diverted from strategic missions into Germany pounded German resupply lines and slowed the movement of German forces into the area. Additional reinforcements arrived on the 14th. The British landed the 7th Armoured Division and the Americans brought ashore the 180th Infantry Regiment of the 45th Infantry Division. Not content with these forces, Clark ordered another regiment of the 82d Airborne to bolster the beachhead and 2,100 soldiers parachuted into the Allied lines that evening.

An airborne attempt to lessen the pressure on the British lines the evening of September 14th was less successful than the airborne reinforcing drops in the American sector. The 509th Parachute Infantry Regiment dropped some twenty miles north of the British X Corps lines to disrupt German lines of communication. Of the forty planes engaged in the operation, only fifteen were able to drop the paratroopers within four miles of their drop zones. Twenty-three planes scattered their men from eight to twenty-five miles from their targets. Of the 600 men who parachuted into the night that evening, only about 400 made it back to Allied lines several days later.

With his counterattacks failing and most German units facing Montgomery out of danger of being cut-off, Kesselring ordered the German units surrounding the beachhead at Salerno to begin an orderly delaying action and withdrawal to the north. Facing less resistance, the American and British units reorganized and reconstituted their forces, moved additional supplies and armored units ashore, and prepared to pursue the Germans. By September 19th, elements of the Fifth Army linked up with forward elements of Montgomery's Eighth Army at Auletta.

The Allies rapidly built up their forces in the Salerno beachhead from September 9th to October 1st as they began moving directly on Naples. Some 190,000 soldiers, 30,000 vehicles, and 120,000 tons of supplies came over the beaches in a major logistical operation. Troops already on hand in the Fifth and Eighth Armies were joined by the British 7th Armoured Division, the U.S. 3d Infantry Division, and the remainder of the 82d Airborne Division.



U.S. Troops, M-4 tanks and trucks come ashore near Salerno. USS LST-16 is at left, and USS LST-379 is at right. In the center is an early British LST, either BOXER, THRUSTER, or BRUIZER.

The landings at Salerno, while successful, were more costly than Allied planners had hoped. The Americans suffered some 3,500 casualties and the British over 5,500. The Germans had taken 3,500 casualties but had successfully blunted the Allied penetration long enough to withdraw their units to defensive lines north of Naples. The surrender of Italy had kept Italian forces out of the fight, but the Germans were determined to resist any movement up the Italian boot with all the forces at their command.

Withdrawing slowly towards Naples, Kesselring and Veitinghoff successfully slowed down the Allied advance towards that critical port. Clark ordered McCreery's X Corps to be the main effort, moving along the coastline towards Naples starting on September 23rd. VI Corps, now under the command of Maj. Gen. John P. Lucas, was ordered to move inland and protect McCreery's flank. In both instances, the rocky terrain and the skillful German defenders slowed down the Allied movements. Using every hill and bridge as a chokepoint, German defenders established roadblocks, forced the Allies to conduct deliberate attacks, and then withdrew a few hundred yards to yet another position. They also blew up bridges in the path of the Allied advance. On one seventeen mile stretch of road, the Germans destroyed twenty-five major bridges, forcing the Allies to ford a series of rivers against opposition and then build bridges to continue their movement.

Despite the slow movement, the British pushed past the suburbs of Naples on September 30th and by the next day the 82d Airborne Division was able to move into the city. The British closed on the Volturno River line a few days later. To their east, Montgomery's Eighth Army captured the airfield complex at Foggia. The seizure of Naples and Foggia, the two main objectives for the AVALANCHE landings, climaxed the campaign. The cost was high, however. The Allies suffered over 12,500 casualties, including 2,000 killed, 7,000 wounded, and 3,500 missing.

Attacks along the Winter Line

The fight for Italy was just beginning. The Germans were determined to hold onto their strategic position in the Mediterranean and tie down as many Allied divisions as possible. To accomplish the goals of successively delaying Allied movement to Rome, Kesselring and Veitinghoff established a series of fortified positions across the Italian peninsula from the Tyrrhenian Sea to the Adriatic. The first of these, the Barbara Line, roughly followed the Volturno River just north of Naples. The second, stronger line of fortifications was the Bernhard (or Reinhard) Line, fifty miles north of Naples along Monte Camino, Monte Maggiore, and Monte Sammucro. Stronger still was the Gustav Line, twelve miles north of the Bernhard Line, anchored on Monte Cassino and running along the Garigliano and Rapido Rivers. Collectively, the Allies called these defensive belts the Winter Line. The Germans planned to delay the Allies along the first two lines while additional work was done on the Gustav Line where Kesselring hoped to hold the Allies. Each line proved to be a formidable obstacle to the Allied advance.

When the Allies took Naples, they found that the Germans had systematically destroyed the port. Communications were removed, train tracks ripped out, bridges destroyed, and power grids demolished. Ships were sunk in the harbor to delay Allied efforts to open the port for business. Despite the extensive damages, however, Allied engineers were able to get the port partially reopened for traffic within a week of its capture. While much rebuilding was needed in the city, by the end of October almost 7,000 tons of supplies were coming through the port daily.

The advance of Fifteen Army Group north up the Italian peninsula ran into its first obstacle along the Volturno River. Varying in width from 150 to 200 feet and normally running three to five feet deep, the river was in flood stage in October 1943 and overflowing its banks. It was a major obstacle to movement. Behind the river, General Veitinghoff had 35,000 men of the *XIV Panzer Corps* facing the Fifth Army while the equally powerful *LXXXVI Panzer Corps* opposed the Eighth Army along the Trigno River.

General Clark ordered a general assault on the Barbara Line along the Volturno River for October 13th and 14th. Initially, Fifth Army attacked with two corps abreast, each employing three divisions. The Allies encountered strong resistance and purchased each inch of progress with blood. A feint executed by the U.S. 3d Infantry Division on VI Corps' left flank deceived the Germans and contributed to the initial success of the corps. The British 56th Division, repulsed in its zone, attacked through the 3d Infantry Division sector and joined the British 7th Armoured Division, the Desert Rats of North Africa fame, and the U.S. 45th Infantry Division north of the river. To the east, Montgomery's attacks also proved successful. But Veitinghoff had held the line until October 15th as ordered. He directed his soldiers to conduct a fighting delay northward to where the next major battles with the Allies would take place.

Clark slowly pushed forward of the Volturno River toward Rome. Fifth Army divisions moved in column, usually with a battalion leading each division. Progress was steady but slow. Determined resistance at a roadblock or ford often halted the advance, forcing units to struggle through the mountains to envelop the obstacle. When they finally conducted an assault on the position, the Allies frequently would find that the Germans had melted away. With the roadblock reduced or the ford secured, the units would resume their forward progress, perhaps to be halted only a few hundred yards farther on by another obstacle. In twenty days of fighting across a forty-mile front, Fifth Army forces advanced only between fifteen and twenty miles. When the Allies finally were able to push further north, they hit the Bernhard Line. During the Allies' long slog north from the Volturno River, German forces had laid 45,000 mines in that defensive line, and another 30,000 mines on its approaches. By the end of October, Rome was still a long way off.

The month-long struggle by the Allies in October as they advanced from the Volturno River to the Bernhard Line brought both Fifth and Eighth Armies near the point of exhaustion. The Allies had pressed the Germans continuously, maintaining the momentum of the attack. Since many of the Allied formations were soon due to be withdrawn from Italy to support the OVERLORD build-up, neither Clark nor Montgomery felt that they had the option of pulling units out of the line for rest and rehabilitation. Additional reinforcements would not arrive until December or January. However, on November 15th, succumbing to both weather and troop fatigue, Clark received approval to halt Fifth Army's progress for two weeks to enable his soldiers to rest, refit, and regroup.

Despite the slow movement up the peninsula, the Allied armies had already achieved a major strategic victory. The seizure of the air complexes at Foggia and Bari and a host of other airbases in the south of Italy allowed Allied bombers greater range against German targets. The newly captured fields would improve the strategic bombing of targets in Yugoslavia, the Balkans, Austria, Czechoslovakia, southern France, Poland and southern Germany which were difficult to reach from bases in England. Recognizing this increase in strategic bomber operations, the U.S. activated the Fifteenth Air Force in Tunisia on November 1, 1943 and quickly moved it to Italy. The Fifteenth Air Force, under the command of General Jimmy Doolittle, was formed by amalgamating the U.S. Twelfth Air Force with General Lewis H. Brereton's Ninth Air Force, placing both under General Doolittle. The new bomber command comprised some 90 B-24 Liberators and 210 B-17 Flying Fortresses. The Fifteenth Air Force operating out of Italy was to launch hundreds of missions against German targets throughout southern Europe. They were also available, as needed, for occasional support to tactical operations such as when the Americans later attempted a bold end run by landing at Anzio.



While Clark and Montgomery fought their way slowly from Naples north, Allied conferences were refining plans for 1944. The Allied foreign secretaries met in Moscow in October, laying the groundwork for the Four-Power Declaration that established the foundation for the United Nations. Meetings at Cairo with Roosevelt, Churchill, and Chinese Generalissimo Chiang Kai-shek and later with Stalin at Tehran from November 22nd to December 7th, confirmed plans both for OVERLORD and ANVIL/DRAGOON (the invasions of northern and southern France) for mid-1944. The agreements for both those major operations had a great impact on operations in Italy. General Eisenhower was named the commander of OVERLORD and would be leaving the Mediterranean. He would need to gather forces from Italy both for OVERLORD and ANVIL/DRAGOON in the near future, weakening Allied hopes to win decisively in Italy unless offensive operations were ramped up dramatically and quickly.

While planning a dramatic end run around the German defenses that would result in the Anzio landings late in January 1944 (Operation SHINGLE), Clark and Montgomery began a series of attacks on the Gustav portion of the Winter Line in mid-November. Eighth Army attacked their portion of the line starting on November 20th with a three-division attack that soon bogged down in the rain. The German defenses, as always, were skillfully deployed, tactical movement was torturously slow, and resupply of the forces over the muddy roads tenuous. By the end of December, Montgomery stopped his attacks well short of their goals and left for England to take command of the British and Canadian forces slated for OVERLORD. He was replaced by Lt. Gen. Sir Oliver Leese.

Clark's Fifth Army had no better luck. VI Corps on the eastern flank, soon to be pulled out of line to prepare for SHINGLE, attacked towards Monte Pantano while the British X Corps demonstrated along the Garigliano River to draw enemy attention towards them. U.S. II Corps attacked in the center of the Fifth Army front on December 2nd-3rd and quickly captured Monte Camino.

The Americans were aided in their attacks by extensive air support despite the bad weather. Some thirty-six Allied fighter-bombers hit the Germans at Monte Camino on November 26th while twenty-four B-26s dropped thirty-eight tons of bombs on the town of Casino in preparation for the attacks. Twenty-four P-40 Warhawks worked over Monte Maggiore for the next few days. On December 1st, XII Air Support Command launched 72 B-25s, 24 A-20s, 130 A-36s and 48 P-40s to bomb directly in front of Fifth Army positions.

The Americans held their position on Monte Camino despite furious German counterattacks and a week later pushed on towards San Pietro. In a bloody fight that lasted almost a week, the 36th Infantry Division of II Corps, assisted by the Italian First Motorized Group, battled the Germans on Monte Sammucro and in the ruined village of San Pietro. The Germans only withdrew from the sector on December 16th when the Americans seized nearby Monte Lungo after fierce fighting. The battles around San Pietro had cost the 36th Division 150 killed, 800 wounded, and 250 missing. The Italians, fighting on the Allied side by now, lost 84 killed, 122 wounded and 170 missing. It was an expensive victory.

The New Year brought some new hope but much discouragement to the Allies on the Italian peninsula. Progress had slowed to a crawl with battle being undertaken against strong German defenses and under miserable weather conditions. The Germans had reinforced their positions so that they had eleven divisions in southern Italy with another twelve in the north. The Allies had only fourteen divisions on hand with just two more due as reinforcements. In addition, several more divisions were about to leave the theater for the United Kingdom for OVERLORD or were slated to be pulled out of the lines in mid-year for ANVIL/DRAGOON in southern France. What military professionals call the “correlation of forces”, the ratio of attackers to defenders, was not particularly favorable for the Allies, especially given the mountainous terrain of the peninsula that favored the defense.

A switch in Supreme Allied commanders for the Mediterranean from Eisenhower to British General Sir Henry M. Wilson on January 8, 1944 seemed to provide hope that the situation in Italy might change in the new year. Wilson, following guidance from Churchill and Chief of the Imperial General Staff General Sir Alan Brooke, planned to use his forces more aggressively before they were removed for operations in France. Both General Alexander and Lt. Gen. Clark agreed with this new approach and hoped that a more ambitious attack plan could change the situation, break the German defenses, and seize Rome. SHINGLE, the end-run to Anzio, was dusted off as a very real possibility. When combined with a renewed offensive all along the Winter Line and the Rapido River, the Allies hoped to break the logjam.

Conclusions

Allied success in taking Sicily led to greater ambitions in the Mediterranean. Churchill, always pushing for operations on the periphery of the Axis empire before tackling German power in northern Europe, convinced Roosevelt to build on the success of Sicily and invade the Italian mainland. However, Allied hopes that the Italian surrender would allow Italy to fall into friendly hands without a fight foundered upon the reality of German moves that neutralized the Italian Army and organized a vigorous defense of the peninsula. While ceding southern Italy to the British almost without a fight, German commanders Kesselring and Vietinghoff skillfully withdrew their forces north of Naples while simultaneously neutralizing, for a time, the precarious landings at Salerno. Using the time gained by delaying operations, the Germans built formidable defensive lines that slowed and finally stopped American and British units just north of Naples. For the moment, it seemed as if operations in Italy had reached a stalemate.

Liberating Central Italy: The Anzio and Rome-Arno Campaigns

After significant victories in the Tunisia (November 17, 1942 – May 13, 1943) and Sicily (July 9 – August 17, 1943) Campaigns, the Allies continued their advance into Italy. This choice provoked contention between American advocates of the earliest possible return to France and British advocates of keeping the pressure on in the Mediterranean until a return to France was actually feasible. A compromise of sorts put off the invasion of France until the spring of 1944 and launched the Naples-Foggia Campaign (August 18, 1943 – January 21, 1944). Objectives of this campaign were to topple the government of Italian Dictator Benito Mussolini and replace it with a more favorable regime, secure shipping routes in the Mediterranean, gain the use of such strategic bases as Naples and Foggia, and draw German forces away from Russia and France. The campaign achieved these objectives. However, it also provoked a major German intervention in Italy, the disarmament of Italian units not loyal to Mussolini (whom the Germans rescued), and bitter fighting across southern Italy.

Plans and Preliminaries

By December 1943 the advancing Allies found themselves facing the formidable defenses of a “Winter Line” stretching across Italy from the Gulf of Gaeta to the vicinity of Ortona. Here the Germans skillfully exploited the difficult terrain, steep slopes and flooded streams of the Apennine Mountains to force the Allies into costly assaults for minimal gains. Icy wind, torrential rains and all too frequent cases of “trench foot” tormented the attacking Allied soldiers. Weather rendered artillery support less effective and frequently precluded air support altogether. Nevertheless the Allies pushed on, battering their way through such difficult objectives as Mount Camino, the Mignano Gap, San Pietro and Mount Sammucro. Hard fighting and heavy casualties brought them to a line roughly described by the Garigliano and Rapido Rivers. Here the Germans had established the so-called Gustav Line as the most formidable constituent of their Winter Line defenses. The imposing massif dominated by Monte Cassino towered over exposed rivers meandering through the valleys beneath. Exhausted, the Allies faced stalemate.



Camouflaged mobile anti-aircraft unit near San Pietro Infine.

Momentum for a change of approach in Italy came with the January 8, 1944 change of command in the Mediterranean Theater. General Dwight D. Eisenhower transferred to England to take command of preparations for Operation OVERLORD, the invasion of France. His successor in Algiers was British General Sir Henry Maitland Wilson. Eisenhower, heavily influenced by U.S. Army Chief of Staff General George C. Marshall, had for some time suppressed his appetite with respect to resources and expectations in the Mediterranean. Wilson, heavily influenced by British Chief of Staff General Sir Alan Brooke and Prime Minister Winton S. Churchill, favored a more aggressive approach. The rapid capture of Rome and a subsequent pursuit up the peninsula would comport with the peripheral strategy the British had long advocated, whittling away at the Axis in the Mediterranean before delivering a decisive blow. The Fifteenth Army Group, land component for the Allied forces in Italy, was commanded by British General Harold Sir Harold Alexander. He too favored speedily breaking the stalemate.

Churchill lent his considerable weight to efforts to revitalize the Italian Campaign. He secured reinforcements, and also landing craft that were to be available through January and sufficient for two divisions. Much of this was obtained by temporarily retaining assets otherwise earmarked for OVERLORD. A plan soon emerged calling on the U.S. Fifth Army, commanded by American Lieutenant General Mark W. Clark, to land the British 1st and U.S. 3d Infantry Divisions at Anzio, thirty-five miles southeast of Rome. These would be quickly reinforced by the U.S. 45th Infantry Division and elements of the U.S. 1st Armored Division. Prior to the landings at Anzio the rest of Fifth Army would attack into the Gustav Line, sixty miles further southeast, to draw off German reserves and support assets. The British Eighth Army would attack along the Sangro River and Adriatic Coast for the same purpose. The attacks into the Gustav line were scheduled for January 17th. The landings at Anzio were scheduled for January 22nd. If the landings unhinged German defenses further south, a speedy link up between the Anzio and Gustav Line forces would result, followed by the capture of Rome.



General Dwight D. Eisenhower exits an airplane and shakes hands with General Mark W. Clark at the Pomigliano Airfield, Italy.

Along the Gustav Line, Fifth Army deployed the British X Corps on its left along the Garigliano, the U.S. II Corps in the center along the lower Rapido, and the French Expeditionary Corps (FEC) on its right from the upper Rapido to the spine of Italy northwest of Isernia. The British Eighth Army stretched from there to the Adriatic Sea with the XIII Corps on its left and center and the V Corps on its far right. The boundary between the British X Corps and the US II Corps roughly centered across from the Liri River Valley. This lay along the most direct and usable route from southern Italy to Rome, and featured roads and railroads as well the river. Monte Cassino over watched the juncture of the Liri, Rapido and Garigliano Rivers.

The British X Corps attacked across the Garigliano on January 17th. Surprising the Germans, the 5th and 56th Divisions quickly landed ten battalions on the far bank. As the bridgehead expanded, the German *XIV Corps* commander urgently requested reinforcements. Field Marshall Albert Kesselring, the German commander in Italy, dispatched two *panzergrenadier* divisions he had held in reserve near Rome. These proved sufficient to contain the British bridgehead, and to repulse an attempted crossing by the British 46th Division on January 19th. Meanwhile the French Expeditionary Corps attacked and gained some ground in its sector and the British Eighth Army tied up more than a half dozen German divisions along its front.

Ideally the attacks by X Corps and the FEC would have cleared the flanks for a U.S. II Corps assault across the Rapido River scheduled for January 20th. Unfortunately, neither the British nor the French advanced far enough to push the Germans from heights overlooking the proposed crossing sites. Uninterrupted artillery coverage precluded II Corps from staging boats or bridging equipment forward prior to the assault. Instead the assaulting infantrymen of the 36th Infantry Divisions had to carry the boats several miles through the darkness on the night of the attack. Engineers pushed forward bridging later. The regiments of the 36th were understrength and contained many incompletely assimilated recruits and inexperienced small unit leaders due to losses in the earlier fighting. The omens for this difficult attack under unrelenting enemy fire were not good. Nevertheless Clark insisted that it go forward, as he was determined to draw as much German attention as possible away from Anzio.

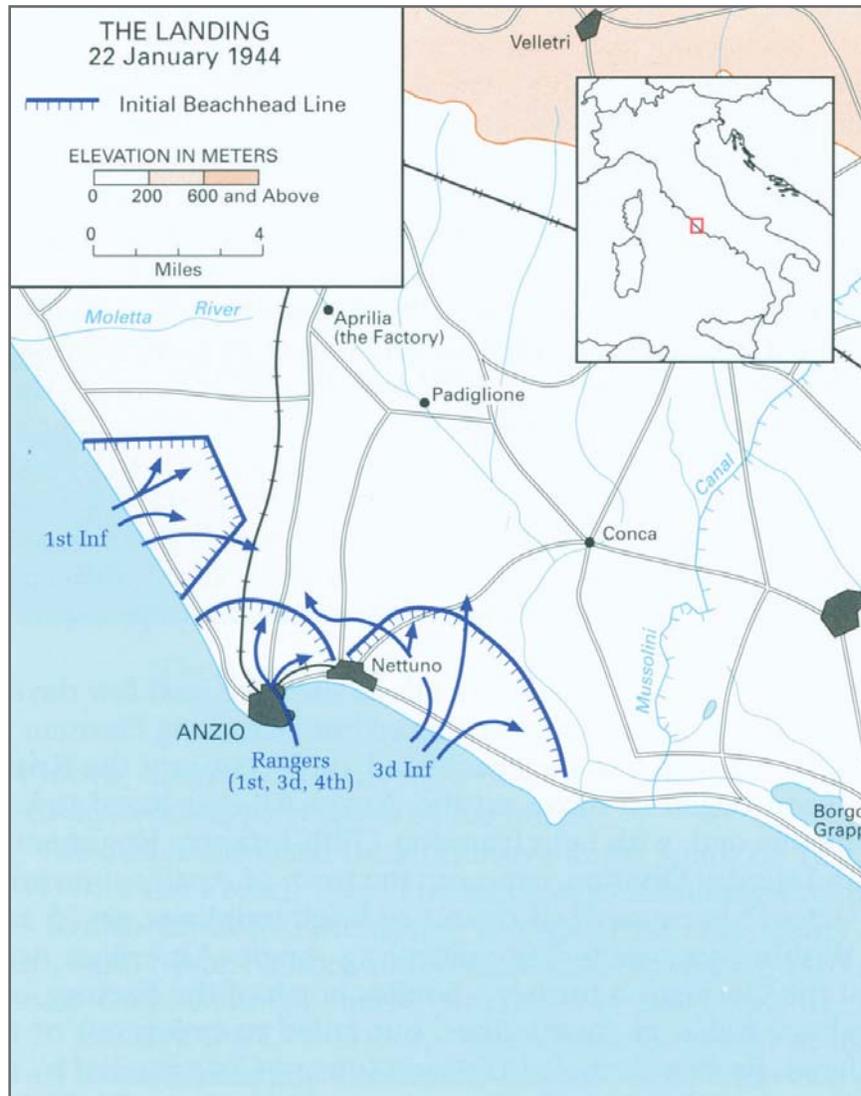


Firing a mortar during the successful Rapido River crossing on 24 January 1944.

The 36th Infantry Division's assault across the Rapido River on the evening of January 20th turned into a nightmare. An artillery barrage of 31,000 shells had little effect on the well dug in enemy. The 141st and 143d Infantry Regiments each managed to get small contingents across the river, but these could not be supported as enemy fire destroyed so many boats and precluded bridging. Casualties were horrific. Clark ordered a renewed assault on the evening of January 21st. This failed as well. What bridging did get into the water was broken up by German artillery or swept downstream by the rapid current. After relentlessly pounding the bridgeheads the Germans counterattacked. American infantrymen unable to escape back across the river were killed or captured. In two days of lop-sided fighting the 141st and 143d Infantry Regiments suffered 2,128 casualties. German losses were negligible.

Anzio: January 22 – May 10, 1944

Clark took responsibility for the fiasco along the Rapido River, but did not characterize it as a mistake. The U.S. VI Corps, with the Germans distracted, landed virtually unopposed at Anzio and nearby Nettuno beginning at 0200 on January 22nd. The 1st, 3d and 4th Ranger Battalions seized Anzio and the U.S. 509th Parachute Infantry Battalion Nettuno, while the British 1st Division with attachments landed north and the U.S. 3d Infantry Division with attachments landed south of these two towns. The U.S. 45th Infantry Division and Combat Command A of the U.S. 1st Armored Division soon reinforced the emerging beachhead. MG John P. Lucas, VI Corps commander, pushed the combined forces over seven miles inland during the next several days. The British 1st Division seized Aprilia and approached Campoleone while the U.S. 3d Infantry Division secured Conca and reached the outskirts of Cisterna. Meanwhile Allied pilots operating from Naples and Foggia sustained air superiority over the beaches, and Allied air defenses brought down almost a hundred German planes.





"Anzio Harbor Under German Bombardment" by Edward A. Reep

Despite surprise and initial success, Lucas was cautious as he moved inland. He and Clark were aware that the Germans had twenty-three divisions in Italy, and that less than half of their troops were committed to the fighting in the south. At the turn of the year 215,000 Germans were fighting in the south whereas 265,000 were in Italy but not yet committed. Resistance around the Anzio perimeter was negligible at first, but quickly increased. Clark accepted Lucas' request that he be allowed an operational pause from January 26th-29th to build up forces, sort out logistics and dig in in case of a major counterattack. Churchill and other advocates of the Anzio landing had anticipated a daring thrust through the Alban Hills and beyond, severing communications to the south and provoking a dramatic operational collapse. Clark, limited by landing craft to a two-division assault and constrained logistics, was skeptical of such overly grand ambitions. Clark saw the wisdom of caution, and Lucas embraced it.

The German did react quickly and in mass. Within twenty-four hours four German divisions were converging on the beaches despite delays caused by Allied air attacks. Meanwhile the Germans dispatched further forces from Northern Italy, France, Germany and Yugoslavia. The *Fourteenth Army* under General Eberhard von Mackensen redeployed from Verona to take over the battle for the beachhead, relieving the forward deployed *Tenth Army* under Lt. Gen, Heinrich von Vietinghoff of that concern. As Lucas and Clark feared, the German build up progressed more quickly than that of the Allies. By month's end the Allies had landed over 61,000 men with thousands of tons of supplies and put the port of Anzio into full operation. This was nevertheless short of the more than 70,000 men *Fourteenth Army* had amassed around the beachhead. It was of little immediate comfort to Allied soldiers on the beaches that the Germans badly depleted reserves elsewhere to stop them at Anzio.

Sicily-Rome American Cemetery



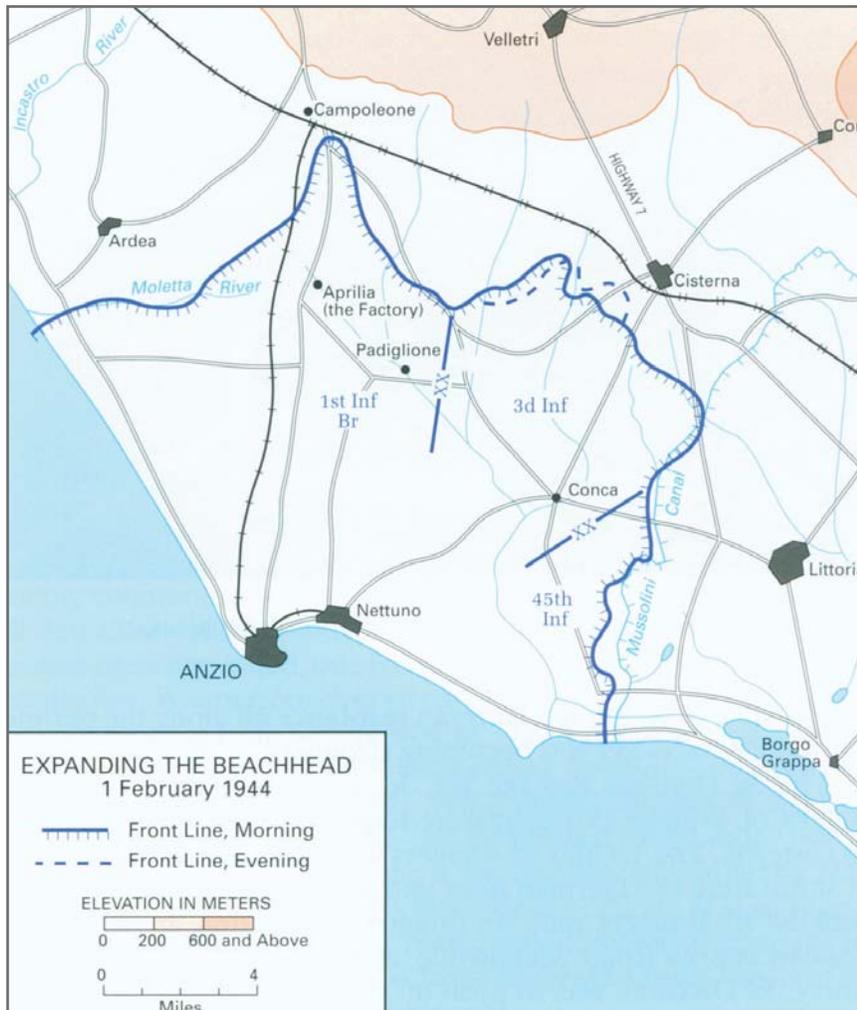
The cemetery entrance is through an elaborate ornamental iron gate. To the right of the entrance is the visitor center, reception area and public restrooms. Directly ahead of the entrance is a flowering lily pond with a small island of Italian cypress trees in the middle. Beyond the pond is a gentle rising slope that encompasses 7,858 burials arranged in arcs beneath rows of Roman pines. A wide central mall leads to the memorial, which is rich in works of symbolic art and

architecture. On the white marble walls of the chapel are 3,095 names listed as missing in action, lost at sea, or buried at sea. The map room contains a bronze relief map and four fresco maps depicting military operations in Italy from 1943 to 1945.

The visitor center contains artifacts, films and interactive displays that help explain the significance of Allied operations in Italy during World War II.

Lucas attempted to regain the initiative on January 30th with attacks to seize Cisterna and Campoleone. At Cisterna the Americans came up against thirty-six German battalions concentrating for an attack of their own. The 1st and 3d Ranger Battalion were virtually annihilated when attempting to infiltrate behind German lines. They were caught in the open by these far superior forces, including tanks. Some 761 Rangers were killed or captured in this abortive attack, and many of the prisoners were later paraded through Rome by their captors. The U.S. 3d Infantry Division, to which the Rangers were attached, continued to attack through the following day with little progress. Lucas, benefitting from further intelligence and correctly sensing a major German counterattack, ordered his forces to dig in. At Campoleone the British 1st Division supported by CCA of the U.S. 1st Armored Division had advanced several miles and opened a gap, but was unable to push further.

By now Alexander, Clark and Lucas all anticipated a major counterattack, and did what they could to rush reinforcements to Anzio. Elements of the British 56th Division went in, as did the American-Canadian 1st Special Service Force, commanded by Col. Robert T. Frederick. By February 4th the Allies had 100,000 troops in the perimeter, but the Germans still outnumbered them. The Germans attacked near Campoleone following a brief but intense artillery barrage. The British 1st Division held, but was badly punished and dangerously exposed. Lucas ordered it to withdraw two and a half miles to a more defensible line over the night of February 4th-5th. Meanwhile Lucas set about organizing a final beachhead defense line to the rear from which there could be no retreat. German attacks other than at Campoleone were on a lesser scale and achieved fewer results.

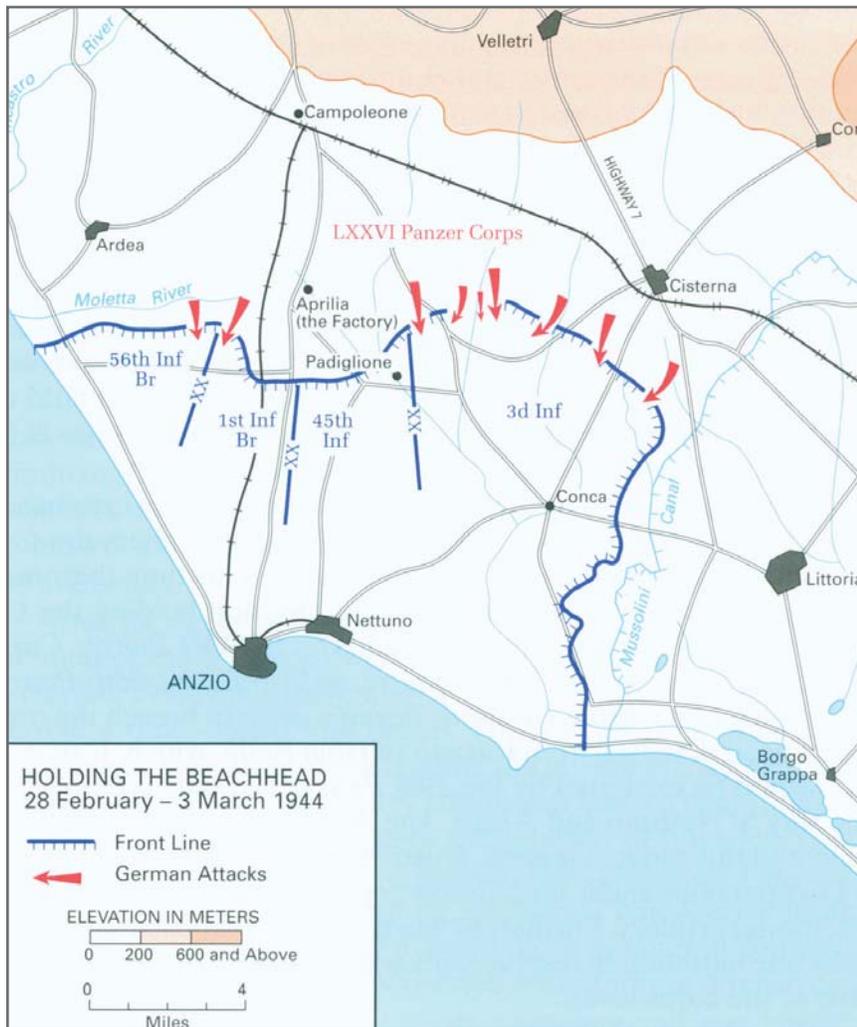


The Germans attacked the British 1st Division again, driving it back from Aprilia and Carroceto. Lucas reinforced the embattled British with American units, including two regiments from the U.S. 45th Infantry Division. These reinforcements attempted to retake Aprilia, but failed after two days of fierce hand to hand fighting. This fighting further depleted the attacking German units, who had already taken heavy casualties. Lucas replaced the British 1st Division with the newly arrived British 56th, and committed the entire U.S. 45th Infantry Division on line.

On February 16th the Germans attacked again, this time hitting the 45th Infantry Division. The initial attacks were repulsed, but around midnight sixty tanks and three enemy regiments pushed through a gap created between the 179th and 157th Infantry Regiments. By morning the Germans had driven a two-mile wedge into the 45th Infantry Division, and that afternoon the 179th took heavy casualties attempting to withdraw to more defensible terrain. Lucas scrambled to plug the emerging gap with 90-mm antiaircraft guns, naval gunfire, air strikes, and hastily redeployed units of the U.S. 1st Armored Division. The Americans were forced back to Lucas' final defensive line but held. A German drive on February 18th halted in the face of massed naval gunfire, artillery, tank, mortar, antiaircraft, machine gun, and small arms fire and air strikes. German attacks over the following two days were smaller and more readily repulsed. In five days of fierce fighting the Germans lost almost 5,400 and the Allies 3,500 killed, wounded and missing. This was not an exchange the Germans could long afford.

Despite the losses Mackensen decided to attack again, this time through Cisterna. Here he gathered a *panzer* corps and seven divisions. Lt. Gen. Lucian Truscott, who had fought in this sector as the 3d Infantry Division's commander, assumed command of VI Corps from Lucas on February 23rd. He anticipated Mackensen's next attack, and massed artillery in the threatened sector. He also had his troops dig in and prepare for a defense in depth. Lucas' earnest earlier attention to logistics paid off. When the German artillery opened up at midnight February 28th-29th, Truscott smothered it with 66,000 rounds of his own in a single day. An estimated twenty American artillery rounds went out for each one fired by the Germans. Attacking German troops were similarly met by hurricanes of well-coordinated American fires. Fighting was fierce and limited penetrations occurred in some places, but the results were a lop-sided defeat for the Germans. Mackensen gave up and went over to the defensive on March 4th.

Exhausted from six weeks of brutal combat, Allied forces in the Anzio beachhead and the German forces facing them ceased major offensive operations. Both sides improved upon their defenses, refurbished depleted units, brought in reinforcements, built stockpiles, dispatched combat patrols, and prepared for the anticipated Allied spring offensive. The British 56th Division redeployed out of the beachhead to Egypt, and the British 5th Division and U.S. 34th Infantry Division deployed into it. Elements of the 1st Armored Division that had not yet deployed into the beachhead did so, bringing the division up to full strength. This gave the Allies six full divisions, the American-Canadian 1st Special Service Force, and supporting units within the beachhead.





Fifth Army, Nettuno Area, Italy. Men of the 1st Armored Regiment, 1st Armored Division unload used shell casings, used in breaking up one of the many German counter attacks on the beachhead.

During March and April 1944 life in the beachhead bore similarities to the Western Front during World War I. Troops disappeared into labyrinths of interconnected trenches, bunkers and dugouts. Casualties were relatively light, and the overwhelming majority of those that did occur resulted from shrapnel and shell fragments. Logistics became routine. Six LSTs each carrying 1,500 tons of supplies distributed across fifty trucks left Naples daily. Upon arrival the fifty trucks drove off across the beachhead to designated delivery points, and fifty trucks dropped off the previous day loaded back onto the LSTs for the return journey. Smaller vessels made deliveries as well, and four Liberty ships showed up every ten days to deliver heavy equipment. Between January 22nd and June 1st, the Allies unloaded over 530,000 long tons at Anzio. Much of this was in anticipation of an upcoming breakout.

Right: A Sailor lives with his dog at a U.S. Navy salvage depot on Anzio Beach-Head, 15 April 1944. Note sandbag bunker, army-type uniform, and blue navy jacket.



Below: USS LST-77 lands Fifth Army M-4 "Sherman" Tanks on the Anzio Waterfront, 27 April 1944.



Along the Gustav Line: January 22 – May 10, 1944

While fighting raged around the Anzio perimeter, the Allies continued their attacks into the Gustav Line. Attention focused on the town of Cassino, Monte Cassino behind it, and the massif of which Monte Cassino was part. Seizure of this strategic terrain would expose the route up the Liri River Valley, now critical both to relieve beleaguered Anzio and to push on into Rome.

On January 26th the U.S. 34th Infantry Division crossed the upper reaches of the Rapido River while attempting to outflank Cassino to its north. Assisted by the French Expeditionary Corps (FEC) and reinforced with a regiment from the U.S. 36th Infantry Division, the division penetrated several miles and gained a foothold on the northeastern slopes of Monte Cassino. It did not break through the Gustav Line, however, and its costly attacks ground to a halt with the enemy still in possession of the critical high ground. Meanwhile the British X Corps again attacked out of its Garigliano bridgehead, but also made little progress.

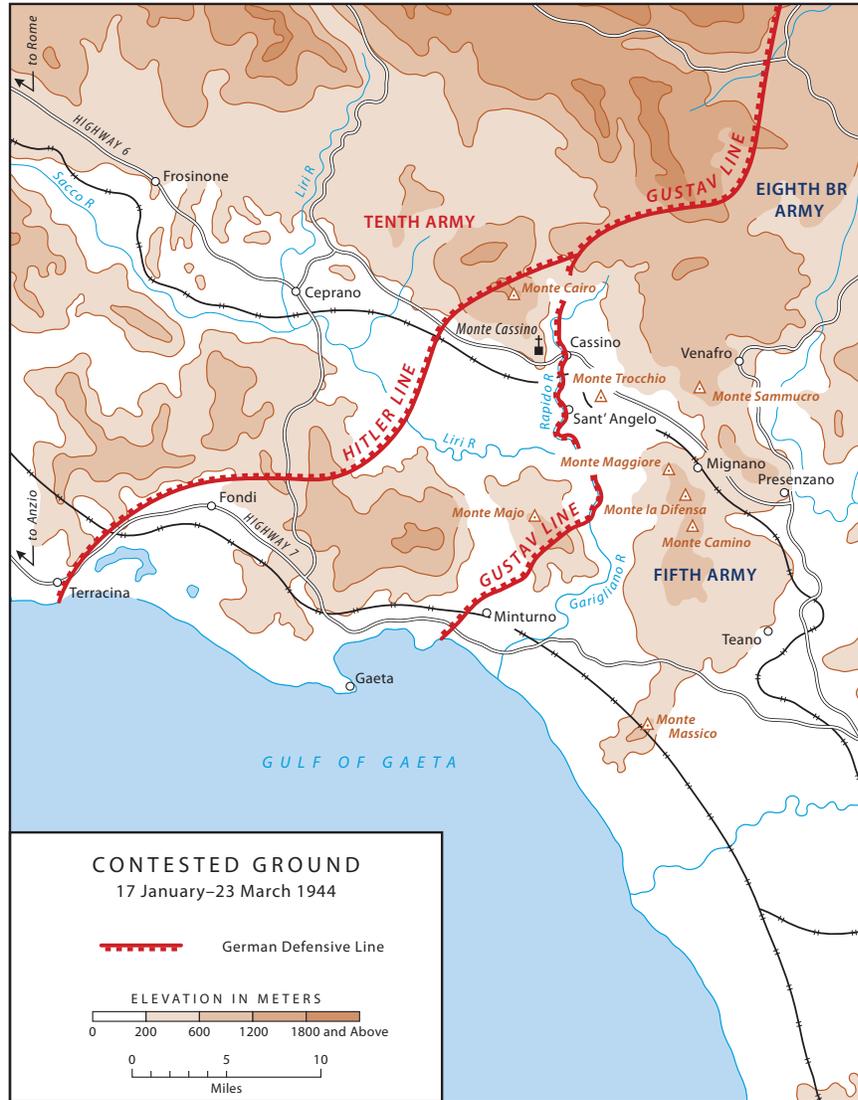
The 34th Infantry Division renewed its attacks in early February, shifting its focus to the town of Cassino. It encountered fierce resistance as it inched forward to assault one dug-in position after another. Sturdy houses and deep cellars greatly assisted the defenders, as did their use of observation posts on the surrounding high ground to bring in artillery fire. American artillery pounded Cassino into rubble, yet the Germans fought on from the ruins. The 34th Infantry Division made a final effort on February 10th, but the drive ground to a halt amidst exhaustion and heavy casualties.



Monte Cassino Abbey. Liri Valley, the so-called Gateway to Rome, is on the left.



The newly formed New Zealand Corps, commanded by Lieutenant General Bernard Freyberg, took up the sector and the fight. Freyberg believed the Germans were making illicit use of the historic monastery on top of Monte Cassino, founded by Saint Benedict in 524 A.D. In reality the Germans had refrained from posting observers in the monastery itself, but the Allies did not know this. Freyberg requested a massive air bombardment to demolish the monastery along with other German positions along the high ground. Clark balked at bombing such a



sacred place, but passed the request along to Alexander. Alexander, supported by Wilson, approved. On February 15th, after leaflets had been dropped to warn away civilians, seven bomber groups dropped 1,150 tons of explosives and incendiaries on the abbey. It became a smoking ruin. In the wake of the bombing the 4th Indian Division assaulted Monte Cassino and the 2d New Zealand Division pushed further into Cassino. The Indians were bloodily repulsed by German defenders in the ruins of the monastery, and the New Zealanders made limited headway. Like its predecessors, this drive ground to a halt with heavy casualties.

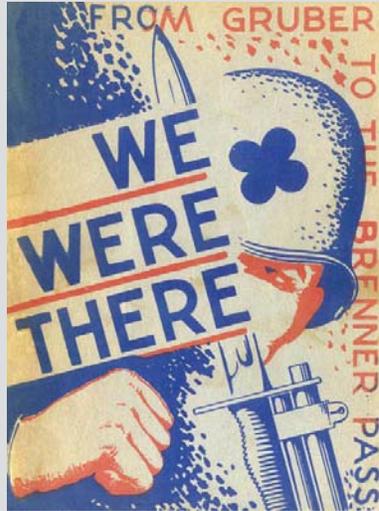
Freyberg reorganized and tried again on March 15th, driving along the Rapido River valley from the north. The Allies assaulted in the wake of another 200,000 rounds of artillery and 1,200 tons of explosives. Stunned by the pounding and having suffered heavy casualties themselves, the Germans nevertheless emerged from bunkers and basements to fiercely contest the advance. The attack stalled, in part because bomb craters and rubble impeded movement. Heavy rains filled craters and turned open ground into a morass. The Germans reinforced their determined defenders, and the British 78th Division reinforced the attackers. Bloody fighting progressed from house to house through the town of Cassino. Progress was slow. On March 23rd Alexander called off Freyberg's assault, judging it too costly for the results being achieved. By this time the Indians had lost 3,000 and the New Zealanders 1,300 casualties.

Stalemated at both Anzio and along the Gustav Line, Alexander paused to refurbish and reinforce his armies and prepare for a spring offensive. By late April the Fifth Army numbered over 350,000 and the Eighth Army over 265,000. Within Fifth Army the FEC added the 4th Moroccan Mountain and the 1st French Motorized Division and U.S. II Corps added the U.S. 85th and 88th Infantry Divisions. The 85th "Custer Division" was commanded by Maj. Gen. John P. Coulter and the 88th "Blue Devils" by Maj. Gen. John E. Sloan. These were the first of the U.S. "drafted divisions", activated after Pearl Harbor to enter combat, and thus an important test of American mobilization and training policies. The multi-national Eighth Army featured three British, three Indian, two Canadian, two Polish, a New Zealand, and a South African Division and an Italian Motorized Group spread across five corps. Twenty Allied divisions accumulated along the Gustav Line. Meanwhile the U.S. 36th Division was to redeploy to Anzio, bringing the strength within that perimeter up to seven divisions and the American-Canadian 1st Special Service Force.

The Germans were hardly idle. They gathered 365,000 troops to directly oppose the Allies from formidable positions, and had 412,000 troops in Italy overall. They back stopped the Gustav Line by constructing a so-called Hitler Line five to ten miles to its rear. Nine divisions manned these new defenses. They also began work on a so-called Caesar Line stretching along the north side of the Anzio perimeter and through Velletri and Valmontone to block routes from Anzio or the Liri Valley towards Rome. The Allies attempted to disrupt German preparations with an intense bombing and strafing campaign named Operation STRANGLE. This conducted 65,000 missions and dropped 33,000 tons of bombs on German road, rail and sea routes. Damage was substantial, but the Germans were able to repair most of it and push on with efforts to resupply and reinforce their front – albeit with more delays and greater difficulty.



The “Draftee Divisions”



Prior to 1941 the U.S. Army had nine Regular and ten National Guard infantry divisions at widely varying levels of strength and preparedness. In 1941 it added two Regular and eight National Guard infantry divisions more, at least on paper. After the Japanese attack on Pearl Harbor, it added thirty-six more infantry divisions. These new divisions were characterized as Army of the United States (AUS) or “draftee divisions”. They initially consisted of small cadres of experienced soldiers and great masses of conscripted soldiers delivered up by the Selective Service.

The 88th Infantry Division, for example, was to have a strength of 15,007. It stood up with 197 cadre officers, two-thirds of them junior, and less than two hundred NCOs who had been in the Army for more than three years. To this it added 427 recently commissioned OCS (Officer Candidate School) officers and about a thousand soldiers with a year or so of service to assist with “housekeeping”. The rest of its manpower consisted of newly inducted draftees who poured across the railroad siding at Camp Gruber, Oklahoma, as the division activated in July 1942. These had to be organized, equipped and trained “from the ground up”.

The pre-war Army had given considerable attention to mobilization planning, drawing on lessons learned during World War I. The result was the comprehensive and highly structured Army Training Program, or ATP. In a little less than a year it took units from activation through basic, individual, unit, combined arms, and large-scale maneuver training. If properly executed without interruption, training was steady, purposeful and progressive. An important aspect of it was a “train the trainer” mentality, wherein experienced officers and NCOs trained inexperienced subordinates to in turn train their men. Sometimes leaders were teaching something they themselves had learned but the day before, but the chain of command was reinforced by insistence that the trainer and leader of a unit be the same soldier.

By the time the draftee divisions reached the advanced stages of their training, American industrial mobilization had reached a point that kept them well supplied. They had fifty percent of their heavy equipment from the outset, and this proved sufficient to get them through the earlier phases of training. By the time they needed more for ambitious maneuver training, they had it. Supply per se was seldom a problem. Indeed, ammunition expended in training was lavish. Many troops ate better and enjoyed better medical care than they had as civilians. The greatest single logistical obstacle for the new divisions was learning how to properly maintain all the materials and equipment they now had on hand. War had never been so mechanized, and organization and training had to adjust accordingly.

The draftee divisions were trained and equipped to be powerful combinations of infantry and artillery. These were areas of expertise in which they demonstrated considerable skills even in their first introductions to combat. Cooperation with armor and air strikes had to be honed on the battlefield, as the relevant equipment had not been much present in their stateside training. Nevertheless the draftee divisions learned the lessons of combat quickly, and soon measured up to the standards set by their most experienced counterparts. Constructed amidst the crisis of war with men who responded to the call of duty rather than volunteering for it, the draftee divisions proved capable and invaluable in carrying the weight of the nation’s combat requirements.

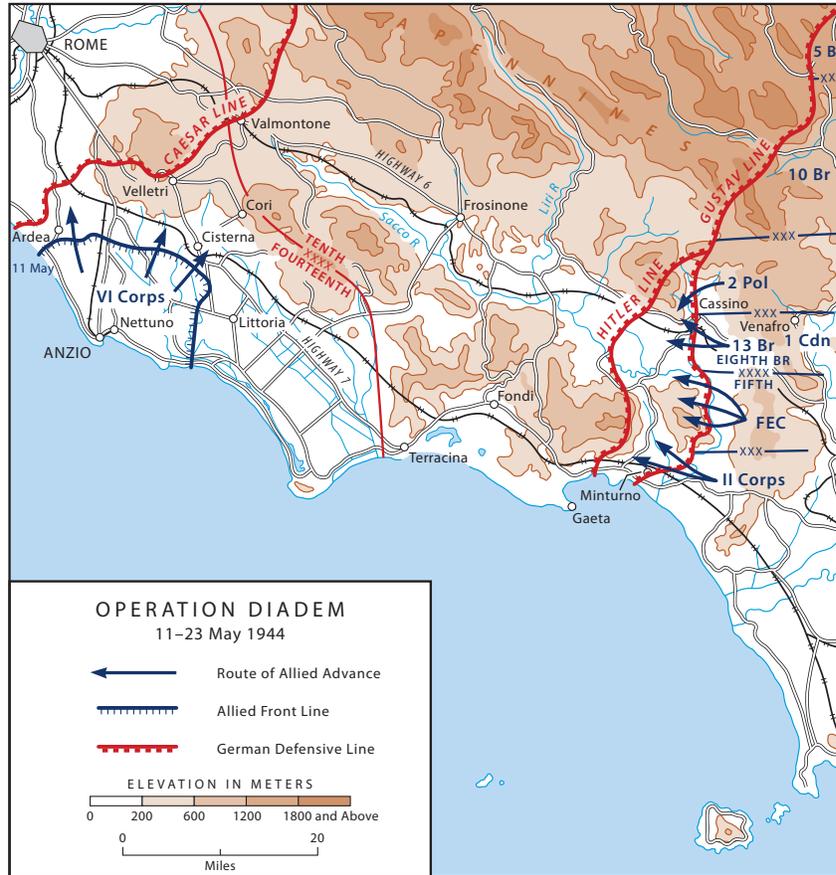
Operation DIADEM: May 11-22, 1944

At 2300 on May 11th the Allies launched a massive attack into the Gustav Line. Deafening barrages from over 1,660 artillery pieces preceded the main assaults. Seeking concentration, Alexander had crammed all but four of his divisions into the narrow sector between Monte Cassino and the Tyrrhenian Sea. The Polish Corps was to seize Monte Cassino while the British XIII Corps forced the lower Rapido River and pushed up the Liri River Valley past Cassino to penetrate the Gustav and Hitler Lines. The Canadian I Corps was in reserve to exploit the success of this main attack. The FEC and U.S. II Corps were to conduct supporting attacks to tie the enemy down in front of them and cover the left flank of Eighth Army's advance. Once the Allies made appreciable gains in their attacks up the Liri Valley, the seven divisions wedged into Anzio were to break out and link up with them. The combined armies would then cut off and annihilate the German *Tenth Army*, liberate Rome, and assure the Germans opposing the upcoming OVERLORD invasion of France got no reinforcements from Italy.

The Allied main attack soon bogged down in an all too familiar pattern. The British XIII Corps did establish two bridgeheads across the Rapido but stalled in the face of German reinforcements, thick interlacing fires, and artillery controlled by observers on the high ground. The initial Polish attack on Monte Cassino failed with heavy casualties. Fortunately for the Allies, successful American and French supporting attacks in the rugged Aurunci Mountains to the south of the Liri Valley tipped the scales in their favor. Troops of the U.S. 88th Infantry Division followed close behind well-synchronized artillery fire to seize the critical Mount Damiano within fifty-five minutes of their initial assault. They captured Mount Rotondo the following day, and the key village of Sante Maria Infante after three days of savage fighting. The French-led 4th Moroccan Division overran Mount Majo with similar speed and decisiveness, and the U.S. 85th Infantry Division battered its way into Castellonora and onto Monte Penitro by 15 May.



Fifth Army, Coreno area, Italy. Light and Medium Tanks, in Coreno, one hour after its fall, await word to continue advance



The Germans had counted on the tortured terrain of the Aurunci Mountains to enable their defenses. They manned it thinly, concentrating their forces on the far more trafficable Liri River Valley. Along the Liri mechanized units could be used, and defenses organized into interlocking kill zones and fields of fire. Ironically, mountain-wise French colonials and enterprising Americans turned the badly broken up and compartmented lunar landscape of the Aurunci to their advantage. Lines of sight extended miles in some directions and meters in others. It was hard for defenders to achieve mutually supporting direct fires. The Americans and French took advantage of defiladed approaches, dead space and trafficable ridge lines to force penetrations. The Allies had considerable advantages with respect to indirect fires, and pushed their artillery forward. Once the outer crust of the German defenses cracked, the battle disintegrated into hundreds of small unit engagements as infantrymen made contact, called for fire, and assaulted within one miniature terrain compartment after another.



The ruins of Santa Maria, Infante.

Having broken through the Gustav Line around Mount Majo, elements of the FEC hooked north towards the Liri River Valley. This threatened to unhinge the German defenses around Cassino, and Kesselring threw two of his four reserve mechanized divisions into efforts to block the French advance. French units shifted ever further westwards along the southern wall of the Liri Valley, rendering the German hasty defenses intended to contain them impossibly elongated. Facing encirclement, the Germans defending Cassino began to withdraw. The British XIII Corps broke through the German defenses, closely followed by the Canadian I Corps. After ferocious fighting for Monte Cassino on May 17th, the Polish Corps secured it virtually unopposed the following day. The Germans fought stubborn rear-guard actions and maneuvered to reposition themselves into the defenses of the Hitler Line ten miles to their rear. The British XIII Corps and Canadian I Corps closed to the Hitler Line, but found it too formidable to immediately break through in their sector.

While the Eighth Army and most of the FEC contested the Liri Valley, other French units and the two American draftee divisions pushed directly into the Aurunci. Avoiding roads and low ground where they could be bottled up, they moved along the ridge lines where possible. Communications proved difficult, so daring artillery spotters in their tiny planes relayed radio signals and dropped written missives. Difficult positions were by-passed, left to be mopped up later. The egress from the Aurunci onto the coastal highway was at the town of Itri, dominated by nearby Mount Grande. The 88th Infantry Division closed on both by the evening of May 18th, but had outrun its artillery. Fortuitously the 85th Infantry Division had opened a usable route along the coast in its sector, and both divisions crammed their artillery onto this narrow perch. This proved to be close enough, and Itri and Mount Grande fell to spirited assaults the following day.

Itri was about seven miles from Fondi, a key position in the Hitler Line. Alarmed by the capture of Itri, Kesselring dispatched the uncommitted *29th Panzergrenadier Division* to reinforce Fondi at about the same time the 88th Infantry Division launched a regimental combat team towards the same objective. Marching cross country at an accelerated pace, the dismounted Americans made it to the town before the mechanized Germans. A mixed bag of Germans retreating from the Gustav Line held the town, and mounted a defense oriented on the main road into it. Sensing this, the American commander launched a fixing attack down the road while sending his main attack on a wide loop through the hills to the north. The tactic worked, and the flanking attack quickly routed the German defenders. By the time the *panzergrenadiers* reached Fondi, the Americans were dug in and covered by artillery.

The *29th Panzergrenadier Division* retired on Terracina, closely followed by the 85th Infantry Division. Meanwhile the 88th Infantry Division pushed on along Mount Alto and the spine of the Ausoni Mountains to seize Roccasecca del Volci in the evening of May 22nd. This village enjoyed breathtaking views sweeping from the mountains to the Tyrrhenian Sea and along a main lateral route between the Liri River Valley and the coast. Now it was the Americans who perched on the dominant high ground with their battle-disordered enemy spread panoramically beneath them. As soon as the Americans' artillery pulled within range, everything the Germans held south and east of Roccasecca would be untenable.

DIADEM Continues: Anzio and Rome, May 23 - June 4

The Allies launched their assault out of the Anzio beachhead at 0545 on May 23rd. The U.S. 1st Armored Division, U.S. 3d Infantry Division and American-Canadian 1st Special Service Force attacked towards Cisterna and Valmontone in the wake of an intense forty-five-minute artillery barrage. Meanwhile the U.S. 34th and 45th Infantry Divisions pushed towards Campoleone and Velletri and the British 1st and 5th Infantry Divisions secured the Allied left flank. The U.S. 36th Infantry Division served as a reserve and potential exploitation force. The U.S. XII Tactical Air Command flew 722 sorties in support of the assault. Resistance was fierce, but the 1st Armored Division and 1st Special Service Force broke through the main line of resistance by the end of the first day. The next day the attacking troops isolated Cisterna, and then seized it the day after that.

Meanwhile the U.S. 85th and 88th Infantry Divisions continued their thrusts from the south. On May 25th a motorized task force from the 85th Infantry Division that had raced past Terracina and across the Pontine Marshes linked up with the 36th Engineer Combat Regiment from the Anzio beachhead at Borgo Grappa. This reunited the Fifth Army and ended the isolation of Anzio as a separated campaign. The link up was tenuous at first, because the 85th and 88th Infantry Divisions had bypassed numerous units in their precipitous advance. Indeed, for several days more fighting was going on behind their lead elements than in front of them, and the bulk of their combat units were committed to mopping up rather than moving forward. Persistence and numbers paid off, and the routes connecting the erstwhile southern front with Anzio became ever more secure.

Sergeant Sylvester Antolak, 15th Infantry Regiment, 3d Infantry Division

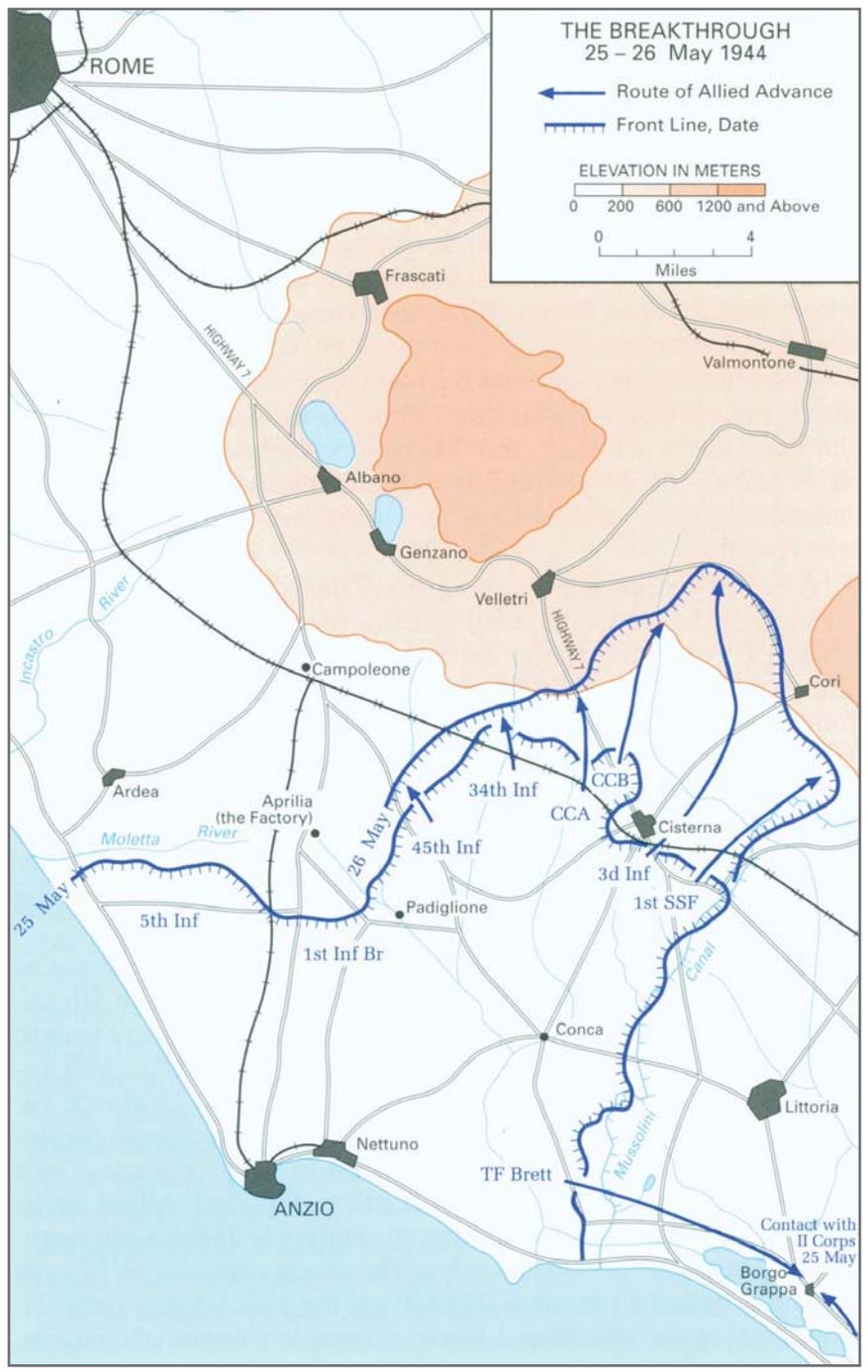


Sylvester Antolak was born in St. Clairsville, Ohio, on September 10, 1916, and was of Polish-American descent. He grew up and went to school in Ohio and entered the U.S. Army through the Selective Service in the same town in which he was born. He was a conscientious and well-liked soldier and acquired the nickname "Lutsky" from other soldiers with whom he served.

On May 24, 1944 the U.S. 3d Infantry Division was embroiled in fierce fighting to break out of the Anzio beachhead and push on towards the liberation of Rome. Leading his squad forward, Antolak encountered withering machine gun and rifle fire. Badly wounded, knocked to the ground three times, and with his right arm shattered, he nevertheless wedged his submachinegun under his uninjured arm and continued to advance. Assaulting an enemy strong point, he killed two and forced the surrender of ten more. Reorganizing his men and refusing medical attention, he led an assault on another enemy strong point a hundred yards away. He was killed during this assault, but the men he led pushed on to overwhelm the position. Antolak was awarded the Medal of Honor for his inspirational leadership and selfless sacrifice, which cleared the way for his company's advance and the division's breakout.

Sylvester Antolak is buried in the Sicily-Rome American Cemetery in Plot C, Row 12, Grave 13.

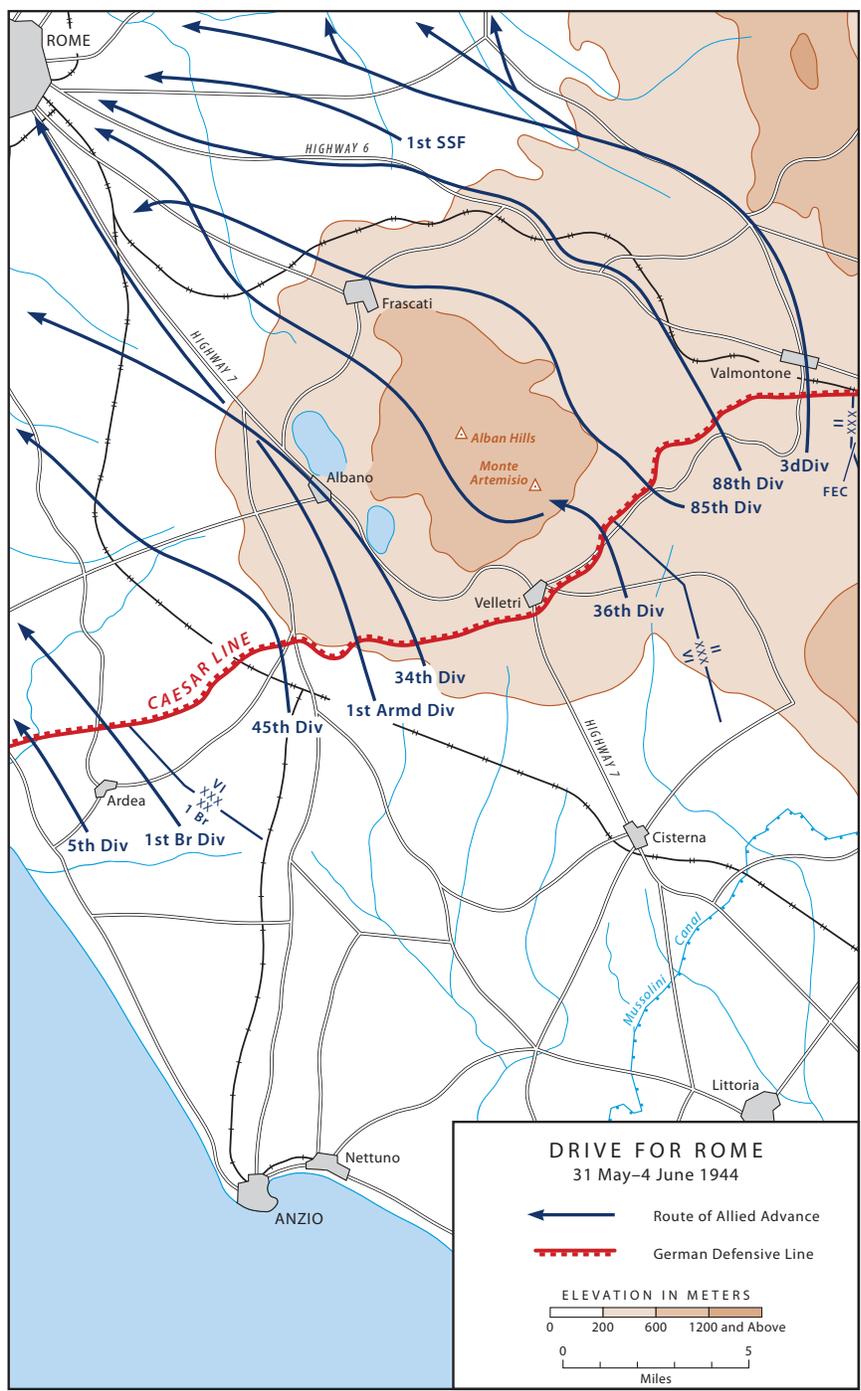




Forced to withdraw and often compelled to move in the open, the retreating Germans became prey to recurrent air strikes. Allied artillery observed from newly captured heights joined in the carnage. Alexander had envisioned the attack from Anzio would push through Valmontone, close Highway 6 and the upper reaches of the Sacco and Liri River Valleys, and trap the *Tenth Army* retreating through it. Such a neat encirclement proved infeasible for several reasons. The Germans anticipated such a maneuver and fought fiercely from good positions to defend Valmontone. American losses attacking towards Valmontone were heavy, costing the 1st Armored Division a hundred tanks in a single day. A gap of thirty miles opened up between the foremost American units and the Eighth Army, still battling its way through successive delaying positions in the Liri Valley. Battle wise German units found ways to extricate themselves through porous terrain, often leaving behind heavy equipment as they did so.

Clark doubted he could neatly trap *Tenth Army*. He also worried that German units would settle into a newly emerging Caesar Line south of Rome, and again stall the Allied advance. He believed he could run down more retreating German units with the pace of his pursuit than he could entrap with geometric maneuvers. If German troops got away but left their vehicles and equipment behind, it would be at least half a loaf. Leaving the U.S. 3d Infantry Division and American-Canadian 1st Special Service Force pushing towards Valmontone, he reoriented his main offensive northwest towards the glittering prize of Rome. National capital and premier communications network, its capture would render all German positions south of it untenable.

Reoriented, the VI Corps drove on Rome. The U.S. 45th Infantry Division attacked towards Campoleone and the U.S. 34th Infantry Division towards Lanuvium. They were soon reinforced by the U.S. 1st Armored Division, redeployed from the drive on Valmontone. The British 5th and 1st Divisions attacked parallel to these thrusts along the Tyrrhenian coast. As Clark had feared, German resistance stiffened. Kesselring and his commanders cobbled together units retiring from the south with newly arriving reinforcements into defensive positions along the nascent Caesar Line. The VI Corps drive decelerated and progressed painfully slowly between May 27th and 30th.



Major General Lucian Truscott, now VI Corps commander, committed the U.S. 36th Infantry Division to cover the gap emerging between his forces advancing northeast towards Valmontone and his forces driving northwest towards Rome. The division faced the Alban Hills and, more specifically, the formidable massive of Monte Artemisio. Here enterprising patrols discovered a seam between the German corps oriented on the drive towards Valmontone and its counterpart containing the U.S. 45th and 34th Infantry Divisions. Liaison between the two German corps was poor in the difficult terrain, and both German commanders relied on the difficulty of the terrain itself to augment their defenses. Over the night of May 30th the 36th infiltrated two regiments through this seam, and seized the heights of Monte Artemisio in a daring assault. This totally compromised the German defenses, as observed artillery fire rained down on anything that moved and the 36th repelled desperate counterattacks.

Kesselring ordered a general withdrawal on June 2nd, and declared Rome an open city on June 3rd. The Allies hastened to pursue. Clark pushed Fifth Army forward on a broad front. The British 5th and 1st and U.S. 45th Infantry, 1st Armored and 34th Infantry Divisions advanced abreast to the south of the Alban Hills. The Germans struggled to maintain a coherent front in the more open cultivated terrain. The U.S. 36th Infantry Division pushed on through the Alban Hills but encountered stiff resistance just short of Rome. Clark threw the U.S. 85th Infantry Division, previously pinched off by the Anzio breakout, in on the 36th's right flank. The U.S. 3d Infantry Division captured Valmontone and swung on a wide arc past Palestrina towards the Aniene River Valley. Clark threw the 1st Special Service Force, an improvised armor-heavy Task Force Howze, and the also pinched off U.S. 88th Infantry Division into the space between the 85th and 3d Infantry Divisions. Meanwhile the French Expeditionary Corps, Canadian I Corps and British XIII Corps cleared the Liri and Sacco River Valleys, closing on Palestrina. The Polish II Corps and British X Corps pushed towards Avezzano.

The final drive on Rome devolved into a bit of a race, with Allied units pressing forward and German units retiring reluctantly while trying to maintain a coherent front. One by one Allied units stalled, delayed by determined resistance and exhaustion from previous fighting. By the morning of June 4th, only the 1st Special Service Force, the 88th Infantry Division and Task Force Howze were still making significant headway. The 1st Special Service Force collided with a determined rear guard near the suburb of Centocelle. Task Force Howze, swarmed by jubilant crowds, found itself in suburban streets too narrow for its vehicles. Meanwhile the 88th Cavalry Reconnaissance Troop neatly threaded its way between the embattled 1st Special Service Force and log-jammed Task Force Howze. The contingent debouched on the main east-west *Via Prenestina* and sped towards Rome. At 0715 command radio nets crackled with the news: the U.S. 88th Infantry Division was into Rome, and first!



"Roman Holiday" by Mitchell Siporin

Whether or not the 88th Infantry Division was actually first into Rome remains a matter of dispute. It almost doesn't matter. The draftees believed they had been first and incorporated this conviction into lore vindicating their service. The 85th and 88th Infantry Divisions had shown remarkably well in their combat debuts. General George C. Marshall, with some relief, announced "the first confirmation from the battlefield of the soundness of our division activation and training program". With less restraint, the *Washington Post* exulted "All-Draft Divisions Chase Nazis 30 Miles". The *Saturday Evening Post* later opined "The Blue Devil's 88th Infantry Division Stumped the Experts" and changed the minds of "regulars who once refused to believe that a draftee could ever be anything but a sad sack". It was a good time for Americans to have proven the character of their conscripts. Further hard fighting in Italy, France, the Philippines, and elsewhere, would increasingly be borne by American draftee divisions. They would dominate U.S. forces and become a major factor in the inventory available to the Allies.

Troops of the U.S. 3d, 34th, 36th, 85th, 88th Infantry and 1st Armored Divisions and the 1st Special Service Force poured through Rome in the wake of the tiny 88th Cavalry Reconnaissance Troop, close on the heels of the retreating German. Jubilant crowds applauded, offered refreshments and threw flowers and kisses as they threaded their way through congested streets and marched past such venerable landmarks as the Forum and Colosseum. The cost of liberating Rome had been high. Since *DIADEM* began on May 11th the Fifth Army had suffered 17,931 American, 10,635 French and 3,355 British casualties. Of these, perhaps a fifth had been killed. The Eighth Army suffered 11,639 casualties more in the same period. German losses had been even greater: over 38,000 killed and wounded and 15,000 captured.

The “Deuce and a Half”



The United States Army was the world's most mechanized during World War II, and heavily dependent upon trucks for mobility and supply. It procured almost 2,400,000 trucks between 1939 and 1945. Of these, the most ubiquitous and arguably most reliable were 2 ½ ton trucks, popularly called “Deuce and a Halves”. The Army bought 812,000. Of these over 572,000 were GMC CCKW (or Ordnance supply catalog number G-508), assuring a standardization of design and maintenance.

The GMC CCKW featured a GMC 270 engine that delivered 104 horsepower at 2,750 rpm. It had a five-speed transmission and beam axles on leaf springs. Its ladder frame chassis had three axles, one in the front and two in tandem to the rear. The truck had a fuel capacity of 40 gallons and an expected operating range of 300 miles. Its robust, durable tires, power to weight ratio and sturdy construction contributed to remarkable off-road mobility. It weighed about 12,900 pounds empty and 17,900 pounds loaded for off-road movement – the difference of 5,000 pounds is 2 ½ tons, of course. Originally the trucks featured hard cabs, but these were generally replaced with canvas as the war progressed. The removable canvas enabled the placement of a ring mount for a machine gun over the passenger seat. Eventually one in four trucks was so equipped.

The June 1941 Table of Organization put 360 Deuce and a Halves in an infantry division. Of these, 276 were in the division artillery. This gave American artillery an unmatched capability for battlefield mobility and resupply. The guns could be kept in the immediate rear of advancing infantry and redeployed from sector to sector quickly. Ammunition could be sustained in ample supplies well forward. Another 63 trucks were consolidated in a quartermaster battalion, giving the division options with respect to handling its internal transportation. Beyond divisions, thousands of trucks were assigned to corps and theater assets. This kept supplies moving forward in an uninterrupted flow.

The truck's 6x6 bed proved remarkably adaptable. Variants proliferated as successive tables of organization added ever more trucks to the inventory. Vans mounted on the trucks sheltered mobile battlefield surgery and dental work. Deuce and a Halves were converted to become water tankers, fuel tankers, fire trucks, welder's trucks, maintenance vans, mobile command posts and to many other purposes. One version even became the amphibious DUKW, a remarkable vehicle that sped troops and supplies from the sea across beaches and inland during amphibious assaults.

The ubiquity and reliability of their truck fleet gave American forces operational and strategic options they would not otherwise have had. In Italy, some units pressed forward while others mopped up or went into rest and rehabilitation. Forces left well to the rear could be sped forward as circumstances required. Redeployments were easier with trucks, and troops arrived fresh with their equipment intact. The “Red Ball Express” gained fame in France as an example of focused improvised logistics, but miniature versions of it supported Allied forces all over the world. The Anzio beachhead was supported by fleets of trucks landing daily by LST. One day's contingent off loaded and fanned out to supply the beachhead while the previous day's contingent mounted the LSTs for a return journey to Naples. Time and again, the redoubtable Deuce and a Halves proved central to American success.

From Rome to the Arno: June 5 - September 9, 1944

Liberator of Rome, Clark later grumbled that the Fifth Army captured the headlines for but a single day. On June 6th Allied forces stormed ashore in Normandy, and all eyes turned to France. A loss of headlines would not be the only decrement to Clark's operations in Italy. Allied planners had long envisioned an invasion of southern France, Operation ANVIL, later renamed DRAGOON, to complement the invasion through Normandy. The troops were to be drawn from Italy. By mid-July Clark was to give up the U.S. VI Corps, U.S. 3d, 36th and 45th Infantry Divisions, 1st Special Service Force and French Expeditionary Corps to the Seventh Army commanded by Lieutenant General Alexander Patch. Patch in turn would lead Seventh Army in an invasion of southern France in mid-August. Thus, Clark's army would be reduced by more than half a little over a month after liberating Rome.

Wilson, Alexander and Clark viewed this diversion of forces as unwise with the enemy on the run in Italy. Surely the rest of the peninsula could be liberated in a few months' more time. On the other hand, Marshall, Eisenhower and others considered success in France to be paramount, and DRAGOON to be critical to that success. Over-ruled at the highest level, the Allied commanders in Italy resolved to make as much progress as possible before the scheduled depletion of their forces occurred. Wilson issued orders for an immediate push to a line extending from Pisa to Rimini. This was 170 miles north of Rome and would secure the liberation of central Italy.

By the morning of June 5th, the Fifth Army was across the Tiber River at several points in its sector. The retreating Germans fell back towards two successive albeit nascent defense lines. The Dora Line ran from Orbetello past Lake Bolsena, and the Frieda Line ran from Piombino past Lake Trasimeno. The Germans hoped to again halt the Allies along one of these two lines. They destroyed or "booby trapped" logistical infrastructure as they withdrew, knowing that Allied supply lines extended back through Naples in difficult terrain. Allied engineers struggled to restore minor ports that had been recently seized and to refurbish roads integrating Anzio and Nettuno into their expanding logistical network. Meanwhile Allied planners prioritized the port of Civitavecchia and the airfields around Viterbo as their next objectives.

Led by Combat Command B from the U.S. 1st Armored Division, truck-mounted troops of the U.S. 34th Infantry Division pushed on to Civitavecchia. Dismounting to assault, the infantry cleared the town by noon on the 7th. The Germans had taken considerable pains to sabotage the port of Civitavecchia, but American engineers put it back into operation within a week. Meanwhile the U.S. 36th Infantry Division took over the sector from the exhausted 34th Division. Combat Command A, 1st Armored drove on to Viterbo, seizing it early on June 9th. The capture of Viterbo came with a complex of surrounding airfields. These greatly assisted Allied tactical air forces in providing continuous support to advancing troops on the ground.

In the U.S. VI Corps sector the U.S. 36th Infantry Division, reinforced by the newly arriving U.S. 91st Infantry Division, pushed on along the Tyrrhenian coast to seize Orbetello and then Grosseta. To their right the U.S. 85th and 88th Infantry Divisions of U.S. II Corps advanced past Lake Bracciano. Here they were pinched out by the advancing French Expeditionary Corps, and went into reserve. The French Expeditionary Corps in turn pushed past Lake Bolsena on both sides and advanced onto the heights overlooking the Ombrone and Orcio River valleys. This penetration compromised the Dora Line, rendering it indefensible. In the Eighth Army sector British XIII Corps captured Orvieto and pushed on to Lake Trasimeno. British X Corps captured Terni and then Perugia. Polish II Corps and the attached brigade-sized Italian Corps of Liberation relieved the British V Corps along the Adriatic Coast, then began a drive on Ancona.

By June 20th the Allies had overwhelmed the Dora Line at numerous points and were closing on the Frieda Line across a broad front. Their supply situation had been considerably relieved by the refurbishment of roads and bridges and the opening of the port of Civitavecchia. They also had secured extensive fuel storage facilities at San Stefano, connected by a causeway with Orbetello, largely intact. Here Italian engineers thwarted German efforts at sabotage. The prize included underground storage for over 280,000 barrels of fuel. San Stefano soon became the main petroleum terminal for Fifth Army.

Even as the Allies broke through the Frieda Line, time ran out for the divisions committed to Operation DRAGOON. Rear areas and logistical routes descended into near chaos as the selected units pulled out of the line, others pushed forward to replace them, and the Eighth Army shifted west to compensate for the depletion of the Fifth. The veteran French Expeditionary Corps came out of the line just after it seized Siena and pushed into the Chianti Mountains, and the U.S. 36th Infantry Division after it passed Piombino. These penetrations ruptured the Frieda Line. The U.S. 3d and 45th Infantry Divisions and the 1st Special Service Force were already out of the line. The U.S. 91st Infantry Division (Powder River) commanded by Maj. Gen. William G. Livesay and the Japanese-American 442d Regimental Combat Team commanded by Colonel Charles W. Pence arrived as partial replacements. Meanwhile Hitler, alarmed by the German collapse, reinforced the Italian Front with eight divisions. These included four in or earmarked for Russia.

The U.S. 34th Infantry Division took over from the 36th Infantry Division along the Ligurian Coast and advanced on the port of Cecina. Meanwhile the U.S. 1st Armored Division closed up to the Cecina River and seized Mazzolla. These divisions now served under U.S. IV Corps, commanded by Maj. Gen. Willis D. Crittenger, as VI Corps had withdrawn to support DRAGOON. Attempts to envelop Cecina on its inland flank bogged down in rough terrain, but the Germans nevertheless retired from the town rather than endure incessant artillery fire from three sides. The Germans sought to establish a new line along the heights overlooking the Cecina River. This was thwarted by a well synchronized combined arms attack by the U.S. 88th Infantry Division that seized the hilltop town of Volterra and penetrated into the Era River Valley. Pushing on along the east bank of the Era, the 88th reached the Arno River around Capanne. Meanwhile the U.S. 91st Infantry Division attacked along the West Bank of the Era and reached the Arno River around Pontedera.

The mouth of the Arno River was dominated by the significant port of Leghorn. The U.S. 34th Infantry Division reinforced by the 442d Regimental Combat Team maneuvered to envelop this city. Assisted by a regiment from the U.S. 91st Infantry Division, they turned the German position and secured Leghorn on July 19th. The Germans heavily damaged the port before departing and sank ships to block the harbor as well. American engineers, by now used to this type of destruction, set about restoring the harbor. Indiscriminate mines and booby traps left in the town itself proved more dangerous. Hundreds of soldiers and civilians were injured by these in the weeks that followed Leghorn's liberation.

Meanwhile the British XIII Corps seized Arezzo after difficult fighting, expanded its frontage to take over the sector vacated by the French Expeditionary Corps, and pushed on to capture Florence. It too closed up to the Arno River by August 5th. Along the Adriatic Sea the Polish II Corps and attached Italian Corps of Liberation enveloped and seized the critical port of Ancona. They then pushed on far enough to put the port out of enemy artillery range. The Germans had managed to do less damage to Ancona than usual, and the British were already offloading ships there on July 23rd. The British X Corps advanced along the spine of Italy and maintained contact between the British XIII and Polish II Corps. The capture of two major ports, Leghorn and Ancona, considerably improved the Allied logistical posture for further drives north.

The Germans had been working on yet another formidable line of defenses in northern Italy, the Gothic Line, for some time. This ran along the North Apennines Mountains from south of La Spezia on the Ligurian Sea to Pesaro on the Adriatic. The Germans had begun laying it out in 1943 when they were not yet decided on whether or not to intervene in central and southern Italy if the Allies invaded. In the western portions of the line the terrain was particularly difficult and routes through it did not lead quickly to vital targets. In the center major highways connected Florence and Bologna and their critical hinterlands, but passed through high mountains and difficult passes to do so. In the east terrain was more open, but featured numerous parallel rivers running from the Apennines to the Adriatic. As the Gustav Line disintegrated in the south, German engineers returned to the Gothic Line in earnest. Kesselring's campaign between Rome and the Arno had in part been intended to buy time for the further development of the Gothic Line.

Alexander was mindful of the strength of the emerging German position, and sought to break through it before the enemy could settle into it. He believed he would have more success doing so if he shifted the weight of his attack from the U.S. Fifth Army in the west to the British Eighth Army in the east. This acknowledged the withdrawals the Fifth Army had experienced to support DRAGOON and its considerably diminished strength. It also recognized the greater opportunities for maneuver in front of the Eighth Army south of Rimini now that the Fifth Army was closing on the North Apennines, and quicker access to the plains of the Po Valley north of the Apennines along the Adriatic Coast. The Eighth Army was to make the main attack along the Adriatic Coast, and the Fifth Army was to conduct a supporting attack on order.

While the Eighth Army reshuffled forces to shift its weight to the east, its Polish II Corps launched preliminary attacks. These pushed forward to the Metauro River. On August 25th the British V, Canadian I and Polish II Corps attacked abreast across the Metauro. By September 3rd they had penetrated the Gothic Line, seized Pesaro and pushed over twenty miles to the Coriano Ridge. Here they stalled in the face of heavy rains, flooding, and German reserves rushed in from elsewhere. With German reserves drawn to the Adriatic coast, the Fifth Army advanced on a broad front to close to the Gothic Line in its sector. By September 7th it was five to ten miles north of the Arno along a line running roughly from Lucca past Pistoia through Monte della Calvana.

At this point Alexander realized that the pursuit was truly over, and that he could no longer hope for quick or expedient gains. Although he was through the Gothic Line north of Pesaro, the Germans had simply retired to one of the numerous ridge and river lines that interrupted the narrow coastal plain along the Adriatic coast. The Allied forces would have to commit to yet another major set piece offensive to crack the enemy defenses and continue their advance. This watershed would mark the end of the Rome-Arno Campaign (January 22 – September 9, 1944), and the beginning of the North Apennines Campaign (September 10, 1944 – April 4, 1945).

Epilogue

The Anzio and Rome-Arno Campaigns liberated Rome and central Italy. Valuable bases and infrastructure came under Allied control during the course of them, and units the Germans could ill-afford to divert were drawn from France, Russia and the Balkans to contest the Allied advance. The cost was high. The Allies lost 29,000 killed, wounded, and missing in the four months of savage fighting around Anzio, 40,000 in the advance on Rome that began May 11th, and 34,000 in the push from the Tiber River to the Gothic Line. The Germans lost 28,000 around Anzio, 54,000 as the Allies pushed on Rome, and 64,000 in the fighting between the Tiber and the Arno Rivers. The Germans lost more and could afford less, but their skillful defense greatly delayed the Allied advance. Even as the Allies closed to the Arno, the campaign sputtered momentarily as troops were withdrawn to support Operation DRAGOON. Nevertheless the Allies reorganized and absorbed reinforcements and replacements, closed to the newly established Gothic Line, and penetrated it along the Adriatic Coast. Stalled, they prepared to follow up with the bitterly contested North Apennines Campaign. Hard fighting in the Apennines in turn set the stage for the triumphant Po Valley Campaign (April 5 – May 8, 1945) that finally completed the liberation of Italy. Allied armies in Italy ultimately killed or captured a half a million Germans, manpower sorely needed in other theaters. Allied air forces operating from Italian bases supported ground offensives, and also carried the war into the German heartland in the strategic bombing campaign. Allied naval forces swept the Mediterranean to turn it into an Allied lake, mounted recurrent amphibious operations, and assured that the entire Allied enterprise remained in supply. Working together, Allied forces in Italy contributed heavily to the Allied victory in World War II.

Decision and Plan for the Invasion of Europe

American war planners viewed an invasion of northwest Europe as a key feature of American strategy in the Second World War. Such an invasion would focus every facet of American power to one end, victory against the strongest enemy in the shortest amount of time. While U.S. planners voiced this argument repeatedly in every major conference of the war prior to 1944, a European invasion was not solely or originally an American idea.

In the days immediately following the 1940 Dunkirk evacuation, British Prime Minister Winston Churchill, who also held the key position of Minister of Defence, directed that plans be drawn up for “a return to the Continent.” Churchill reorganized and centralized the direction of the war into his war cabinet. Perhaps no democracy was so well coordinated on a daily basis in meetings where military, policy, industrial and civil concerns were discussed and dealt with. England could ill afford any waste. Churchill, whose personal style of management scattered his interest throughout England’s vast empire, could not permit the bureaucracy to work at cross-purposes. His joint planners toiled at detailed outlines for every conceivable contingency, balancing ways, ends and means. As a well experienced minister holding multiple portfolios in government for nearly forty years, Churchill understood government. As an experienced soldier, *he understood war.*



British Prime Minister Winston Churchill after Dunkirk.

A prewar analysis of American strategy prompted by President Roosevelt after 1939 helped bring about the RAINBOW 5 Plan and the Army’s concurrence with Chief of Naval Operations Admiral Harold R. Stark’s conclusion that Europe would be the critical theater. This encouraged Army Chief of Staff General George C. Marshall and his staff to press for the earliest possible invasion of France. This was agreed to in principle during the pre-war “ABC (American-British Conversations) Talks” of January through March of 1941 and confirmed during the first wartime conference held in Washington immediately following the Pearl Harbor attack. Churchill’s planners presented their outline plans for many different actions. Included was an invasion of Europe sometime in the future.

The invasion of Europe was not hastily conceived. Churchill had created Combined Operations as a Joint Staff under World War I hero Sir Roger Keyes. This used Army, Navy, Air, and Royal Marine officers to devise techniques, equipment and studies for amphibious warfare, as well as to support raids on German-held territory. Initiatives included forming airborne, special operations, and “Commando” or ranger-like units. Combined Operations Headquarters evolved as a permanently formed Joint Headquarters, which later included Americans, for such missions. Most of the landing craft and technology needed for ROUNDUP, an early invasion plan, were at the time only designs or experimental craft being developed by Keyes and his staff.

A European landing was embraced by the U.S. Army Staff. It was enlarged upon and given a full order of battle and a basic operational concept by the new War Plans chief, Brig. Gen. Dwight D. Eisenhower. The plan was named ROUNDUP. When considered by the British, two variants were proposed. SLEDGEHAMMER was an emergency landing to gain a foothold in 1942 to draw off German reserves from Russia if the situation in the East was perilous enough to justify a high-risk landing. The main invasion, ROUNDUP, would take place in 1943. In 1942 Churchill and his Chiefs of Staff believed that even a 1943 invasion would be highly perilous and knew the bulk of the sacrifice would be borne by the British if executed then. Heavy losses could not be made up from Britain’s meager resources. Considering that neither air superiority nor the Battle of the Atlantic had been won, the British considered American optimism for a major landing any time soon to be strategically “unsound.”

British policies were clear to their planners and their staffs, and well-honed in balancing complex alternatives based on multiple strategies. America had never fought a world-wide war using all three services. The internal tug of public wishes, professional pride, service interests, and national requirements posed a difficult adjustment to a rapidly growing Washington staff. Their personal combat or military experience generally could not match that of their British counterparts on the Allied staffs. Britain had already suffered severe reverses in the war and could ill afford risky adventures. In addition, 1942 was proving to be a desperate year. The British agreed that minimal forces should be spared to safeguard other theaters of war, rather than divert them from operations against Germany.

American planners were starting at a disadvantage. Much of the critical economic, geographic, military, naval and political information and intelligence needed for even basic planning had to be supplied to the United States by the British. The U.S. Army Air Force, for example, had not so much as a single target folder to plan an air campaign. It lacked up to date maps and industrial information for targets, and its knowledge of the German armed forces was sketchy and based on open sources, news reports and information that had been acquired in the days before the war by military attaches. America had tremendous industrial and manpower resources. Britain had the experience of ongoing contact with the enemy and current combat experience in the European theater.



Red Army soldiers during street battles in the Stalingrad suburbs in the autumn of 1942.

The political undercurrents in the United States demanding “A Second Front Now” to support the Soviet Red Army gained some traction. The Soviet Union’s uncertain prospects for survival against another pending summer German offensive were highly influential in both Roosevelt’s political considerations and Churchill’s balancing of reality. Russia was fighting the bulk of Germany’s forces. If it succumbed, Germany might overwhelm the Allies elsewhere. America similarly felt obliged to keep China in the war to distract the bulk of Japan’s divisions.

Washington’s theoretical plans took a long time to balance with the grimmer picture held in the United Kingdom. Eisenhower’s plan theorized the use of forty-eight divisions landing on a frontage spanning France from north of Calais to the Cherbourg peninsula on no less than six major landing areas. It assumed the U-Boat war, then going badly, would be won. It assumed that air superiority over the beaches, given the precedent of the Battle of Britain, would be won. It assumed that the American army, trained and fit for battle, would be landed with craft not yet made, by crews not yet trained, under commanders not yet proven against the world’s most successful fighting machine. The German *Wehrmacht*, teamed with the German *Luftwaffe* based in France at local airfields, would be incredibly formidable. For the British, the leap of faith to envision early Allied success was, understandably, too much.



Luftwaffe soldier guarding a Stuka dive-bomber during re-arming in France.

That the American Army and Army Air Force were not yet up to this task was almost indisputable, and Britain had already fought the Germans and found German combat capabilities superior in many cases. British ground warfare organization and technology had failed in 1940 and too often came up short in the North African desert thereafter. Their Army's doctrine needed updating. The Royal Air Force and Navy had done a better job of keeping pace. They were rebuilding under fire and taking heavy losses but achieving a measure of success. While grateful for the American assistance real and proposed, particularly with respect to manpower, supplies and technology, the British Chiefs of Staff thought a "second front" in 1942 was impossible. In 1943 it could be possible only if the Germans had been significantly weakened by fighting elsewhere. British airmen in particular wanted to use their bombers to destroy German industry. They defined this as focusing on the destruction of the German Air Force by first destroying the German aircraft industry.

The newly designated U.S. Chief of Naval Operations and Commander-in-Chief, United States Fleet, was Admiral Ernest J. King. He was co-equal with the Army Chief of Staff, General George C. Marshall. Both men were passionate for their services and tempered by an understanding that the Army should speak for European strategy, and the Navy for the Pacific in most cases. Both realized that in order to maintain the agreed priority in national strategy a firm commitment to a European landing must be made before Pacific emergencies and growing demands elsewhere used up resources. Together, they proposed to the President that a European landing should be decided upon immediately or a Pacific first strategy should be adopted. Roosevelt refused to be stampeded. A Pacific first strategy, unfortunately, reflected the popular cry of many newspapers due to the recent fall of the Philippines and repeated defeats in the Pacific. Popular calls for revenge for Pearl Harbor and a need to stabilize the front demanded a priority of assets for the Pacific. The President, however, did not want to abandon the Europe First strategy.

Instead, President Roosevelt sent his personal adviser, Harry Hopkins, and his two service chiefs to the United Kingdom to urge the execution of SLEDGEHAMMER as a placeholder or, if need be, a "sacrifice" to establish the appearance of a second front effort in Europe in 1942. They additionally sought to gain concurrence for the more robust 1943 landing in Europe: ROUNDUP. General Eisenhower, recently appointed the U.S. Commander in Europe for the U.S. Army theater buildup, would command the American force.

The British Chiefs refused to accept SLEDGEHAMMER, claiming it was not a sound operation. Since they would lose the bulk of the troops if the landing was a failure, their position was understandable. The British Chiefs, after considerable study, also declined to support ROUNDUP for 1943, citing their Combined Commanders' appreciation stating, "unless German morale has deteriorated by the Spring of 1943, owing to the failure to defeat the RUSSIANS, such a re-entry into FRANCE will not be a feasible operation."

This left the primary concern of Churchill and Roosevelt unanswered, to provide a substantial draw of enemy troops from the Russian Front towards the west. Stalin fervently called for this, as did many left leaning political activists in the UK and the United States. Roosevelt was concerned that with such a large military mobilized and no U.S. forces directly engaged against the Germans, his ability to claim Germany as the major threat was a hollow argument. With oil tankers burning in sight of the U.S. coast line at night, he felt the need for a U.S. ground force in combat soon. Since 1942 was a Congressional election year, Roosevelt realized his own position as Commander-in-Chief could be undermined if his party should lose control of Congress. Churchill had a coalition government and was forced to work through his war cabinet. Roosevelt did not want to face a similar situation eking out political support for his policies.

The President and Prime Minister broke the military deadlock by deciding to launch Operation TORCH over the advice of Roosevelt's military chiefs. This landing in French North Africa would secure the opening of the Mediterranean and provide a flank approach to clear the Mediterranean littoral. It would also commit America to action in 1942 against the Germans and Italians. However, this operation left little leeway for a major 1943 operation in Western Europe producing a second front there on the scale demanded by Stalin. This would not occur until 1944.



American troops assaulting the French North African beaches as part of Operation TORCH.

TORCH was successful, although the decision by Eisenhower to land at multiple sites stretching over 800 miles in Morocco and Algeria proved overly ambitious. His Allied forces reached out over 400 miles to the east in a losing race against German and Italian forces retreating west from their November 1942 defeat at El Alamein in Egypt. German and Italian forces deploying from Europe rapidly brushed aside the Vichy garrisons in Tunisia after cancelling their armistice agreements and marching into unoccupied France. In Tunisia they were joined by the Axis forces retreating from Egypt. Tunisia became the scene of a fierce six-month campaign.

A major Allied conference at Casablanca between Roosevelt and Churchill in January 1943 adjusted Allied strategy in the light of developments in both major theaters. Whereas 1942 had been a year committed to stopping enemy advances, 1943 would be a year for offensives in accordance with the grand strategy of the war. From the perspective of European strategy, the Mediterranean war would continue as a supporting theater and as a logical use of the mass of forces already deployed there. It posed a major threat to the southern flank of the enemy and promised a shorter way to pass support to the Russians.



Troops of the 143d infantry regiment landing at Salerno, Italy.

Tunisia, along with 275,000 Axis prisoners, fell to the Allies in May of 1943. In July the Allies invaded Sicily, and in September the first of the Axis powers surrendered. Italy capitulated, handing over its fleet, as landings were being made in Calabria and at Salerno. In January 1944, the Allies assaulted Anzio south of Rome. Corsica had been taken earlier

by Free French troops. From the perspective of calendar watchers, TORCH and all that followed in the Mediterranean may have appeared to have set back the liberation of France.

It did not. It ultimately enabled it by creating the necessary conditions for military success that did not exist in 1942. Although the “soft underbelly of Europe” envisioned by the British Prime Minister proved to be tougher than anticipated, fighting for it crippled the Axis in several ways. Hundreds of thousands of German troops were lost. The Italian Fleet and Army were lost to the Axis. The Allies gained valuable airbases in the Mediterranean from which attacks could be launched against southern Europe, the Balkans, major oil producing fields in Romania, and Germany itself. Southern France lay open to invasion and required heavy defenses to offset a threat from that quarter. Italy was soon added to the Allied powers, and ten Free French divisions were added to the liberation forces marked for the invasion of Europe. German troops had to take over vast occupation responsibilities in the Balkans that the Italians abandoned. The great deterioration of Axis forces, called for by the British before an invasion could take place, did indeed happen in 1943. The Allies radically expanded and improved their combat capable forces at the same time.

During the year following TORCH, the Allies made considerable advances. The German U-Boat threat was mastered. The combination of breaking German naval codes by the Bletchley codebreakers and rapidly producing destroyers and corvettes to secure convoys turned the North Atlantic into a danger zone for U-Boats by the late spring of 1943. The subsequent arrival of escort carriers and hunter-killer groups further turned the tide, making U-boats hunted more so than hunter. This freed the sea lanes for massive troop and materiel convoys which became ever more prevalent as the full weight of America's mobilization took place.

The air war in Europe, although grim and costly for the Allies in 1943, began the daylight attrition of German industry. Lessons were learned. These would bear fruit with the arrival of new long-range escort aircraft by 1944. While military events proceeded apace, grand strategy continued its midcourse corrections at periodic conferences. These addressed current developments and adjusted long term plans to capitalize upon recent successes. North Africa reversed the course of the war in the West, just as the defeat of the German Army at Stalingrad halted and then pushed back the *Wehrmacht* in the East. Victories at sea and on land in the south and southwest Pacific gave the Allies confidence that the Japanese had been halted. Ample Japanese forces remained, particularly in Southeast Asia, Burma and China. It was time for a grand strategic review and, if necessary, reordering of priorities.

The Casablanca Conference, code named SYMBOL, held in January 1943, steered the war towards the cross-channel attack desired by the Americans. The Mediterranean front would continue to be pursued and exploited in 1943 as a supporting theater. The rapid air force buildup in the UK and the ship building program necessary to support an invasion was beginning to bear fruit. Casablanca's general military directive, issued by the Combined Chiefs to the major theaters, influenced the invasion significantly. It established a position



American and British leaders pose for a photo during the Casablanca Conference, code name SYMBOL.

and formal planning staff called COSSAC, for Chief of Staff to the Supreme Allied Commander (Designate). This individual would present the Combined Chiefs an outline plan for the invasion of northwest Europe, now designated OVERLORD. It would be presented by summer's end with a projected execution date of May 1, 1944.



Naval guns firing in support of Operation HUSKY, the invasion of Sicily.

This conference also resulted in the decision to mount Operation HUSKY to seize Sicily, which preempted any chance of launching ROUNDUP in 1943. While the Americans reluctantly acceded to this with some argument, it was a foregone conclusion after TORCH. The fact that the Battle of the Atlantic had not yet turned, and would not do so until May 1943, impeded the flow

of troops and supplies. BOLERO, the buildup of U.S. air and ground elements in the UK for an invasion, had decelerated to support TORCH. This had already rendered ROUNDUP a moot point unless mounted mainly by British forces. Adequate U.S. forces simply were not available. Besides, most of the assets and type of forces needed for such an assault were now in the Mediterranean theater.

The Casablanca Conference also issued the POINTBLANK directive creating the Combined Bombing Offensive. Its goal was to reduce Germany's potential to wage war prior to the invasion, primarily by eroding morale, destroying key industries such as aviation, and eliminating the *Luftwaffe*.

The conference gave priority to the European and Mediterranean theaters for 1943, with campaigns to maintain momentum in the Pacific and keep up the pressure on the Italian government, which was considered the weakest of the three Axis powers. It authorized but limited the effective time frame for landings in Italy following the seizure of Sicily. Major fleet elements were to be removed from the Mediterranean for use in the OVERLORD operation or in the Pacific in 1944.

The conference put aside the designation of commanders for the invasion until the outline plan was approved. In Britain, the Committee of Combined Commanders had evolved from joint planning groups that had been working since 1941 on invasion plans for a return to Europe along with Combined Operations Command. The United States European Theater Headquarters provided additional planning for this effort, which had progressed from ROUNDUP since British planners had discarded it as unsound. The Prime Minister advanced the idea that the eventual commander for the invasion of northwest Europe be provided from the country providing the largest force. He would probably be an American, in keeping with Churchill's eagerness to sustain the largest possible American participation. The decision was made to appoint a separate staff to plan the landing, despite the fact that plans had already been underway on both sides of the Atlantic.

The German Defense in the West

As the planners worked, agencies including the British Special Operations Executive, the newly formed American Office of Strategic Services, and the French, Belgian, Dutch, and Polish Governments in exile provided intelligence to the Allies. ULTRA and various decryption and radio intercept agencies also provided information washed through conventional military intelligence organizations or means. Combat had provided knowledge of methods and means used by the enemy which were assessed by the Allies. This was used in developing tactics and equipment for the attacking forces. Everything from tourist booklets to snapshots and maps donated to British intelligence in response to a public appeal for information on Europe from prewar travelers helped to build a massive mosaic of information. This included, in some cases, remarkably detailed geographic information on varied aspects of the coastal towns, beaches, bridges, roads, buildings and inland areas of France, Belgium and Holland. Photo interpreters filled in new buildings and fortifications and radio intercepts and direction finding located German units. This picture was used by the planners as they developed their thoughts on opposing forces and targets for the assault.

The early German defense of “Fortress Europe,” was based on *Fuhrer Directive No. 40*. This directive placed defenses on major landing beaches where large landings might occur. Strong points tied together defended lesser beaches with coastal batteries. Patrols sufficed to cover the rest. However, the situation changed in 1942. Hitler knew that the Soviets were calling for a second front in the West and feared that this attack might come anywhere, with an attack against Norway being perhaps the most difficult to defend against. The successful raid on the St. Nazaire docks by the HMS *Campelltown* in March and the destruction of the large raid on the port of Dieppe in August 1942 convinced the Germans and Allies that port assaults were fruitless, but also that mere point defenses were incapable of effective security.



Canadian POWs being led by a German guard following the unsuccessful raid on the port of Dieppe.



Anti-aircraft machine gun and bunker found on the “Atlantic Wall” between Caen and Bayeux, France.

This analysis prompted the Germans to implement a larger fortification program which was slowly implemented due to supply and manpower shortages and the pressing demands of the war in the East. In November 1942, in response to the French surrender in North Africa after the Allied landings, Hitler marched into unoccupied Vichy France and extended his defensive scope from about 2,400 to 2,800 miles of potential invasion beaches. Both the Allies and the Germans realized Western Europe loomed as the location of a major campaign for the western Allies in 1944. Hitler could stall no longer. He was forced to shift priorities. Hitler reinforced his security posture in the west beyond air defenses, occupation duties and patrol garrisons for the beaches. 1944 would be the year of decision in the West, and the *Wehrmacht* was ordered to prepare to meet and repel the expected Allied invasion.

The German “Atlantic Wall” had been built emphasizing priorities based on the relative threat posed by Allied assault options. The area from the Scheldt area of northern Belgium to the Seine received early attention as its beaches were closest to the United Kingdom, and its inland routes ran directly to the industrial heart of Germany. This focus on what became the German *Fifteenth Army* sector remained for much of the pre-invasion period. This area included the Pas-de-Calais sector the Allies had favored for a landing in ROUNDUP. The German military’s belief in the threat posed in this sector reinforced FORTITUDE’s complex deception plan to conceal the Normandy invasion. As Hitler’s rocket-based “vengeance” weapons were to be based on this coast, the Germans saw additional reason to stack its defenses.

In late 1943, Hitler issued War Directive 51. It outlined requirements for the German operational defense of the continent, constraining his senior commanders to recognize his intentions as to how any invasion would be met. When Directive 51 was issued, the “Atlantic Wall,” was only partially complete. With Russia absorbing most of Germany’s overall war potential and the air war dominating operational interest over western Europe, the *Luftwaffe* had been the key power broker in the West. Now Hitler turned to his army and stated that a strenuous effort to fortify the western shores of the continent would be made to meet the full weight of the Allied assault.

Hitler stressed strong defenses along the coast itself. He stated that any penetrations would be met with “a counterattack with all our weight.” He directed the creation of a strong reserve to accomplish both the construction of the defenses and the assembly and training of a decisive counterattack force. This included reinforcing existing formations with tanks and antitank weapons plus motorization and automatic weapons to compensate for their existing lack of combat power. The navy and air force would cooperate with the army and reinforce its defenses. Hitler expected that all commands would “exert every effort” in the remaining time to mature these defenses.

German land power in the western theater in 1944 consisted of fifty-three to fifty-five divisions. Coastal divisions stretched along nearly 2,800 miles of coast from Norway to Italy. Coastal divisions lacked mobility, were understrength, and manned fixed positions along possible landing beaches and avenues leading inland. The German intent to add mobile reserves as a second belt in their defense line was achieved slowly by adding badly damaged divisions from the east in need of replacements and retraining. New divisions were also raised from the cadre of Eastern Front units by adding “volunteers” from the east from non-German populations paroled from military captivity or recruited from occupied areas. While many of these units were considered of low combat value, the *Luftwaffe* divisions withdrawn from the East and added to the western reserve were of high value. This was also true of the extra-large SS *Panzer* divisions belonging to the *SS Panzer Corps*. These would begin to appear in early 1944 along with other mobile units and added depth to the crucial Pas de Calais sector and the defense of the approaches to Paris. Those nearest to Paris could cover the central front or move northeastwards as needed. They served as part of the *Panzer Army Reserve*, whose control belonged directly to Berlin. The specifics of the control of these reserves were unknown to the Allies prior to the invasion. Intelligence assumed that the Commander in Chief West had full call on his own reserves.



Field Marshal Erwin Rommel (left) inspects fortifications along the "Atlantic Wall."

Field Marshal Erwin Rommel, Commander of *Army Group B*, assumed command of the area within the planned invasion area, and energetically applied his military engineering skills with respect to fortification, obstacles, and mining to fortify the best and most useful landing areas. These included not only the favored Pas de Calais sector, but also the sector actually selected by the Allies, the Baie de la Seine or Normandy area. Rommel added numerous anti-airborne obstacles to inhibit glider and airborne landings behind the beaches. ULTRA and other intelligence assets discovered Rommel's presence and his feverish activities almost immediately.

From the beginning, German strategic intelligence had been weak. In 1942, German assessments gave the British forty infantry and four armored divisions available but had trouble locating them. This force nearly equated to Britain's entire world-wide imperial strength. In 1943, a refined German assessment gave the British thirty-one divisions in the United Kingdom. It was apparent that in 1943 the Western Allies would be mounting a second front soon. This caused more fortifications to be built, using mainly French labor. Holland was not heavily fortified, as its dikes and water-logged terrain was considered sufficient to slow an advance. The area north of the Seine was considered highly threatened. Despite the influx of combat units into France and the Low Countries in 1943, the Germans' prime combat units in the West were traded for burned out units from the East. These often took months to rest, rebuild and replace personnel lost in combat. In the meantime, they were of limited combat value. The *Fifteenth Army* coastal units demonstrated the largest build up. While the total numbers of divisions increased from January 1943 to June 1944 from thirty-two to sixty, the inclusive numbers of these that were static rose from three in 1942 to twenty-four in 1944. This number was the average for nearly half a year.

The Chief of Staff (Designate) for the Normandy invasion was Lt. Gen. Sir Frederick Morgan. He arrived at Norfolk House at St. James Square, London, the headquarters used by the Combined Commanders for planning. Morgan's charter was to provide an outline for the Combined Chiefs to approve. He and his staff shared the collective name, COSSAC. A plan already existed, named SKYSCRAPER. The Combined Commanders, the Commander of the Home Forces, the Commander-in-Chief, Home Fleet, and the Commander, Fighter Command had rigorously worked their staffs through a detailed outline following more than forty meetings and numerous staff sessions. This produced an invasion plan based not on "an available troop list or shipping list," but on the required forces and the ideal location for the operation to be successful. It was the opposite of "here are your forces, make a plan." It started with a problem, made the plan, and told the Combined Chiefs the forces required. Since the grand strategy was seemingly being made at the time based on allocating a budgeted amount of resources per problem, the SKYSCRAPER plan provided a useful alternative approach.

Using current intelligence and the operational experience of the British and selected Free French military, SKYSCRAPER had selected the Normandy coast from Cherbourg to Le Havre for the main landings. It called for a ten-division landing, a parachute force of four divisions, and a naval force requiring seven thousand landing craft. While both the U.S. and British planning staffs were aware of SKYSCRAPER, its logistical implications were stunning. It was deemed impossible to build that many landing craft in time, and this was only one of its major problems. SKYSCRAPER was not officially forwarded for approval.

Morgan was allocated a limited number of ships, planes, and aircraft, told to examine the files, absorb all the plans and planners at Norfolk House, and make a plan that would work. He re-examined the possible forced entry options. He used the range of British fighter aircraft from their fields to cover an invasion fleet as the limiting factor. This narrowed the field of possibilities to the Pas de Calais and the Cotentin Coast, Normandy. Since the Pas de Calais was the most heavily defended and the expected invasion route due to its short range from the UK, Normandy was seen as a viable choice. The Pas de Calais was less defensible than Normandy once taken. It would be harder to build up sufficient forces there for a subsequent breakout.



The Batterie Todt: one of the largest artillery defense batteries on the Atlantic Wall overlooking the Pas de Calais landing areas.

After a close examination of the options, and comprehensive discussion in a conference held by Combined Operations called RATTLE, Normandy was selected. Admiral Lord Louis Mountbatten's planners had long been proponents of Normandy. They had devised equipment and plans for an artificial harbor, beach improvements such as matting, obstacle clearance devices, and an underwater pipeline for pumping fuel under the English Channel direct to continental supply dumps. Morgan's tailored plan, based on mountains of material, became known as the COSSAC plan. It was officially called OUTLINE OVERLORD.

OUTLINE OVERLORD was a pared down version of SKYSCRAPER but did not share SKYSCRAPER's early advance to capture Antwerp and the Ruhr. Morgan was very concerned with airfields and planned on "winning the air battle" by bringing aircraft to Normandy. This was despite the increasing numbers of American fighters with the range to support the beaches from bases in the UK. The prime port Morgan hoped to capture was Cherbourg, some distance from the landing. The plan also relied upon an artificial port, which would be towed into place. It further relied upon the capture of ports in Brittany along with a logistical pause to build up forces and supplies before resuming the offensive.

Morgan's staff forwarded this plan for approval and moved on to other plans for deception, and also to contingency plans in case Germany collapsed unexpectedly. Such political contingencies avoided the major problem that OVERLORD as then planned was simply too small. It did not have a named commander to fight for its implementation.

"Approved in principle" at the Allied QUADRANT conference at Quebec in August, OVERLORD became part of policy arguments among the "Big Three", Stalin, Roosevelt, and Churchill. There was a general acceptance that the plan as proposed was, as Churchill tartly noted, "at least 25% too small." After a



Allied leaders at the QUADRANT conference in Quebec.

seven-division assault landing in Sicily and numerous problems with the Americans being held up at Salerno, an early buildup on the beach was recognized as key to driving inland before the enemy could rope off a beachhead. The stalemate the Allies suffered at Anzio in January 1944 reinforced this recognition.

Admiral King's insistence on a sustained Pacific advance, and the President's reluctance to curb him, put the Combined Chiefs at cross-purposes. It threatened to leave the still to be named Supreme Commander with the war's most important mission, but with insufficient sea lift to accomplish it. It was already apparent that the Allies' strategy would be closely tied to the numbers and types available of amphibious landing craft.

Meanwhile, the Mediterranean Campaign proceeded disappointingly as the Germans rapidly overran and secured Italy north of Naples. This made Italy's defection from the Axis less decisive. The transfer of its fleet reinforced the Allies and the southern several hundred miles of the Peninsula came under Allied control with little effort. This included the key airfields around Foggia which proved especially useful for the strategic bombing campaign. North of Naples, Italy remained under German control, and they forced the Allies to fight for every foot.

The Italian Campaign affected OVERLORD. It did draw off and tie up some German forces, but landing craft intended for transfer to the European front were held to conduct and support the landing at Anzio in January. A simultaneous landing of forces in southern France demanded by General Marshall, code named ANVIL and offered to Premier Stalin, was also in jeopardy. Plans for southern France would reduce the American commitment in the Mediterranean, remove the French Army from Italy, and add it to the forces liberating France. Stalin envisioned a huge and simultaneously envelopment of the German forces in France, not understanding that the Allies lacked the ships to move masses of forces by sea to mimic the sprawling land operations conducted by his forces in the east.

Roosevelt delayed approving the appointment of a Supreme Allied Commander for OVERLORD, a position to be held by an American due to the eventual size of the American forces involved. General Marshall, the Army Chief of Staff, was a prime candidate. However, his value to the war effort serving on the Combined Chiefs, forging grand strategy, advising Roosevelt, and dealing with Congress was appreciated by many as more valuable than commanding the invasion. The most loyal of soldiers, he acknowledged his duty to serve his president and the nation in the most useful manner possible. He surrendered his dream of command of OVERLORD.



General Dwight D. Eisenhower and his military counterparts planning Operation OVERLORD.

The Supreme Command was given to a Marshall protégé, General Dwight D. Eisenhower, who was then Allied Supreme Commander in the Mediterranean. Eisenhower had Churchill's confidence and that of the other Allies. Command of the Navies for OVERLORD fell to Admiral Sir Bertram Ramsay, who had saved the British Army at Dunkirk and commanded most of the landings in the Mediterranean. Air Chief Marshal Sir Trafford Leigh-Mallory would command the Tactical Air Forces. The initial command of the ground forces would be placed in the British 21st Army Group under General Sir Bernard L. Montgomery. U.S. ground forces would be commanded by the U.S. First Army commander, Lt. Gen. Omar N. Bradley, who would serve in Montgomery's Army Group until he formed his own U.S. 12th Army Group. Eisenhower's Deputy was Air Chief Marshal Sir Arthur Tedder. In addition to serving as Deputy Supreme Commander, Tedder would coordinate strategic air operations with Sir Arthur Harris of Bomber Command and Lt. Gen. Carl A. Spaatz of the U.S. Strategic Air Forces. Eisenhower's indispensable man, Lt. Gen. Walter Bedell Smith, was the Chief of Staff.

Eisenhower's headquarters was designated SHAEF, Supreme Headquarters, Allied Expeditionary Force. Directives to SHAEF were passed through Marshall from the Combined Chiefs. Eisenhower's headquarters kept daily contact with Marshall and the British War Office as needed. Eisenhower co-located his headquarters at "Widewing" in Bushy Park with General Spaatz to capitalize on the extensive communications there. His planning staff continued to operate from the Norfolk House at St. James Square in London.

Eisenhower immediately directed that the invasion front be expanded in the OVERLORD plan. Montgomery, the landing force commander, examined the plan in detail, expanded it, and provided details that paralleled some of SKYSCRAPER's features, although he had never seen it. Montgomery asked

for a five-division landing, and eventually settled on a three-division parachute landing as Eisenhower procured more assets. These changes had to be approved. Both men understood that too large a request would be turned down by the Combined Chiefs. The revised plan for the landings was named NEPTUNE.

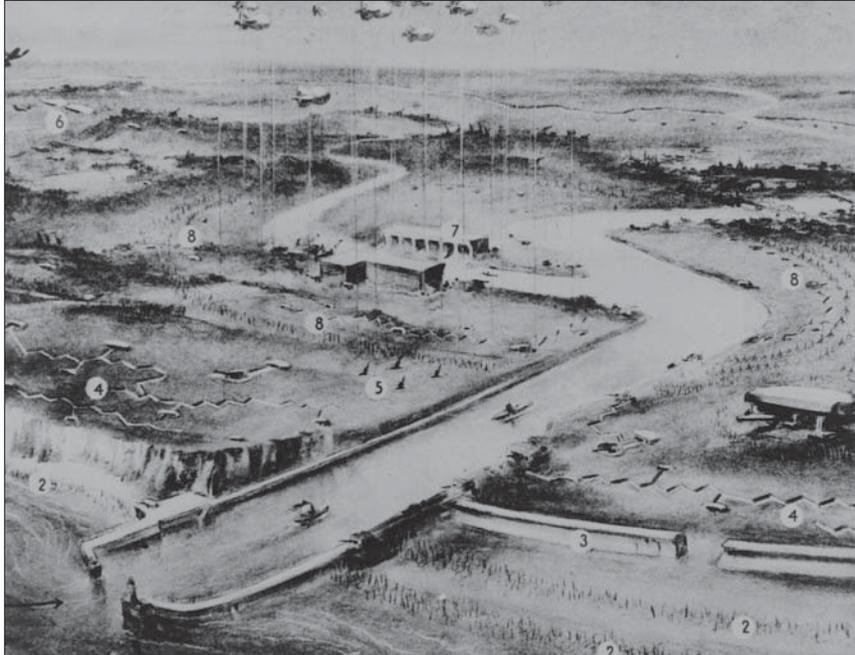
The original plans evolved by the Combined Commanders and COSSAC were based on a very different situation in Normandy than that faced by Eisenhower and his commanders in the spring of 1944. Normandy in particular was initially weaker in its defenses with fewer German divisions. Caen, highly valued by air planners for forward airfields, was not defended by *panzers* nor were the beaches near it as fortified, mined, or heavily defended when the COSSAC draft outline was approved or the original OVERLORD plan adopted. Caen was touted as an immediate objective. Montgomery's amended plan strengthened the attack, but the Germans strengthened their defenses almost everywhere after the Allied plan was finalized. Additional changes or forces for the invasion could not be easily added. The same situation arose in the American OMAHA beach sector as a full German division arrived and more troops were added behind the beaches in the Cotentin. Anti-airborne traps went in as well. The Germans reinforced every objective area chosen by the Allies after the Allied plan was fixed. The movement of a German *panzer* division immediately behind Caen in mid-May was discovered by ULTRA. Because of the source of the intelligence, discussion was necessarily restricted, although the alternative of taking Caen by envelopment was inserted as a mission. General Dempsey, however, did make his commanders aware that the *21st Panzer Division* was now near Caen.

Allied intelligence did not fully identify these changes in German dispositions prior to the landings, although some identifications did prompt changes in assault plans. This was particularly true for the American airborne drops in the Cotentin Peninsula. The proximity of the German *352d Infantry Division* behind OMAHA beach was not fully understood until immediately prior to landing. The strength of a German regiment at SWORD was not identified. Intelligence relating to the location of fortifications blocking the path to Caen was not passed to assault brigades of the attacking British division on D-day, nor was the neutralization of these fortifications assured by gunfire or air attack.

These German changes in the defense were not the result of intelligence leaks about the location of the Allied assault, but rather the energetic application of logical defensive tactics. The forward deployment of arriving troops was speeded along by Field Marshal Rommel, who had been appointed to oversee preparing the Normandy defenses as well as those of the rest of the Atlantic Wall. He had visited every sector, personally spurred new building and field defenses, and inspired activity in the defenders for the coming fight. Not sure where the Allies would land, he planned defenses as if every beach was the most threatened sector.

Rommel's innovations added two significant twists prior to the invasion. Both had operational consequences for the Allies on D-day, and throughout the campaign. Rommel's experience in North Africa convinced him that no army could survive under the unfettered pounding of a formidable enemy air force. Realizing that German air superiority over the beaches was unlikely, he believed that the concentration and movement of his divisions for a mobile battle might be stopped or rendered too costly by Allied airpower. This led to his conclusion that the battle must be won immediately, perhaps on the first day. The Allies had to be stopped in the water, on the beaches, or immediately behind the beaches, before they could gather their strength for a large penetration.

To stop the Allies on the beaches, Rommel engineered massive networks of mines, fortifications, and obstacles in the water and on the beaches to impede Allied movement or divert it into fire traps and ambushes. Mobile and armored units moved close to potential landing areas to respond immediately to landings. This compressed the German defense in depth to five or six kilometers in some places and put the entire German defense within range of Allied naval gunfire. It also exposed Allied assault forces when most vulnerable to successive losses from automatic weapons, mines, obstacles and mobile counterattack. Defenses would overlap in close layers as the attackers attempted to move inland through webs of resistance.



A depiction of the "Atlantic Wall" produced for propaganda purposes in Germany.

Central to Rommel's defensive concept was the largest concentration of mines ever seen in the west. In the water, logs topped by mines were placed at the high-water line to hit the bottom of landing craft. Underwater obstacles were devised ranging from simple stakes to the more complex metal "Belgian Gates." Tetrahedra, hedgehogs and various tank traps were devised to defend in the water at various depths, and to leave no gaps coming inland. Ashore, minefields were laid between strongpoints and automatic weapons pits were sited to provide flanking fires to sweep beaches from under cover. Open areas were covered by concrete positions for antitank or larger artillery pieces. Large open fields were staked with "Rommel's asparagus," poles with mines, to prevent glider landings. Brittany and Normandy received such "asparagus" as they were viewed as possible diversionary or supporting landing sites for a main landing at the Pas de Calais.

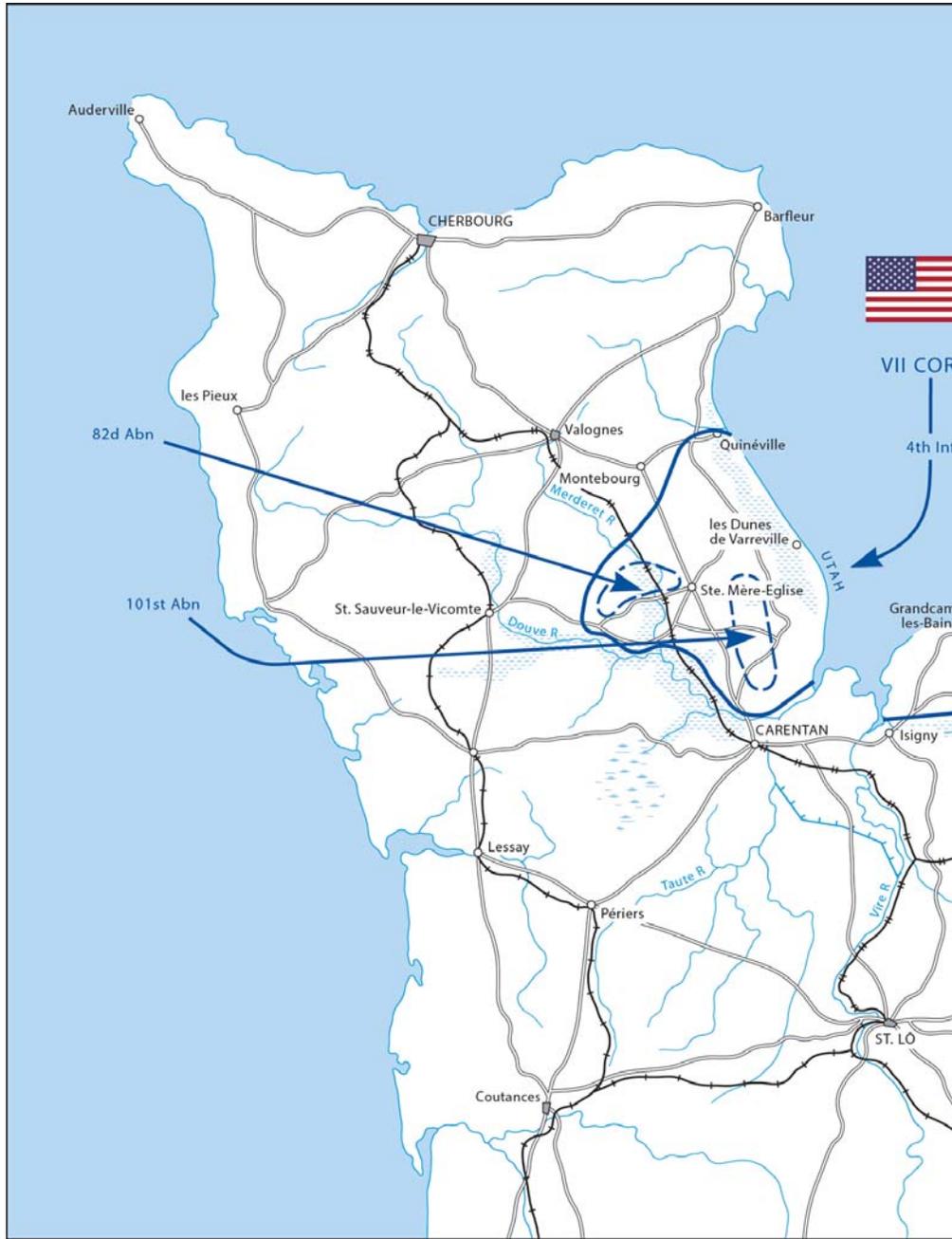
Estimates on land mines for the Atlantic Wall range as high as six million and poured concrete for its fortifications exceeded 17.3 million cubic tons. The "wall" was not complete by the time of the invasion. German defensive plans are estimated to have been accomplished to about the 80 percent level in the vital Pas de Calais sector, but to less than 20 percent in the Normandy sector where the landings actually took place.

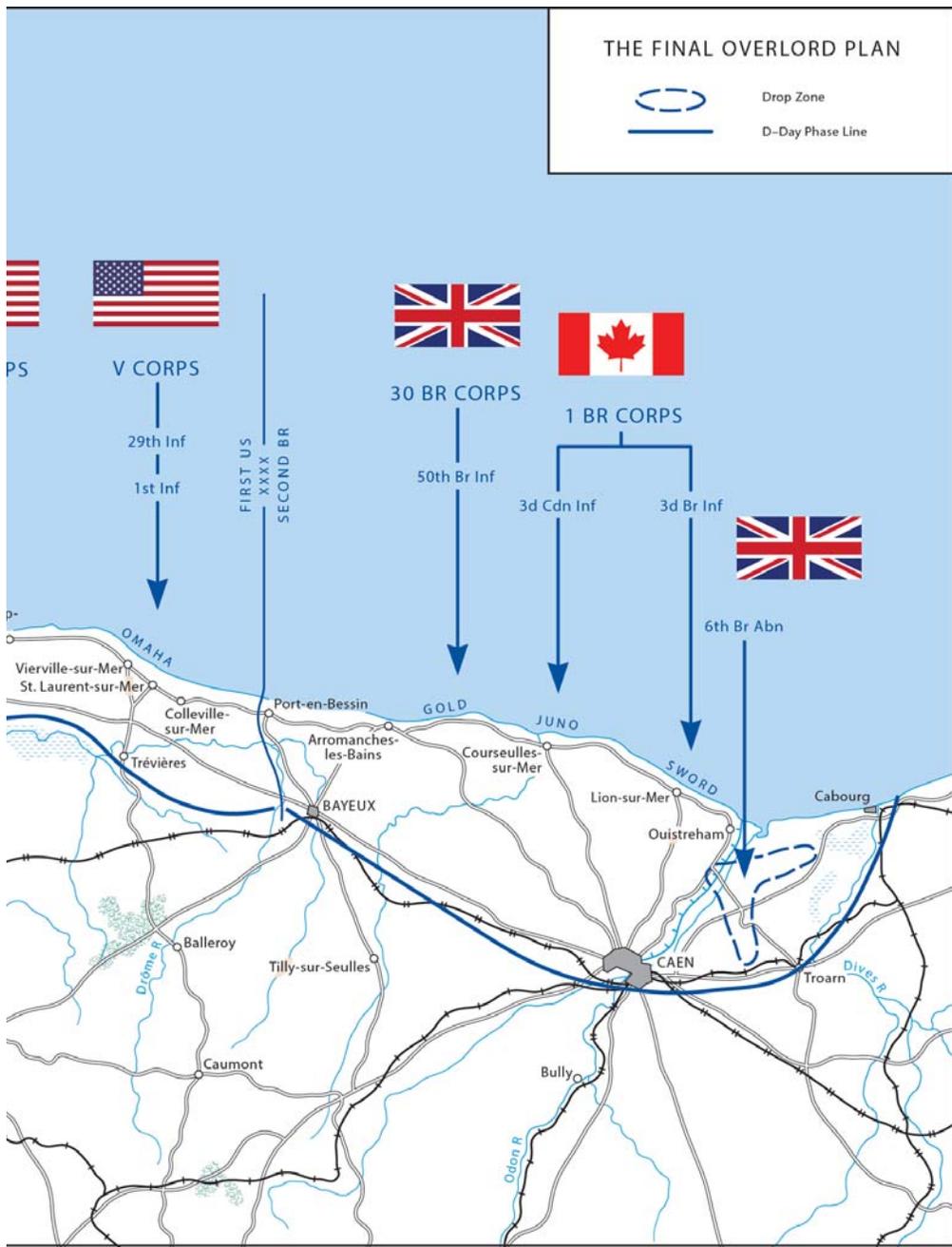
Troop strength for the Allies were not a restrictive issue. Landing craft were the primary shortage, along with troop carriers and glider towing aircraft for the airborne forces. As Montgomery's plans added two new beaches, these shifted the relative primacy of D-Day objectives. Montgomery both deepened and widened the landing areas to expand the initial perimeter. From this mounting area the Allies were to move forward, repel German counterattacks, and rapidly capture airfields and ports. The new "NEPTUNE" plan was bolder than what had gone before, and Eisenhower fought for additional assets in the face of the U.S. Navy's insistence that additional landing craft were available only for Pacific operations. With difficult compromises necessary around the globe, Eisenhower accepted a month's postponement in the landings.

Eisenhower's control of the aviation assets of the European Theater became a matter for debate almost immediately. Leigh-Mallory was designated to be Eisenhower's Tactical Air Force Commander, but General Spaatz, as United States Army Air Forces commander in the theater, pooled his tactical fighters to support the Strategic Air Forces. These were executing the POINTBLANK bombing directive issued by the Combined Chiefs. Spaatz considered the fighters essential to escort bombers and to assist in breaking the back of the *Luftwaffe* in daylight operations. By



Air Chief Marshal Sir Trafford Leigh-Mallory, 1944.





directly challenging the German Air Force, he anticipated the immediate and severe attrition of German pilots and planes. This would cripple the enemy, facilitate the strategic bombing campaign, and enable the OVERLORD operation to proceed without interference from German air forces. The Army objected. At some point, it held, bombing would have to concentrate on pre-invasion targets. Tedder interceded with a plan to replace one already provided by the tactical air forces to hit transportation targets in the invasion areas.

The debate among the airmen broke into two parts. The first concerned overall control of the heavy bombers. Eisenhower demanded that strategic bombers be subordinated to the Supreme Headquarters for the period of the invasion. He insisted that the theater's resources be focused totally on the prime mission of the theater, OVERLORD. The airmen insisted that the Combined Bombing Offensive was a matter of strategy directed by the Combined Chiefs. The Combined Chiefs' executive, Air Chief Marshal Charles Portal, had issued a general directive to harmonize the night bombing by Harris' RAF Bomber Command and the daylight bombing by the United States Strategic Air Forces. Lt. Gen. James H. Doolittle's Eighth Air Force flew from the United Kingdom and Maj. Gen. Nathan F. Twining's Fifteenth Air Force from Italy in a synchronized campaign. The essence of this argument was more than just targeting, it was also the independence of the airmen to conduct their own campaign.

The second debate concerned targeting priorities. The so-called Transportation Campaign was first devised by the Allied Expeditionary Air Forces commanded by Leigh-Mallory. It evolved into a more railroad intensive operation with a priority of hitting yards and bridges as championed by Air Marshal Tedder. General Spaatz proposed a separate campaign against the oil production of the Third Reich. This would not simply target major refineries such as Ploesti in Romania, but also synthetic production plants throughout Germany. Both transportation and oil production targets were bombed, so great was the strength of the Allied air forces under SHAEF's operational direction as coordinated by Air Marshal Tedder.

Another strategic argument concerned Operation ANVIL, the proposed simultaneous landing in southern France. Churchill argued vehemently against it. He saw it as an unnecessary and premature diversion of landing craft from those needed to support Anzio, which had congealed into a stalled bridgehead. The enclave needed landing craft for sustenance and to build up for a breakout. Churchill also recognized ANVIL as the logical extension of Marshall's plan to remove as many U.S. troops as possible from the Mediterranean Theater of the war and use them in northern Europe. Marshall planned to roll up the Mediterranean Theater and send its forces through the southern French ports. Churchill believed these could better support the southern advance against Europe by pushing on through northern Italy.

Churchill viewed the southern European front as ripe for development, including threats against Austria and the Balkans, the hopes of bringing Turkey into the war, and diverting German forces from the Eastern Front. While the Combined Chiefs deadlocked on this vital issue, the political heads threw the issue to Eisenhower to decide. Did he need ANVIL? Marshall reminded Eisenhower that Stalin had been promised a southern France invasion. This posed no real worry to Roosevelt in his mind, but provided an added reminder that Marshall wanted ANVIL.

Eisenhower called for ANVIL but hedged. He accepted it as useful whenever it was feasible to conduct. He did not press for its simultaneous launch, or even for landings within a month of those in Normandy. He needed all possible landing craft for OVERLORD and would accept a delay in ANVIL. This supported the pledge to Stalin, Marshall's strategy, and the desire to allow the Italian Campaign to capture Rome. The latter required breaking out of Anzio and the Winter Line across southern Italy and seizing Rome and its vital airfields. In Churchill's eyes, the capture of an Axis capitol city, Rome, symbolized that victory was one-third complete. This was even though Italy's government had already joined the Allies. The psychological threat the capture of Rome posed to Berlin, Prague, and Vienna, coupled with increased attacks against the Romanian oil fields, Germany's southern industries, and southern France, could not be overstated.



General Eisenhower established the original theater headquarters in this building at 20 Grosvenor Square in London.

A Joint Directive was issued on February 1, 1944 by the Commanders in Chief of Air, Ground and Naval Forces as a basis for planning for NEPTUNE. It gave the headquarters and specified elements throughout the Allied chain of command the ability to form their own detailed plans. They could also harmonize and coordinate their work, request additional resources, or alter plans as needed.

With air priorities and direction being accommodated, and naval support for a five-division landing promised, Montgomery's draft for NEPTUNE went forward to the two assaulting armies for detailed plans. British Second Army, commanded by Lt. Gen. Miles Dempsey, was to secure the 21st Army Group left (east) flank from the Caen beaches (Ouistreham) to the central sector around Bayeux near Port en Bessin. Two corps would command the assault divisions, I Corps nearest to Caen, and XXX Corps with two divisions with one beach each. The 21st Army Group would be the initial Ground Headquarters for the Allies under General Montgomery. The Supreme Commander would assume that role upon moving his headquarters ashore and making it fully operational. Until that time Montgomery directed the ground campaign in Normandy with full operational authority.

Lt. Gen. Omar N. Bradley commanded the U.S. First Army with two corps on the Allied right (west) flank. Each corps controlled divisions with their own beaches. The American V Corps would assault west of the British beaches at OMAHA beach with two divisions and VII Corps would attack southeast of Cherbourg on UTAH beach at the neck of the Cotentin Peninsula (Varreville) with one division.

Behind the beaches, key airborne objective targets were selected to support the invasion. Deep interdiction missions by airborne troops had disappointing results in both the North African and Salerno landings due to scattered drops, the inability to link actions with the landings themselves, and the ability of the enemy to bypass the effects of the drops. Despite proposed plans for a mass drop deep within the enemy rear south of Paris, Eisenhower refused such dispersion. Montgomery gave his planners guidance to place airborne drop zones close to the invasion beaches, within easy link-up range. In the British sector, this led to airborne missions to silence the Merville Batteries on their left flank and seize the Orne and Dives River bridges. This would allow egress to the east, secure potential counter attack routes into SWORD Beach's flanks, and anchor the Allied left flank.

Behind the American beaches two airborne divisions would drop. The U.S. 101st Airborne Division would seize the causeways linking the landings on UTAH beach to exits towards its objectives. The U.S. 82d Airborne Division would provide a defensive buffer against counterattacks from north, west, and south by German reserves in the Cotentin Peninsula. This would give the American VII Corps a protected bridgehead into the Cherbourg peninsula from which to pursue its campaign objectives.

The NEPTUNE plan relied on gaining defensible ground inland before Germany's substantial *panzer* reserves, held in the interior of France and behind the north coast, arrived to counterattack the beaches. Two additional divisions were combat loaded for D+1, but the fleet's ability to deploy further divisions ashore depended on landing craft availability, changing weather in the difficult English Channel, beach clearance, and achieving the beachhead space necessary to develop further operations. The enemy would try to destroy the beachheads before the Allies gained ground suitable to defend, and before they could expand and develop operations in depth. The invasion initially relied on over-the-beach resupply, but its buildup would eventually require port facilities. The invasion also required local air superiority, so the acquisition of suitable terrain for forward airfields was a priority.



Lt. Gen. George S. Patton.

The OVERLORD campaign to gain a lodgment of approximately thirty divisions in France, with the ability to absorb three to five additional divisions per month, relied upon the capture of the Brittany ports and pushing the bridgehead east to the Seine River. Montgomery's headquarters estimated a 90-day time frame for this accomplishment, although much depended upon the weather. Success required the capture of ports, a steady buildup, and for the Allied divisions to fend off German counterattacks while gaining ground for additional troops and stores. During this period, Lt. Gen. Bradley would activate a second U.S. Army headquarters, the Third Army under Lt. Gen. George S. Patton. Bradley would be replaced by Lt. Gen. Courtney H. Hodges

as First Army Commander while he assumed command of 12th Army Group. The Supreme Allied Commander would assume command of all Allied ground forces in the theater, and General Montgomery would revert to command of the Commonwealth 21st Army Group with the Second British Army and the newly activated First Canadian Army.

XI Amphibious Force Marker



The World War II XI Amphibious Force Marker is located in the Britannia Royal Naval College in Dartmouth, United Kingdom. This marker is etched with a historical tribute to America's armed forces that served in the vicinity during World War II, and to our Allied comrades.

Allied forces launched the liberation of Europe from the northern shores of the English Channel. Dartmouth was roughly in the center of the sector used by the Americans. The Britannia Royal Naval College served as the headquarters of the U.S. XI Amphibious Force. Under the supervision of this Force, thousands of soldiers, sailors and airmen prepared for and executed landings in France on June 6, 1944. The D-Day landings marked a turning point in the war, and hundreds of thousands of troops and millions of tons of supplies then moved across the English Channel in the following days, weeks and months. Dartmouth's geographic location proved ideal for Allied logistical needs.

This marker commemorates the importance Britannia Royal Naval College played in carrying the battle to the enemy, and ultimately overthrowing the grip of Nazi tyranny. It further commemorates the enduring bond between the United Kingdom and United States.

To provide additional logistical support until the ports were captured and functioning, the Allies would bring their own artificial ports with them. In the center, behind the British beaches at Arromanches, "Port Winston" would be assembled. A massive artificial breakwater created by sinking concrete filled blockships would create a sheltered harbor. Within this harbor, floating piers would be anchored to rise and fall with the tide and be used to unload ships. Floating roadways would link to LSTs or other ships. The "breakwaters" were composed of blockships called "Corncocks." These were brought in under their own power and sunk in line. The breakwaters themselves were known as "Gooseberries." The Gooseberries would be expanded into artificial harbors by sinking large ferro concrete caissons, "Phoenixes," that both reinforced and extended the line of Corncocks. They continued the line to the shore as well as completing the breakwaters at both ends. The "Mulberry" harbors were intended to be operating by D Plus Four. They could accommodate various sized ships and craft and would be placed behind the British beach at Arromanches and the U.S. beach at OMAHA. The concrete fabrication of these artificial harbors took place secretly in England.

Prior to the capture and opening of ports, these artificial harbors would be critical to the Allied buildup. Besides troops, the harbors could unload the vast number of vehicles needed to carry supplies along with huge quantities of ammunition and artillery. Armored vehicles, aviation fuel and bombs, other supplies of all types and airfield matting for temporary airstrips in the beachhead would also require sustained harbor operations. Bad weather would delay operations and would hamper long term planning for offensives. It would call into question the ability to build up ammunition reserves and vehicles quickly enough and slow the arrival of replacements and reinforcing units.



Admiral Sir Bertram Ramsay at his London Headquarters in October 1943.

The Transportation Plan bombing campaign continued, with additional missions added by Eighth Air Force heavy bombers in May prior to the landings in June. These missions remained the operational responsibility of Air Chief Marshal Leigh-Mallory and Air Chief Marshal Tedder. Meanwhile Lt. Gen. Spaatz executed more missions against German oil production facilities to further draw out and destroy *Luftwaffe* fighter reserves. By June, the capacity of German reserves and reinforcements to move by rail or across bridges into the invasion areas had been much degraded. In May, intensive strafing of railroad locomotives throughout France further reduced rail mobility assets available to the enemy.

The OVERLORD naval plan was complex and benefited from the command of Admiral Sir Bertram Ramsay. His most notable early wartime assignment had been the rescue of Britain's army from Dunkirk. Following that, he had conducted the British landings in Sicily. He incorporated the use of the artificial harbors invented by the Combined Operations staff into his plans, thus eliminating the need for immediate direct assaults on harbors. While the selection of Normandy had been made by Combined Operations and COSSAC after long examination, Admiral Ramsay crafted the actual plan for assault employing two navies with varying operational methods. He insisted on supporting the land commanders' principal campaign requirements first. This differed from the U.S. Navy's technique for island assaults in the Pacific, where fleet protection or other naval requirements often overrode Army plans. Ramsay supervised in detail to assure smooth execution, an approach that was not always pleasing to his American counterparts.

Ramsay had one of the most challenging problem sets of the Allied commanders. He faced the complexities of minelaying off the flanks of his convoy routes, mine clearance of those routes, ship stationing along them, and the multiple problems posed by tides, enemy batteries, differences in underwater and beach characteristics in different sectors, variances in ships, nationalities of crews, and the turbulence of Channel weather. His forces had to conduct a successful amphibious assault and maintain a steady build-up of forces for at least five to six weeks in unpredictable weather. They could face air, naval, and under-sea attack, and would be greatly exposed until captured port facilities could ease the over the beach and artificial port off-loading problems. Ramsay remained in command of the Allied Expeditionary Naval Forces in European waters until his death in an airplane crash in early 1945.

Ramsay's fleet totaled over 5,000 ships. Protection and gunfire support came from 1,213 warships including 7 battleships, 2 monitors, 23 cruisers, 3 gunboats, 80 destroyers, and 71 corvettes. Landing ships and craft totaled 4,126. 79 percent of the warships came from the Royal Navy and Royal Canadian Navy, 16.5 percent from the American Navy, and 4.5 percent from the French and Dutch. The fleets would sail to their five landing zones by different routes, link-up southeast of the Isle of Wight, and then move into ten mine-swept channels through the German minefields. There were two channels to support each landing beach, with protective forces far to the flanks.

Ramsay decided on a daylight landing. Mediterranean landings had been in darkness, following a silent approach, with a very short preparatory bombardment. No beach obstacles existed when this original decision was made, but the appearance of obstacles later probably would have prompted a night landing to be shifted to daylight had one been chosen. A critical concern identified in early studies was that without an artificial port to speed the build-up of troops, sufficient troop strength could not be amassed to survive the enemy's response. The Dieppe Raid in August 1942 had demonstrated the difficulty and unlikelihood of the early capture of a working port.

H-Hour, the time of actual landing, was determined based on daylight, tide, visibility for preparatory fires, maximum time for daylight operations once the ground forces were ashore, and the use of a second high water period for landing a second wave. Based on the need for rising water to refloat landing craft, the optimal times for landings and second waves varied with each beach due to the underwater conditions and tides (hydrography) of that coastal sector. These optimal times ranged between three and four hours before high water and began about forty minutes after the start of nautical twilight when sufficient light existed to see beach obstacles. The discovery of obstacles meant that the first engineers would have to land just short of the obstacles to clear them. This varied times of approach further. The JUNO beach force had to negotiate shoals at low

water, leading to further compromise. This limited prospective landings to several days per month and gave a landing variance in time from 0630 at the earliest for the Western Task Force and 0745 for the Eastern Task Force. These ideal conditions existed only twice monthly for three days.

Given the extensive road network the Germans enjoyed in France to move their forces, the ability to securely seal off the western beaches by air was questionable. Crippling rail lines would be crucial, and reducing daylight moves essential. The larger forces demanded by Eisenhower and Montgomery for the early assault solved only the D-Day force balance. Thereafter, the accuracy of German decisions in deciding where and when to concentrate their counterattack forces would be as critical as Allied moves. The naval force would have to land adequate forces to repel these attacks, and also ship in massive amounts of supplies to sustain continuous operations. It would have to build up a growing reserve for future operations and bring in additional forces to be employed within the Allied lodgment. Supply planning was coordinated through 21st Army Group based on its operational forecasts.

Preparation fires were to begin at first light. Naval gunfire would be challenged to neutralize the most complex defenses ever met by a seaborne assault on such a large scale. The breadth of the landing frontage, over forty miles, required precise targeting and the isolation of fortifications posing an immediate danger to assaulting troops. The movement of German armored reserves or mobile reinforcements would have to be interdicted. This required coordinating intelligence, navigation, gunnery, and timing prior to the troops coming ashore. A final attack by air force bombers

Dartmouth Monument



The Dartmouth Monument is located in the Royal Avenue Gardens park in Dartmouth, United Kingdom. This monument, a granite “memory stone,” is etched with a historical tribute to America’s armed forces and our Allied comrades in World War II.

Allied forces launched the liberation of Europe from ports all along the northern shores of the English Channel. Dartmouth was roughly in the middle of the sector used by American forces. It was transformed into a major logistical center, and served as a training base as well as a port of embarkation.

This monument marks the importance Dartmouth and ports like it played in carrying the battle to the enemy, ultimately overthrowing the grip of Nazi tyranny. It further commemorates the enduring bonds between the United Kingdom and the United States.

immediately between the lifting of naval gunfire and the landing of assault craft was planned. This was to destroy or neutralize enemy targets in the last minutes before the landing.

One of the early objectives of the invasion encompassed capturing a city, Caen, with a population of more than 60,000. The original planning done by both the Combined Commanders' Committee and COSSAC valued the city of Caen as a key objective. The COSSAC plan went so far as to say that OVERLORD's success depended upon its immediate capture. It placed its airfields ahead of the capture of the port of Cherbourg, a priority Montgomery reversed during the campaign as airfields were established within the lodgment.

COSSAC's plans for Caen assigned two-thirds of an airborne division to seize the city. According to the COSSAC plan, which held to the original strictures of the CCS allotment of forces and landing craft, only three divisions landed in the first wave. Two were to land in the east sector and one in the west near Varreville. With the subsequent broadening and deepening of the assault plans and further acquisition of combat aircraft, Montgomery allocated priority to the west for airborne assaults. These were to support the landings behind the American beaches. Montgomery employed British airborne assets to anchor the eastern beach high ground and a flank exit. He did allocate a full division plus an armor brigade to seize Caen.

A critical consideration in Montgomery's deliberations was the terrain behind Caen. The city was too large for an airborne brigade to seize if held by a determined force. The large expanse of open rolling ground behind it was ideal for the airfields sought by the Allies, but also provided premier *panzer* counterattack routes towards the beaches. The major road nets leading from the northern German *Seventh Army* area and from deep within France led directly through Caen or onto the road marked as the D-Day objective line. Allied intelligence watched *panzer* divisions move in and out of the sector behind these beaches in the months prior to the invasion. By the weeks prior to the invasion, ULTRA had confirmed the permanent presence of a *panzer* reserve several hours drive behind the D-Day beaches, out of bombardment range of the Allied fleet.

The mission of the Canadian division assaulting JUNO Beach was to seize Caen on D-Day. If that was not possible, a secondary mission was to screen the city. The Canadians were to prepare to envelop the city from its right as neighboring Allied forces seized their objectives. These included an airfield at Courseilles and high ground east of Caen. The Canadians were to prepare to exploit or attack southwards to seize the desired airfields, while fighting the German *panzers* after their counterattacks were broken.

Implicit in this mission were several tasks and assumptions. One vital task was air superiority. From the first, Generals Spaatz, Doolittle and Brereton, and Air Marshals Tedder, Leigh-Mallory, and Coningham, had different views of the use of air power in supporting the invasion. All believed in air superiority over the beaches and invasion sector, but the Americans viewed the entire continent as the air theater. The Royal Air Force airmen viewed it more narrowly, possibly due to the range of their fighters and their stress on a night bombing strategy. Coningham was in favor of constantly building airfields to push his short-ranged British aircraft forward. Leigh-Mallory recognized the need to balance support to the army's fight with deep interdiction missions. The American airmen wanted to get direct support to the invasion over with and move back to strategic bombing. The bombers would hand off operations to the Tactical Air Forces to continue air cover for the ground troops.

FORTITUDE, the deception plan, also had a basic assumption. It assumed that the Germans would view Normandy as a diversion only for a reasonable period. The German Commander-in-Chief in the west would be Field Marshal von Rundstedt, a sound soldier, and the Allied generals counted on a balanced response to Normandy. A rapid advance in Normandy, although desired, would draw more *panzer* reserves from the Pas de Calais sector through Caen, and also from the center of France. The Germans could ill afford a large bridgehead in France, even if a secondary effort. Thus, FORTITUDE would have a time limit, undefined, in its usefulness in keeping German attention focused on the Pas de Calais.

OVERLORD's basic task was to establish a lodgment of twenty-six to thirty divisions capable of absorbing three to five additional divisions per month from the United States. This implied ports open to the Atlantic. The Brittany ports, used in the First World War, were ample for the job. This fit the campaign design of a landing on the Calvados coast in Normandy proximate to Cherbourg and Le Havre. There was also a defensible line to form the lodgment sector, the Seine River. Once secured, the Loire ports and ports opened during the landings in southern France would form the basis for the liberation of France and the Low Countries and the march to the German border. Eisenhower referred to this as the "broad-front."

To secure the lodgment, the amphibious assault plan envisioned seizing a "D-Day Objective Line", a designated line based on prominent features whose possession denied the enemy the advantages of observation or blocking positions. It would also provide a convenient defensive line against counterattacks. In Normandy, the planners put this line along a road running from the high ground at Caen in the east to south of Bayeux to south of Isigny at the inlet leading back to the coast. The objective line picked up again at the Douve River south of Carentan and proceeded south of the airborne drop zones,



Field Marshal Gerd Von Rundstedt (right) examines a map of the "Atlantic Wall."

west of the nearby marshes, then past St. Mere Eglise and back to the coast. (See Map FINAL OVERLORD PLAN). To assist with the coordination of movement and fires, a series of phase lines were drawn as planning measures. Then current U.S. and British military doctrine used these lines as estimates of advance, not schedules. This fact was too often forgotten when the enemy's reactions dampened pre-invasion optimism with more realistic expectations and results.

The phase lines added to the plan implied that forces could be landed at a steady rate if the frontline troops were able to maintain their advance at a steady rate. They reflected an anticipated ratio of friendly to enemy forces built up at a pace to maintain a reasonable equality. The ability of the Germans to concentrate armor, to thin their defenses to counterattack, or to maneuver from positions in depth could only be countered by the offensive use of tactical air power, superior intelligence, or flexible command. The unpredictability of channel weather and reliance on over the beach supply and temporary ports would determine the rate of the Allied buildup, to include air support. The phase lines were to be used as estimates for logistical planning purposes.

On May 8, 1944, Eisenhower informed the War Department that he had tentatively approved his campaign plan for the liberation of Europe. He identified the major avenues into Germany and decided on a "Broad Front Strategy" with the main effort in the northern half of the front. With the invasion of southern France, the Allies would eventually have three full Army Groups facing the German border. The Canadians, British, Americans, and Free French would have armies ranging from north to south, from the North Sea to the Alps. SHAEF's planners estimated that the war could be finished in a year. Much depended on the damage inflicted by the Red Army in the East, which continued to engage the

bulk of the German Army, and the effects of the strategic air war. Also on May 8, Montgomery met with his two Army Commanders to discuss Allied attacks and German options in the coming battle for the beachhead. Both commanders had flexible approaches within a very broad intent. This permitted details to change within a wide strategic aim. The commanders later claimed that their plans did not change within their broadest sense, although modifications did occur.

While the troops finalized their plans and preparations, the Joint Intelligence Committee that provided the Supreme Command with “all source intelligence” examined the German strength and capabilities in the light of the basic assumptions provided by the Combined Chiefs for a successful OVERLORD invasion. This was an eleventh-hour check on the probability of “reasonable success” for the operation. First considered was the reduction of German fighter strength in Europe. This was the driving factor behind the Caen airfield objectives so desperately wanted by Leigh-Mallory and Coningham. Their original plans had not counted on air superiority being won by Spaatz’s Strategic Air Forces in their daylight raids. The Americans had, however, devastated the *Luftwaffe*, whose ability to defend Germany and the beaches was crippled. Pre-invasion strikes against airfields, radars, and support facilities had pushed the German air defenses further eastward and out of the invasion sectors.



American soldiers engaged in artillery training for the OVERLORD invasion.

Second considered was tactical surprise, an absolute prerequisite. An alert mobilized defense could crush the invasion. While the Allied buildup on the beaches was essential, the count of *panzer* divisions arriving was crucial as well, as was the presence of German reserves. Two Allied initiatives could influence this. The deception plan might slow or partially prevent the shift, and the aerial interdiction plan might seal the invasion area from immediate reinforcement.

A critical consideration was the ability of the Germans to move new divisions quickly against the landing sites. Most Allied planners discounted the fighting ability of the “static” defensive units on the beaches, but the Germans had fifty-five divisions in France and the Low Countries, and a number were of high quality. These divisions could prove decisive. Early plans indicated that if the Germans were able to bring in no more than twelve divisions, the Allied ground forces could defeat them. More than that and the result was problematic. The implications of French resistance efforts, Allied air power, and the German’s ability to coordinate counterattacks were difficult to assess.

As the time for the invasion neared, new intelligence estimates posited that as many as twenty-four divisions might confront the Allies within the first ten days of the invasion. To counter this, planners added additional divisions to the landing force, accelerated the time table for the arrival in the beachhead of reinforcing divisions, and ramped up air interdiction missions. Prime Minister Churchill still expressed misgivings about the ability of the Allies to get off the beaches and inland quickly enough. He had witnessed the stalemate following the Anzio amphibious landings and had been a principal architect of the similarly stymied Gallipoli landings in Turkey in World War I. He feared that a similar outcome might be possible in Normandy.

In mid-May the Allied commanders met for their final plans briefing. The tenor of the briefing was generally optimistic, although few there realized the higher-level concerns prompted by ULTRA intelligence concerning last minute German movements. Additional *panzer* reserves moved to areas near Caen and new German infantry units were identified near the American drop zones behind UTAH Beach. Beach defenses, mine fields, and the number of anti-glider traps in proposed landing fields grew daily. Many high-level commanders were concerned about whether German strength in France had grown to a point threatening the success of the invasion. Despite the huge size of history’s greatest amphibious effort, OVERLORD would be a “near run thing” -- like many of history’s greatest operations.



German Panther tank in Normandy preparing for a counterattack.

The ground and sea commanders pressed forward, knowing that their previous advantages had been reduced. Field Marshal Rommel had strengthened German defenses significantly and had added considerable energy to preparations to counter their assault. Waiting to build-up more forces or make additional changes to the plan, with the concomitant risk of intelligence leaks, could be fatal. The Allies watched and waited for break in the weather in early June, for their chance to “GO”. Matters would soon rest in the hands of the soldiers, sailors and airmen of the Allied Expeditionary Force.

Air Offensive Europe: January-September 1944

In January 1944, General Eisenhower brought several senior airmen with him from the Mediterranean to round out his command team for Operation OVERLORD, the invasion of northern Europe through Normandy. The Combined Bomber Offensive, for some time the sole threat posed to Hitler's "Festung Europa," remained on center stage as a leading element of the upcoming Allied assault. To focus the power of his several Air Forces, Eisenhower relied on his former Mediterranean team. His Deputy Supreme Commander would be Air Chief Marshal Sir Arthur Tedder, who had been the Air Commander-in-Chief, Mediterranean. He would act as Eisenhower's primary air advisor on the British side, and as a key liaison with Air Chief Marshal Sir Charles Portal on the Combined Chiefs-of-Staff (CCS). Portal wrote directives for the CCS concerning POINTBLANK targets. Lt. Gen. Carl Spaatz, who had commanded the Northwest African Allied Air Forces, came to England to take command of the new United States Strategic Air Forces, Europe. These comprised both the Eighth Air Force in England and the Fifteenth Air Force in Italy. Spaatz would synchronize the strategic bombing of the American Air Forces, as well as assume administrative command of U.S. Army Air Forces, Europe. The latter comprised the American air forces in both theaters. Maj. Gen. James H. Doolittle moved from the Fifteenth Air Force to the Eighth in the United Kingdom, passing the Fifteenth to Maj. Gen. Nathan F. Twining. Lt. Gen. Ira Eaker moved from England to command the Mediterranean Allied Air Forces, which included all the air forces in the Mediterranean Theater. RAF Bomber Command remained under the British Air Ministry and remained subject to Portal's directives.

The United States Army Air Forces in Europe had grown significantly. The Eighth Air Force in January 1944 mustered some 4,600 aircraft in the United Kingdom, with 4,200 combat aircraft in the 26 Bomb Groups, 12 Fighter Groups, 4 Medium Bomb Groups, 2 Transport Groups and 1 Reconnaissance Group assigned. The newly organized Fifteenth Air Force was growing rapidly from its 4 Fighter and 6 Bomber Groups. Further reorganization with the arrival of the Ninth Air Force would transfer the mediums and transports out of the Eighth. An increase in heavy bombers and fighters would nevertheless give the Eighth 52 Bomb Groups, 21 Fighter Groups and 400,000 personnel before spring. The Fifteenth would reach 21 Bomb Groups and 7 Fighter Groups.

The B-17G and B-24M bombers evolved into their final forms with maximum armament, improved radio electronic navigation and bombing aids, and armor upgrades. Few older planes remained except for group assembly ships and those used for spare parts or local transport. Escort procedures had improved, and tactical commanders had been retrained in the standard tactics developed. Airfield and industrial support from the British had been honed to optimize operations and improve coordination. While Eaker had constantly felt pressure from Arnold and the Air Staff, Doolittle inherited a “going concern” as well as the protection of a



A B-17 bomber from 8th Bomber Command, later the 8th Air Force, flies over a small German town en route to hit a *Luftwaffe* ME110 assembly plant in Brunswick.

senior headquarters to shield his operation from Washington’s undue expectations.



An American B-24 Liberator Bomber delivering a payload to Berlin.

1944 was a priority year for men and material flowing to England. Doolittle initiated bombing tactics that evolved around numbers and quality of aircraft previously unavailable. Most of Eaker’s missions had been flown with 100 or fewer bombers. Later missions of 150 might be flown. These permitted

the *Luftwaffe* to concentrate on individual bomb groups, and also gave the German antiaircraft gunners smaller area targets. This led to higher losses. With relatively few fighters available and these committed to close escort, General Hunter had been hesitant to send his fighters ahead after German fighters or to attack German airfields. General Kepner, his successor, had fighters to spare from close escort, and would enjoy the reputation of being more aggressive.

In 1944, the Eighth Air Force was a mature, well-trained organization. Its bomb wings were organized into bomb divisions for command and administration. Planning, intelligence, logistics, and support had been practiced and improved. Coordination with the Royal Air Force and with the antiaircraft guns of the Air Defence had been perfected.

Doolittle's tactics reflected greater numbers and ample daring, accepting that losses were part of warfare. He could afford to send fighters to attack German fighter fields well ahead of the bomber streams. This would catch the *Luftwaffe* pilots in their cockpits before they took off, with the American pilots braving ground fire to achieve this result. Doolittle could also unleash many of his more numerous fighter groups to hunt ahead or beyond the bomber formations, while others provided close escort to the bomber stream. So thick were friendly fighters in the air that few enemy fighters could intercept the bombers. With fighters capable of ranging as deep as 700 miles from London by May 1944, no target reached by American bombers went unescorted. Cripples which fell out of formation due to damage or engine trouble were immediately picked up by "little friends" to shepherd them home. Bomber losses to enemy fighters dropped dramatically.

Doolittle benefitted from bombing aides such as H2X for radar bombing, employed by pathfinder aircraft to find their way through heavy overcast. During the winter months this added as many as a third more bombing days to the campaign. The precision desired might not be achieved in bad weather, but with complementary night missions by RAF Bomber Command, the relentless bombardment further devastated key industrial areas. Allied persistence hampered German industrial dispersal, transportation, and recuperation. The housing of industrial workers was heavily damaged as well. This placed ever greater strains on the German economic system, offering no respite for the recovery of key industries.

Originally, Air Chief Marshal Sir Trafford Leigh-Mallory was envisioned by the CCS as Eisenhower's airman. Eisenhower, at Tedder's prompting, watered this down. The bomber airmen balked at giving up their relative autonomy to serve under Leigh-Mallory. Tedder bargained for coordinating powers with respect to the use of the strategic bombers during the period of the invasion. This left Leigh-Mallory with the U.S. Ninth (Tactical) Air Force under Maj. Gen. Lewis H. Brereton and British 2d Tactical Air Force under Air Vice Marshal Sir Arthur W. Coningham under his direct command. United States Strategic Air Forces (USSTAF) under Spaatz and Bomber Command under Air Chief Marshal Sir Arthur Harris received directions from Tedder, working through Leigh-Mallory's staff when Eisenhower asked for it.



Air Chief Marshals Sir Arthur Coningham and Sir Arthur Tedder and Generals Carl Spaatz and James Doolittle.

Leigh-Mallory, who previously commanded Fighter Command, later named Air Defence of Great Britain, and Army Cooperation Command, soon found himself in spirited arguments over the ways and means of preparing for the invasion. A detailed bombing plan against French and some German rail and bridge networks was prepared. Nearby batteries, radars, and key communications nodes were also to be hit. This target list was generally known as the Transportation Plan. Spaatz countered with a plan of his own, a strategy to destroy German fighter forces by direct assaults on industrial targets that would force their reaction.

This debate over strategy concerned Eisenhower who sought a focused air campaign preparing for Operation NEPTUNE, as D-Day's amphibious phase was now called. Bomber Command continued to execute its own interpretation of POINTBLANK targets, bombing area targets at night under the auspices of the Combined Bomber Offensive. The Allied Expeditionary Air Forces staff was initially unable to get control of Ninth Air Force fighters tasked to fly as bomber escorts by Spaatz, the senior U.S. airman in the theater. Spaatz held that without air superiority over the beaches, the invasion could not go forward. The *Luftwaffe's* defeat could only be guaranteed by destroying the source of German airplanes in the factories. German aircrews would rise to defend these and be destroyed as well. The operation to focus on the *Luftwaffe* directly was named ARGUMENT; the air crews called it BIG WEEK.

BIG WEEK proceeded during a week of clear weather at the end of February 1944. It hit airframe assembly plants, air components plants, and antifriction parts (especially ball bearings) plants in Central and Southern Germany. Following Arnold's admonition to destroy the enemy air force wherever it was found, USSTAF fought BIG WEEK as a coordinated campaign. The German shift to greater fighter production was a direct threat to the bomber force and the invasion. Spaatz believed directly assaulting the *Luftwaffe*, in the air, on the ground, and in the factories, was the fastest way to end the threat. It was also a direct attempt to kill the *Luftwaffe's* best pilots before the invasion. Anderson, his operations director, knew the *Luftwaffe* would come out in force to defend these factories. They had been picked as much to prompt a response as to diminish the enemy's industrial capabilities.

Spaatz differed from Eaker in his commitment that enemy fighters should be hit both in the air and on the ground, even if they did not come up to attack the bomber formations. Attacking airfields could be costly, as strafing exposed the attacking aircraft to ground fire. Yet, Eighth Air Force policy encouraged it from Doolittle's arrival onwards. The Americans lost several of their top aces during airfield strafings after they had been highly successful in air to air combats. "Victories" for aircraft destroyed on the ground were credited as a further incentive to pilots eager to become aces. Spaatz believed destroying the *Luftwaffe* wherever it was found was the fastest way to prepare for OVERLORD as well as protect his bomber force.



P-38 Lightnings of the 55th fighter group provide close air support in southern France.

Planned by Eaker in December 1943, ARGUMENT was delayed by foul weather and the wait for more long-range escorts such as the long-legged Lightning P-38s and Mustang P-51s. A patch of good weather, and the introduction of radar bombing aids, brought it into execution. “BIG WEEK” got the green light with good weather that permitted recurrent attacks launched between February 20-26, 1944.

General Spaatz ordered a maximum effort with heavy bombers and long-range fighters committed to the massive destruction of the German aircraft industry and the overwhelming of German fighter defenses. The Royal Air Force added escorts to the extent of their range on the way out and picked up returning bombers with a second wave of escorts.



P-51 Mustangs flying in formation over France.

German industry had by that point moved plants to dispersed locations and this reduced some of the physical damage. The losses of experienced pilots by the *Luftwaffe* to the waves of American fighters were irremediable. After BIG WEEK, American pilots became ever more experienced and plentiful in the skies. Though flak continued to score hits which damaged and destroyed American aircraft, Allied losses to the big killer, fighters, fell off dramatically. The German fighters became hunted quarry ever more frequently. Air superiority over German cities became the norm, and air supremacy over the invasion beaches became guaranteed.

Weather caused the Fifteenth Air Force in Italy to remain in its theater focusing on ground targets during the first days of ARGUMENT, so the operation began with Eighth Air Force bombers flying in marginal conditions on February 20th. Over 940 bombers flew along with seventeen U.S. fighter groups and sixteen RAF squadrons of fighters for short range escort. The RAF fighters flew part way in to the targets and also met the bombers on the way back. Twelve targets were struck by one or more bomb wings. The following day, Eighth Air Force followed up on a heavy night raid by the RAF hitting the industrial city of Leipzig. On the 22nd, the Fifteenth, with clearer weather, joined the strikes from the south and hit Regensburg. Eighth Air Force planes hit targets throughout northern and central Germany. Weather blanketed the continent and closed down operations on February 23rd, but the two Air Forces returned the next day. The Eighth hit Schweinfurt and Gotha, and the Fifteenth hit Steyr. Southern Germany was hit on February 25th with Augsburg, Furth, Regensburg and Stuttgart targeted by bombers from both the United Kingdom and Italy. Weather ended BIG WEEK on February 26th.

Bomber losses for BIG WEEK were reported as 137 heavies for the Eighth Air Force and 89 for the smaller Fifteenth. The UK based Eighth flew over 3,300 heavy bomber sorties and the Italy based Fifteenth contributed more than 500. Over 3,600 fighter sorties were flown by the Eighth, Ninth, and Fifteenth Air Forces. U.S. bombers dropped more than 10,000 tons of bombs and the RAF, hitting five POINTBLANK targets on the intervening nights, dropped more than 9,000 tons of additional ordnance. About 2,600 Allied airmen were shot down, mostly in the bombers. Post war estimates show that no less than 400 German airmen were killed and 300 went missing that month. Similar results accumulated in the following months, with over 3,000 aircraft destroyed in combat in February and March. Air Force estimates at the time, perhaps high, claimed some 760 enemy planes for BIG WEEK. At least a full month's German aircraft production was lost.

Spaatz and Doolittle did not let up after ARGUMENT. More raids pressed in, to include many using radar bombing off of “Pathfinder” aircraft. These used radar-directed targeting to penetrate through overcast and thus increase available bombing days. Such raids tended to limit their targets to rail yards and other large features for which a good radar signature or radio triangulation fix could be achieved.

On March 6, 1944, 658 heavy bombers struck Berlin and its environs. They lost a record sixty-nine bombers despite fighter escorts that protected them all the way to the target and back. With Berlin already under night assault by the RAF, this daylight strike was a massive psychological blow to the Germans. They had been under repetitive bombardment by Bomber Command several nights weekly since November 16, 1943. Eighth Air Force hit Berlin five times in March 1944, dropping 4,799 tons of bombs on the city’s factories. The RAF dropped more than 33,000 tons of bombs on “the City” as they called it, while U.S. aircrews referred to it as “Big B.”

Electronic warfare emerged as a constant battle of electronic measures and counter-measures. The Germans and British had sparred against each other in the ether since 1940. Germany was crisscrossed by the KAMMHUBER LINE, named for the Air Defense Commander who had it covered with radio guided position “boxes.” These were used to determine attacking Allied aircraft locations in such a manner as to guide air defenses and vector aircraft to intercept the bombers. Originally developed to guide night fighters and non-radar carrying night flying interceptors, this line increased in depth and length to cover the industrial areas of Germany and to monitor aircraft crossing the coast. Coastal radars monitored U.S. bomber formations gathering over England before they crossed the channel, and wireless intercept stations could hear radios being tested on runways before missions were launched. This gave German aircraft defenses adequate warning.

Allied electronic warfare included specialized aircraft which flew “spoof” missions to deceive the enemy concerning actual locations, gathered electronic intelligence data concerning radar locations and radio transmissions, and listened to enemy air defense transmissions. The information could be used to jam or confuse enemy air defenses, or to avoid them altogether.

The year 1944 saw the intensity of the air war growing. Tedder and Leigh-Mallory pressed for control of the heavy bomber force, but Harris and Spaatz demurred. Tedder argued that the control of heavy bombers must go to Eisenhower for the invasion, in particular for the Transportation Plan and other interdiction missions prior to and during the invasion. General Spaatz countered with his plans for an all-out attack on oil facilities and synthetic oil producing plants. A meeting held on March 25th got Eisenhower control of the bombers to begin in April, with Transportation Plan targets as the primary emphasis. These bombers would be coordinated by Tedder and diverted as appropriate from their



normal POINTBLANK targets. Spaatz persisted in his desire to fly against both type of targets. The Ninth Air Force focused exclusively on its primarily tactical role. The Eighth Air Force flew against its assigned Transportation Plan targets, but also hit oil and other strategic targets whenever it could manage to do so. By July Spaatz dedicated the Fifteenth Air Force to finishing the destruction of the Ploesti oil fields in Romania. This, Germany's largest oil source, faced nine days of bombardment which effectively eliminated the facilities from further use.

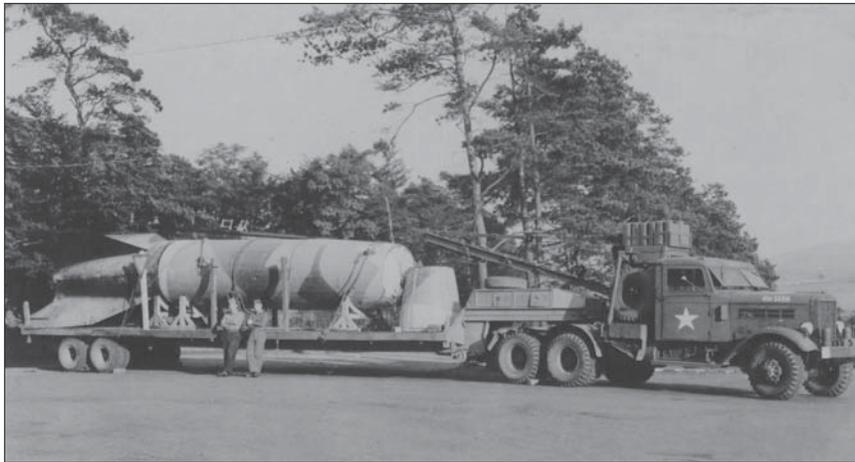
RAF Bomber Command initiated missions under the Transportation Plan on March 6, 1944 when it struck the rail road yards at Trappes, France. Bombing was to be executed initially without tipping the Germans off as to the chosen landing areas. Heavier attention was paid to areas indicating a landing in the Pas de Calais sector, thus reinforcing the deception plan for the invasion under the FORTITUDE plan. A total of seventy-nine targets were picked in northern France and fourteen in southeastern France, making a total of ninety-three initial targets. Additionally, fighter bombers from the Allied Expeditionary Air Forces hit bridges and cut rail lines at predetermined points to further hamper movement and repairs. Many targets were struck on multiple occasions to overcome repairs. Prior to D-Day, Allied bombers dropped a total of 62,000 tons of bombs. Bridge cutting began the first week of May. Eighth Air Force flew its first Transportation Plan mission on April 26th. The Fifteenth Air Force flying from Italy dropped nearly 900 tons of bombs in southeast France to limit the movement of reserves from the south of France. Fighters strafed rolling stock and locomotives, thus destroying rail capacity.

Complicating pre-invasion bombing policy and priority was a competing preoccupation with CROSSBOW targets. CROSSBOW referred to targeting against German secret "V" (Vengeance) weapons. German deployment of V-Weapons posed a special threat both to the invasion and to the civil population of the United Kingdom. The V-1, or Vengeance weapon 1, was a pilotless rocket, launched off a long ski type sled and relying on a gyroscopic guidance system.



A 2,000 lb. German V-1 flying bomb headed for the Port of Antwerp, Belgium.

The amount of fuel its rocket burned determined its range to the target. Capable of hitting only large area targets, it was aimed at cities and used almost exclusively against London. The V-1 launch sites first appeared on the Channel coast west of Calais and were discovered by British photo interpreters. Confirmed by other secret sources, the photos prompted immediate air strikes by RAF and Ninth Air Force medium bombers against the sites as part of CROSSBOW.

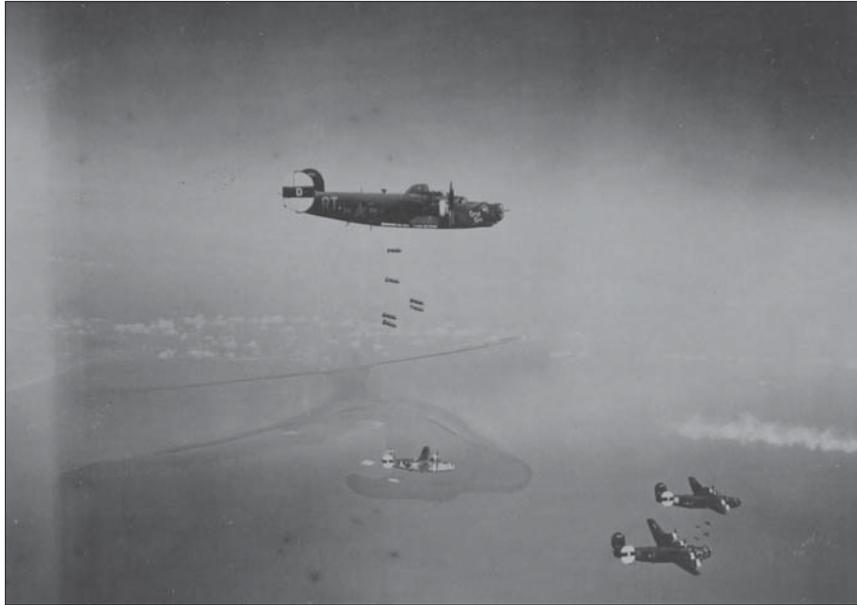


A postwar photo of a V-2 missile captured by the Americans.

The deployment of the world's first actual intermediate range ballistic missile, the V-2, was to cause even greater fear in the populace. While the V-1 could be countered by anti-aircraft fire and the fastest fighters as it glided in its last moments of flight, the V-2 was fired into sub-orbit and came out of the atmosphere at supersonic speed. It hit its target without previously being seen or heard and carried a ton of explosives. The Royal Air Force launched massive air attacks against Peenemunde. The plant at Peenemunde was bombed by 597 RAF bombers on August 17, 1943. A second raid against a missile production plant was launched by Eighth Air Force ten days later, executed by 187 B-17s. However, the Germans continued to build V-2's, although at a limited rate, at an underground facility in the Ruhr called DORA.

With the discovery of launching sites being built in the Pas de Calais, Allied Expeditionary Air Force was given the priority mission of attacking CROSSBOW targets. The German rockets were believed to be targeted on London. Ninth Air Force was originally given the mission. As heavy bombers were believed to be better suited for CROSSBOW operations, these targets, coded NOBALL, later became an Eighth Air Force mission.

By the end of December, sixty-three "ski" sites and five rocket sites had been identified. Intelligence assessed that sites were being completed at a rate of one every two to three days. Prior to D-Day, eighty-seven were neutralized along with two of the seven identified rocket sites. After D-Day, the Germans would begin an expansive rocket campaign that would draw increasing numbers of U.S. aircraft into strikes on NOBALL targets while also directly supporting OVERLORD. All told some 21,000 tons of bombs were dropped and 27,000 sorties were flown prior to D-Day against the V-1 weapons sites. An additional 2,500 sorties and 8,300 tons of bombs were dropped on the V-2 sites.



Consolidated B-24 Liberator bombers releasing their payload over Calais, France.

Meanwhile, the Transportation Plan encountered difficulties in the British war cabinet. Aspects of targeting, particularly the strafing of locomotives and the hitting of marshalling and rail yards in occupied countries, ran counter to British policies which sought to limit friendly civilian casualties, however necessary the targets were for the war effort. Prime Minister Churchill protested the plan and called for its revision, fearing the repercussions of French casualties prior to the invasion. The French Government in exile responded with their assurance that casualties in the cause of liberation would be suffered and understood by the people of France. General Eisenhower insisted on the plan's initiation, although he urged care in planning targets. The prediction of 80,000 civilian casualties, mainly rail workers, was later determined to be an overestimate. Actual civilian casualties were determined to be closer to 10,000 or less. Regardless, no one regretted these losses more than the Allied flyers, and many of them gave their lives pressing low level attacks against flak protected installations to ensure maximum safety for nearby civil communities.

As Spaatz's combined forces grew to over two thousand bombers and over one thousand fighters, he could better afford a percentage of loss on repeated missions that would eventually wear down the *Luftwaffe*. He was eliminating Germany's newest pilots while whittling away its most experienced flyers, leaving both with ever diminishing odds of survival. It was a cruel mathematical choice, but the clearest and most direct path to victory in the air. These attritional battles would essentially destroy the *Luftwaffe* prior to the invasion while heavily damaging German industry.

The Transportation Plan was the brainchild of bombing advisor Sir Solly Zuckerman, Air Marshall Tedder's bombing expert from the Middle East. He had found the AEF air plan "defective" based on his experience in the Italian and Middle Eastern campaigns. He used advanced scientific analysis of traffic patterns combined with ULTRA intelligence to identify targets. He redesigned bombing plans to include transportation nodes leading to the actual invasion beaches while also conducting raids on nodes leading into the Calais sector to divert enemy attention. The German rail system was the prime reinforcement and supply system upon which the German counteroffensive against the invasion would be based.

Many German defenses were already established, and many supply dumps already filled. These would not be much affected by the Transportation Plan. Harris believed his bombers were the wrong aircraft for such targets and Spaatz saw them as not important enough to bring the *Luftwaffe* into decisive combat. Leigh-Mallory was tasked to execute the Transportation Plan with his tactical air forces. He could task the strategic air forces through Tedder for assistance with targets. Harris assigned his best squadrons to hit these rail targets, and it did so with a high degree of precision.

Ninth Air Force committed most of its fighters to heavy bomber support while serving under Spaatz's dual hat as bomber commander and ranking overall American airman in Europe. This slowed initial American participation in the Transportation Plan. The Eighth and Ninth Air Forces, finally committed to Eisenhower on April 25th, did not come under Leigh-Mallory's direction until the end of April. Intelligence suggested that about 800 German fighters per month were being lost in production due to bombing during the period from November 1943 through April 1944. During the remainder of the preparations leading up to OVERLORD, the Allied air forces destroyed as many as 5,200 enemy aircraft in air to air missions or direct attacks on airfields. More than 6,700 tons of bombs were dropped on airfields in France.

A total of 2,900 U.S. aircraft and 2,700 Royal Air Force aircraft were under the operational command of AEF for these missions. During the Transportation Plan phase, eighty major rail targets were nominated for attack. Of these, eighteen were hit by AEF assets, thirty-nine by RAF Bomber Command and twenty-three by Eighth Air Force. The Fifteenth Air Force hit fourteen additional targets in southern France from their Italian bases. Of the eighty Transportation Plan targets hit by D-Day, fifty-one were categorized as damaged beyond repair. Twenty-five more targets were heavily damaged but required re-striking to destroy key elements. Four were relatively undamaged and needed more bombing. Twenty-two thousand sorties were flown in these operations, and 66,500 tons of bombs were dropped.

Ardennes American Cemetery



Ardennes American Cemetery in Belgium is unique among all ABMC cemeteries as it served as the central identification point for the entire European Theater of Operations from the last days of the war until 1960. The Ardennes American Cemetery is the final resting place for more than 5,000 Americans, with 65 percent of those being fallen airmen of the U.S. Army Air Forces. Headstones in the cemetery are aligned in straight rows that compose the form of a Greek cross.

The approach drive at the cemetery leads to the memorial, a stone structure bearing on its façade a massive American eagle and other sculptures. Within the memorial is the chapel, three large wall maps composed of inlaid marbles, marble panels depicting combat and supply activities and other ornamental features. Along the outside of the memorial, 463 names are inscribed on the granite Tablets of the Missing. Rosettes mark the names of those since recovered and identified. The façade on the far north end, that overlooks the burial area, bears the insignia, in mosaic, of the major U.S. units that operated in northwest Europe in World War II.

Locomotives were a prime target for low flying aircraft. AEF aircraft attacked and claimed 157 locomotives during 1,388 sorties after May 22nd, but prior to D-Day. This further slowed German movement into the coastal areas. Numerous trucks and road bound transport vehicles were also attacked and destroyed. Bridges – rail bridges in particular – were targeted.

German defenses on the coast were hit hard. Allied planes hit coastal batteries with a two to one ratio favoring strikes in the Calais versus the Bay of Seine area. This suggested a higher priority in the north in accordance with the FORTITUDE cover plan. While strikes were flown, photographic missions assisted in updating invasion requirements. Covering and deception attacks confused the enemy as missions continued all along the coastal areas. Radar installations were attacked to blind portions of the defense. Attacks on communications nodes degraded coordination within the German defenses. Radio counter measures were planned for use on the actual invasion date.

On D-DAY, the following emplacements in the beach areas were attacked by AEAF immediately prior to the landings.

Coastal Batteries	Sorties	Tons of Bombs
Crisbecq	101	598
St. Martin de Varreville	100	613
Ouistreham	116	645
Maisy	116	592
Mont Fleury	124	585
La Parnelle	131	668
St. Pierre du Mont	124	698
Merville/ Franceville	109	382
Houlgate	116	468
Longues	99	604
	1,136	5,853

On D-Day, aircraft overflew the fleet for convoy protection and naval gunfire spotting. More than 1,500 sorties flew as beach cover against German air attack. Only two German aircraft are believed to have penetrated this air cover. They attacked an Allied beach in the British sector.

The Allied Expeditionary Air Forces registered 16,093 enemy armored fighting vehicles as damaged or destroyed by air attack from June 6 to September 30. Double counting probably inflated these numbers, but the effects of Allied air power were dramatic. Allied air crews bravely pressed low-level attacks to support the ground forces. Their daring was frequently noted in the combat reports of both friendly and opposing forces.

Mute testimony to the bravery of Allied air crews in this period appears in the statistics of their losses:

- 4,560 Killed in Action
- 29,078 Missing or known prisoners
- 4,665 Wounded

Roughly 50 percent of these losses were American, with the remainder occurring among Commonwealth air elements.

Each invading Allied army had tactical air assets directly assigned to support it. These were coordinated by the Advanced Headquarters, Allied Expeditionary Air Forces (AEAF) under Air Vice Marshal Coningham, who also commanded British 2d Tactical Air Force. Dempsey's Second British Army went in under the cover of Air Vice Marshal Harry Broadhurst's No. 83 Group. First U.S. Army was supported directly by IX Tactical Air Command (IX TAC) of the Ninth Air Force under Brig. Gen. Elwood R. "Pete" Quesada.

The tactical air commanders set their command posts next to the ground army command posts and linked their operations with ground operations. Senior air commanders received ULTRA and other signals intelligence for targeting and shifted squadrons to best concentrate for the ground force battle. Logistics support and airfield construction came through Army channels. The IX Service Command handled logistics on the continent as Ninth Air Force moved its elements after the landings from the United Kingdom to support ground operations. Eventually, XIX TAC under Brig. Gen. Otto P. "O.P." Weyland supported Third Army, and XXIX TAC would be added to support the Ninth Army under Brig. Gen. Richard E. Nugent. IX Bomber Command's mediums, mainly B-26 bombers, moved to France under Brig. and then Maj. Gen. Samuel Anderson. Maj. Gen. Lewis Brereton commanded until August, when he was replaced by Maj. Gen. Hoyt S. Vandenberg, then Deputy, AEAF. Brereton moved on to command First Allied Airborne Army.

Ninth Air Force eventually comprised 18 Fighter Groups, 1 Tactical Reconnaissance Group, 4 Medium Bomb Groups, and 12 Troop Carrier Groups. The latter eventually transferred to First Allied Airborne Army. The IX Service Command maintained the signal support to and supply of aircraft, airfields, and air depots. It also maintained the numerous L-4 and L-5 "Piper Cub" aircraft that were the "eyes of the artillery" for every division in the theater. These light planes were also liaison workhorses for headquarters at every level. A separate engineer brigade, IX Aviation Engineers, built airfields out of pierced steel planking. This was lightweight and durable, suitable for supporting the air operations of fighters and medium bombers.

The tactical air forces were indispensable to the ground forces during the campaign to liberate France, and their endeavors are indivisible from the efforts of the troops on the ground. Air power ranged deep to hit targets in interdiction operations. This kept German supplies and reinforcements from reaching the front. Close air support directly supported the ground troops in the field as battles raged. Allied forces were very rarely attacked from the air. Allied lines of supply were free from air attack and enemy air reconnaissance or interference was virtually non-existent. This was a significant advantage in every battle, beginning with the buildup in England prior to D-Day.

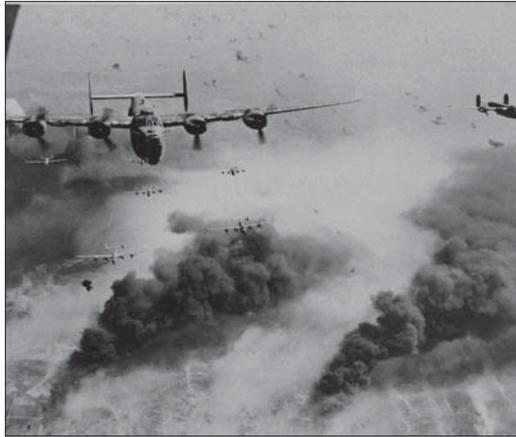


The destruction caused by bombs dropped on Caen.

The heavy bombers remained under SHAEF control during the “OVERLORD period,” but were free to fly POINTBLANK operations when not tasked directly by Tedder and Eisenhower for ground support. They did continue with Transportation Plan operations and maintained deep interdiction strikes along routes into the Normandy area. They also maintained the FORTITUDE cover suggesting a future landing in the Pas de Calais to keep German divisions fixed in northern France and Holland.

The Normandy Campaign saw further need for close air support action by bombers around Caen. Heavy bombers hammered enemy forces outside the city in two operations, CHARNWOOD, and GOODWOOD. They later supported the major American breakout, Operation COBRA. The British Operation BLUECOAT and later Canadian Operation TRACTABLE employed heavy bomber support, largely provided by the RAF. Massive and near instantaneous concentrations of explosive power outmatched that which artillery bombardment alone could provide. Air power was used in close proximity to ground troops during the attack on Cherbourg.

One of the most common and successful uses of tactical airpower was “column cover”. This supported armored commands with armed reconnaissance aircraft controlled by forward air controllers riding in tanks within the columns themselves. These directed strikes against targets of opportunity ahead of tank columns. The British version of this system was referred to as “Cab Ranks.” Pre-planned air strikes against previously nominated targets were also common. These targets were decided upon by higher headquarters based upon priorities and intelligence. The two approaches to identifying targets were complementary and proved successful.



B-24 Liberators from the 15th Air Force disregard exploding flak to drop their bombs on the oil plants of Ploesti.

Oil targets remained Spaatz's priority in the absence of obligatory tactical targets. USSTAF began its anti-oil campaign in April, sending the Fifteenth Air Force to Romania to hit the Ploesti oil fields with 230 B-24s. The bombers would return twice before the month ended, losing a total of twenty-one aircraft. In May, the Eighth would join the oil campaign, hitting two hydrogenation plants near Berlin, one at Leuna on

May 12th and the other at Politz on May 29th. On the May 12th mission, 935 bombers escorted by over 1,000 fighters hit these targets, with their sub-plants in Czechoslovakia. On May 28th and 29th, the Eighth Air Force returned with a strike against Leuna by 224 B-24s. It also hit Politz and the plants at Ruhland, Magdeburg, and Zeitz with B-17s. Intelligence assessed a two-month loss in hydrogenated synthetic fuel to the *Luftwaffe*, an estimated loss of 94,000 tons of production. During that month, USSTAF directed the Fifteenth to return to Ploesti four more times. It hit the complex again three more times in June.

Once NEPTUNE was successfully ashore, oil attacks resumed on June 16th with a strike by 600 bombers flying out of Italy. On June 20th, 1,300 bomber sorties were flown by USSTAF into northern Germany in a maximum effort by Eighth Air Force. In July, the Fifteenth hit the Ploesti oil fields with five strikes and struck again with four more in August. The recurrent attacks virtually ended oil production at the famous fields. All told, the Fifteenth hit Ploesti nineteen times with bombers and once with

fighter bombers alone. It lost a total of 223 aircraft to erase the famous petroleum production center from the target list. More than 5,400 sorties and 13,400 tons of bombs were used against Ploesti, one of the most heavily defended targets in the German industrial complex. German fuel production began to plummet. Although Germany would be able to stage several "miracle" short term recoveries, fuel was always critical and mobile operations on any large scale were limited.



The aftermath of a B-24 bombing raid on the Ploesti oil refineries.

After the landings, the Ninth Air Force, and its British partner, the 2d Tactical Air Force, continued their direct support to ground forces while the bombers shifted their attention back to strategic targets. They savaged a German counterattack at Mortain in early August, and then harried the German retreat. They inflicted devastating results on German forces caught in a pocket around Falaise and Argentan. Everywhere the Allies fought, air power left its mark on the German war machine.

The strategic air forces, USSTAF and Bomber Command, returned to the strategic direction of the Combined Chiefs on September 14, 1944. They were ready to assist ground operations when needed but put their priority back on their designated strategic air missions. SHAEF's Air Officer, Air Vice Marshal James M. Robb, would henceforth coordinate bomber support. Air Marshal Tedder would remain an arbiter if necessary. The strategic air war and the tactical air wars went back into the realm of their respective proponent commanders unless and until the Theater Commander needed to synchronize them.

Allied Expeditionary Air Forces was eliminated as a headquarters on September 30, 1944. Ninth Air Force reverted to a direct relationship with 12th Army Group and 2d Tactical Air Force with 21st Army Group. The First Allied Airborne Army was created in August with Lt. Gen. Brereton in command. It absorbed the Troop Carrier resources of the theater, the training and planning missions for airborne forces, and the administrative control of the airborne divisions. The divisions would come under the command of the Army Groups when employed, but the Airborne Army remained in theater reserve prior to that time. SHAEF was a strategic rather than an operational headquarters, and thus not directly in control of airborne forces. In a tragic coda to the valorous efforts of the Allied Expeditionary Air Forces, its former commander, Air Marshal Leigh-Mallory, was reassigned as Air Officer Commander-in-Chief for South East Asia, but was killed in an air crash en route in November 1944. Nevertheless, the mission that he had led, providing overwhelming air support to the Normandy landings and the liberation of France, had been accomplished.

Normandy Campaign

Group Captain J.N. Stagg, Royal Air Force meteorologist, had what proved to be one of the greatest responsibilities of the war. His team consisted of meteorologists from major headquarters spread across the theater, the best of each command. He brought their findings to the Supreme Commander. Daily he explained the weather patterns affecting the theater in his strong Scottish brogue. He described those throughout Europe, and in particular those for the crucial invasion sector, to the Allied Commanders as they sat in conference at Southwick House. This was the invasion Headquarters of Admiral Sir Bertram Ramsay, Commander-in-Chief of the Allied Naval Expeditionary Force.



Group Captain J.M. Stagg, Chief Meteorological Officer for the D-Day planning and invasion.

On June 4th, the Supreme Commander, Allied Expeditionary Force, General Dwight D. Eisenhower, who had overall responsibility for mounting Operation OVERLORD, was present. Also present were his deputy, Air Chief Marshal Sir Arthur W. Tedder, who advised him on air matters and coordinated strategic bomber operations, and Air Chief Marshal Sir Trafford Leigh-Mallory, who oversaw the Tactical Air Forces. Leigh-Mallory would direct air operations, airborne landings, and air drops for the invasion. The ground commander for the invasion, General Sir Bernard Montgomery, was also present. Lt. Gen. Omar Bradley's U.S. First Army and Lt. Gen. Miles Dempsey's British Second Army served in his 21st Army Group. The army commanders were waiting to board assault ships with their troops. Lt. Gen. Walter Bedell Smith, Eisenhower's Chief of Staff, was the only flag officer at the table without a command billet. He was also perhaps the most relied upon and trusted among the headquarters staff officers.



American troops march through a British port town to assemble for the D-Day assault.

On Eisenhower's direction, Admiral Ramsay would implement the invasion plan. Operation NEPTUNE, the plan for the actual landings, was his responsibility until command passed to the ground commanders. The Fleet would sail on his order, deploy into their various task groups, and head for the five beaches: UTAH, OMAHA, GOLD, JUNO and SWORD. This synchronous movement of more than five thousand ships was timed from major and minor ports and estuaries along the entire southern coast of England.

Stagg's forecast, given during the rainy predawn hours of June 4th, caused Eisenhower to postpone the invasion for 24 hours from its scheduled date of June 5th. Convoys already loaded were held. The few that had left for the longer trips to assigned sectors were told to reverse course. The next meeting, scheduled for the late evening of the 4th and also taking place in heavy rain, began differently.

Stagg predicted adequate landing conditions for the 6th of June, with improved conditions beginning late on the 5th. These would be in time for the airborne drops preceding the invasion. The conditions Stagg forecast would give marginal visibility for bombing, and barely adequate visibility for naval gunfire. The sea state would permit landing, although it would not be optimum. The weather would hold for about thirty-six hours before rain and overcast would again predominate. Long range weather forecasting stations in Iceland, Greenland, and offshore had made Stagg's prediction possible before the Germans would be able to see the same pattern develop. A slight time advantage in predicting this hole in the weather favored the Allies.

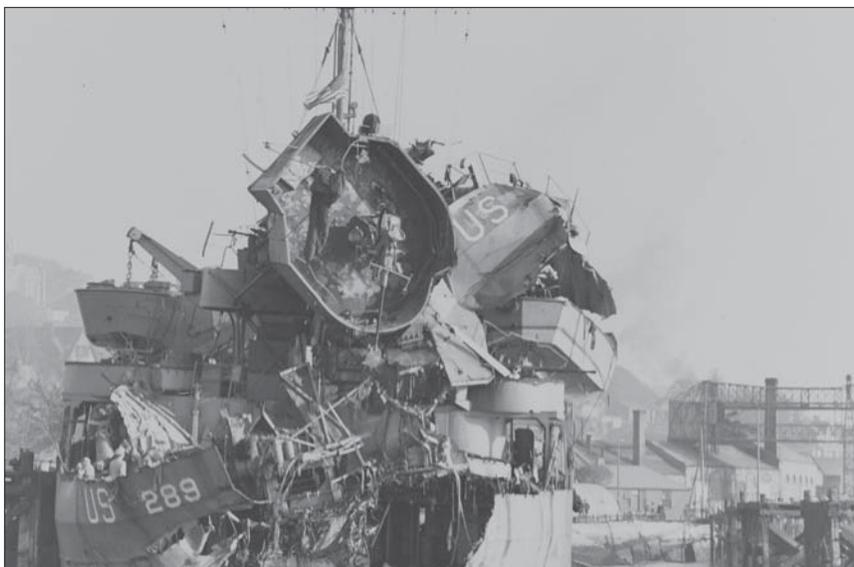
Eisenhower polled the table for recommendations. Leigh-Mallory worried that visibility for bombing conditions and wind conditions for airborne drops were below minimums. He advised no. Montgomery said simply, "I would go!" Ramsay advised that high seas and visibility would restrict naval gunfire's effectiveness and complicate the landings, but they could be done. Smith reminded Eisenhower that a three week wait for the next set of ideal conditions with respect to tide and moon wouldn't guarantee fair weather either. Maintaining secrecy about the invasion now that hundreds of thousands of troops had been briefed, was also a consideration. Ike weighed the consequences. His exact words, perhaps lost to history, were most frequently remembered as "OK, let's go."

At 0415 the next morning, June 5th, the group met again for a last-minute weather check. Stagg's group confirmed their predictions with greater certainty. The invasion was on.



Troops and supplies loading onto landing craft destined for the Normandy coast.

The convoys broke out into rain-swept and choppy channel waters, seasickening many of the troops crammed on board, soaking the troops and their equipment, but making steady headway in disciplined columns through carefully swept channels. For the landsmen aboard, the ups and downs of the heaving seas tried their endurance as well as their courage, as the rough passage was their approach to battle. At trip's end, landing craft would be swung out on davits from the larger ships and lowered, and scrambling nets rolled down the sides for heavily laden troops to cling to when descending. Smaller self-contained Landing Craft, Infantry (LCI) or Landing Craft, Mechanized (LCM), made their trips across under their own power with troops and cargoes packed tighter than in the larger ships. Landing Ship, Tanks (LST), the queen bees of the assault across the beaches, hung back waiting for the smaller assault ships to land men to bore holes in the mighty German "Atlantic Wall."



LST – 289 at Dartmouth Harbor in England showing the damage from a German torpedo attack sustained during D-Day invasion rehearsals off Slapton Sands, England.

The Atlantic Wall of German fortified positions dominated Eisenhower's operational map and presented huge tactical problems to his generals. To his soldiers, it was a more immediate terror. Each landing team previewed it in bright colors on overprinted maps issued a day or so before the landings. Such a team often consisted of thirty-two men in a LCVP (Landing Craft, Vehicle and Personnel). Some had opportunities to examine hastily built models of their objectives made of sticks and pasteboard. Each assault platoon's lieutenant talked the men through what they would see. Each team had only the map for their own sector. Thus, they relied upon precise touchdowns and everyone doing his own job. Beaches were subdivided into sectors and battle drills had been worked out and rehearsed. Much of the training occurred at the Assault Training Center at Woolacombe Beach, Devon, and in exercises at Slapton Sands or Saunton Sands. Slapton Sands had been the site of a disastrous dress rehearsal for the invasion at the end of April 1944, when a convoy of ships loaded with personnel had suffered from both friendly fire and surprise attacks by German patrol boats. Some 749 servicemen, Army and Navy, died in this incident.

Now, as the assault progressed in a sea state of four to six-foot chop, the colored maps were soaked and folded in many a leader's pocket. In most cases it was too late for them to be further consulted. Beach characteristics and landmarks pertaining to his objective had been drilled into every assault soldier's psyche. Recurrent briefings and questions from leaders had stamped locations into their subconscious. The assault troops, American, British, Canadian, and Free French, had been drilled for the jobs they were to perform. Combat was at hand.



General Dwight D. Eisenhower chats with soldiers of the 101st Airborne Division before they make their jump into Normandy.

The Airborne Leads the Invasion

As the convoys pushed through heavy seas in the night, long streams of air transports approached Normandy from opposite ends of the invasion area. They headed towards drop zones and glider landing zones on the invasion's flanks, flying in a complex weave of formations at varying altitudes to avoid collisions. Loaded at nineteen airfields throughout England, more than 1,270 transport aircraft and tugs lifted 23,000 paratroopers and pulled 850 gliders towards their objectives. Royal Air Force crews from Number 38 and 46 Groups, and U.S. Army Air Force crews from the IX Troop Carrier Command's 50th, 52d, and 53d Troop Carrier Wings provided airlift and towing aircraft for the gliders. Among the innovations used, pilots received specially shaded photographic maps of the routes and objective areas showing how they would appear at night. Crews had studied models of their routes and objective areas, and commanders had used these for planning their actions. The first air drops went in during darkness. A second series of airborne assaults occurred on the afternoon of D-Day. Glider landings went in at different times in different sectors.



C-47 Dakota transport aircraft tow Waco gliders towards Normandy.

The bad weather and high winds provided cover for the airborne operations, and they achieved a measure of surprise. The Germans did not have the benefit of weather reports from Iceland to predict upcoming gaps in the stormy weather. Radars had been systematically targeted along the coast. Those left in operation were given an additional treatment of “window” throughout the night. This rain of aluminum strips, or chaff, dropped from planes simulated masses of nonexistent airplanes to suggest night raids going elsewhere, all intended to confuse enemy controllers.



An American paratrooper in full combat load boards a C-47 transport aircraft en route to Normandy.

Elements of three Allied airborne divisions landed overnight. The British 6th Airborne Division landed behind SWORD Beach, and the U.S. 82d and 101st Airborne Divisions behind UTAH. First in would be their pathfinders. Airborne pathfinders were specially trained volunteers using navigational aids to guide parachute and glider towing aircraft to their drop zones and landing zones. They were inserted shortly before the main body by aircrews with highly trained navigators. These were normally guided by GEE aircraft navigation systems based on a triangulation system using three base stations. The British 6th Airborne Division

had a specially trained Independent Parachute Company using radar beacons to guide the aircraft. These used a manpack radar called EUREKA to send a homing signal to an airborne transceiver named REBECCA, which was in the formation leader’s plane. On each drop zone the pathfinders used special holophane lights as visual markers which they switched on when they heard the approaching aircraft of the main body. Each of the American airborne divisions also had a pathfinder company. The pathfinder system was paralleled at sea by specially designed and trained midget submarines that provided offshore beacons indicating cleared lanes. Other ships also used the GEE radio guidance system and beacons to assist in precise navigation in the dark.

The British pathfinders followed the 101st pathfinders by four minutes and led the first Allied assault with an attack at 0020 on the crucial bridges over the Orne and Caen canals at Benouville and Ranville (Operation DEADSTICK). Within five minutes of their landing in Horsa gliders, the 200-man assault team captured its objectives. Four gliders landed right next to the Orne River and Caen Canal bridges. These water features separated SWORD Beach and the immediate landing areas from the rising ground and rolling hills that led south and east from Caen in the general direction of Paris. The teams conducted a textbook coup de main operation. A parachute battalion landed thirty minutes later to form a reinforcing perimeter around the bridges. This held for 23 hours until reinforced by seaborne elements from the landing.

To the northeast, about six kilometers away, was the Merville Battery. This was a fortified area encasing four 150-mm guns and up to 200 troops about three and a half miles behind the beaches east of the inlet to Caen. It was outside the landing sector, but the guns were within range of the fleet. Each gun had a separate two-meter thick encasement, with perhaps four additional meters of dirt on top plus camouflage. The Merville Battery threatened SWORD beach. Forces on the high ground behind it could hem in and dominate any attempt to seize Caen or break out of the invasion beaches across the narrow waterways. These key features held the left flank of the invasion. The guns could threaten ships at sea for up to eleven miles. A combined parachute and glider operation was to take out the guns. Three gliders were to land next to the guns and the task force aboard them was to seize the guns at 0430 hours, H minus 3 for SWORD beach.

Prior to this landing, an advanced team was to land with pathfinders of the 9th Parachute Battalion, about 650 men. They were to prepare for the attack on the battery and clear minefields. Following a short air bombardment, they were to support the glider attack with a diversion as well. The gliders failed. One separated from its tow over England, another crashed in a canal short of the objective, and the third, about to land in the marked minefield, overshot the objective and landed amidst the assault battalion. Undaunted, the paratroopers seized the battery by ground assault through the breached minefield. The guns inside were not the expected 150-mm guns but were WW I-era 100-mm field howitzers. Nevertheless, the paratroopers completed their mission by disabling them.

The 6th Airborne Division was to hold the bridges or destroy them if a strong attack developed against the eastern beaches. It was also to secure the high ground flanking Caen. Caen itself was to be seized by the divisions landing on JUNO and SWORD beaches. The 6th Airborne Division would be the essential buffer against an immediate *panzer* counterattack coming from *21st Panzer Division's* known assembly areas to the south. The troops on the beaches would not immediately have extensive defenses against armored counterattacks.

The city of Caen had a prewar population of over 62,000. It was not an airborne objective since the German defenses there were too strong to be carried by an airborne assault. Caen was assigned to British I Corps as a D-Day objective despite its ten-mile distance from the shore. Tanks and reconnaissance elements would be attached to the corps if a breakthrough was achieved. As with other deep objectives, an alternate plan was in place if too much resistance was met on D-Day.

The 101st Airborne would mark its drop zones using thirteen-man teams beginning at sixteen minutes past midnight on June 6. These landed near St. Germain-de-Varreville, not on the planned objective at Drop Zone A. They set up their marker beacons for the follow-on parachute drops. Additional pathfinders for Drop Zones C and D parachuted at 0027 and 0045, but also with disappointing results. The 82d's pathfinders dropped west of the Merderet River at 0138. The main parachute drops began thirty minutes after the pathfinder's insertion. Six-minute intervals were allotted between each serial of nine aircraft, which formed a "vee of vees" formation in trail. Leaders followed a thousand feet behind the formation. Aircraft were supposed to be spread one hundred feet apart to avoid collisions and making too large a target for ground fire. Ground fire and evasive actions disrupted some formations.



Paratroopers of the 101st Airborne Division packed into a C-47 transport aircraft before take-off.

Troopers were given a warning when twenty-minutes from their drop zones. At that time, they stood, checked equipment, and moved to the now open doors with static lines hooked. They saw a red light flashing four minutes out from their targets. Their aircraft had by then descended to drop altitude, 700 feet, and slowed to 110 mph. When the green light came on, they jumped as close together as possible with their equipment, bundles and supplies. Ground fire and evasive action often made this process chaotic. Aircraft that were hit or set afire provided particularly unsteady jump platforms.

With heavy cloud cover and some inexperience in the use of GEE navigational aids, many of the drops were scattered. Sufficient numbers of paratroopers nevertheless fell within their sectors for the airborne divisions to capture their objectives. In some ways, the scattered drops were a benefit. They confused and delayed reporting within the German command and thus delayed assessments as to whether they represented a large raid, a diversion, or the prelude to an invasion. This confusion was especially pronounced in the American sectors. Overburdened paratroopers who fell into the Merderet River sometimes drowned, weighed down by their equipment. The 82d Airborne was the most affected by scattered drops. Ad hoc units accomplished missions with men from scattered drops pressed into service to fill the roles of those dropped elsewhere.

The two American airborne divisions assisted the U.S. VII Corps landing in two ways. The 101st seized causeways leading off the beaches and provided depth to the landing itself. The 82d defended the flank of the invasion at the Merderet River and along the River Douve. This was the line along which German divisions had been identified as having moved into the Cotentin Peninsula. The paratroopers prevented an immediate counterattack against the invasion beaches or attacks against the southern flanks of the VII Corps as it moved inland and northward towards Cherbourg.



A Martin B-26 Marauder medium bomber of the Ninth Air Force in the sky over Northern France.

Air Preparations on D-Day

The Allied Expeditionary Air Forces had begun their campaign months before the actual landings. The steady daylight strikes of Eighth Air Force's POINTBLANK operations, supported frequently by Ninth Air Force fighters, had worn down the daylight fighter capability of the *Luftwaffe*. The greatest fear of the Allied leaders, not having air superiority over the fleet and beaches, never materialized. The Germans had been forced to withdraw their fighters from fields near the coast due to constant attacks on them by Eighth and Ninth Air Force fighters and by RAF Second Air Force fighters during the two months preceding the landings. They had suffered heavy losses in planes and trained aircrews. The Germans decided to conserve their strength to defend German industry and consigned much of the air defense mission to radars and anti-aircraft guns. The lack of any significant German air attacks against the landings contributed heavily to Allied success in the D-Day campaign.

On D-Day the overcast skies were filled with Allied aircraft showing the special markings assigned to them for D-Day. They were marked with black and white bands on their wings and fuselages (two black, three white) marking them as friendly planes. It is believed that only two German fighters managed to strafe an Allied beach, GOLD Beach, and that any other enemy aircraft in the region kept their distance. A few enemy nuisance missions overflew the fleet at night to no effect.

During the night preceding D-Day, RAF Bomber Command flew 1,136 sorties, dropping 5,853 tons of bombs on major batteries within the landing areas. These included the batteries on the Cotentin at Crisbecq and St. Martin de Varreville. At daylight, Eighth Air Force bombers followed up with an additional 1,365 sorties dropping 2,796 tons of bombs on coastal targets. These strikes were intended to hit thirty minutes prior to the touchdown of landing craft. Medium and light bombers struck artillery targets deeper inland. Eighth Air Force put up 1,347 fighter escort sorties over the fleet. Specially trained AEAFF pilots spotted for naval gunfire throughout the day. More than 1,500 sorties were flown as beachhead cover.

On the right of the Allied invasion, Ninth Air Force supported UTAH Beach, and Eighth Air Force OMAHA Beach. This simplified command and control for the landing. Air control reverted to IX Tactical Air Command once First Army and IX TAC Headquarters were established ashore later on D-Day. Air superiority during all beach operations and throughout the campaign was crucial to the eventual Allied victory. It permitted the landings to proceed uninterrupted and provided the long reach of aerial interdiction to interfere with German daylight reinforcements. This greatly degraded their capability to mount large counterattacks against the developing beachhead, or to strike later against any part of the Allied line.



American infantrymen wade ashore at OMAHA Beach.

The Assault From the Sea — The First day

Soldiers had been trained first on dry land, then with water landings, and then with live fire water landings accompanied by loud explosions, fires and explosive pits. The sights and sounds of combat were introduced in attempts to inoculate their nerves for the battle experience. Few, however, had imagined the several days of seasickness, nausea, dehydration, soaked skin, cold and fear that would precede the excitement and sounds of the “real day”. Many soldiers, already fatigued, functioned like automatons. Some did not function at all. A few rose above the horrors that surrounded them and carried the action and their comrades.

The British met heavy resistance at the waterline at SWORD and behind the beachhead at a set of major fortifications known as the Hillman—Morris complex. The Canadians on JUNO drove deeply, bypassing pockets of Germans as they advanced. They met the first German *panzer* counterattacks mounted by the *21st Panzer Division*, which began throwing units towards the invasion as soon as they could be formed. The centermost landing beach, GOLD, was quickly and successfully assaulted. The troops seized the minor port of Port-en-Bessin, where the first artificial port would be based, and drove inland towards Bayeux, the cathedral city of William the Conqueror. The gains were impressive, but German elements held out in bunkers and field fortifications and remained dangerous for days until overrun and destroyed. The holdouts posed dangers to follow on troops, as well as link-up points for German counterattacks which began late in the day. The *21st Panzer Division* attempted to wedge the JUNO and SWORD enclaves apart from the sea to the Caen road.

The naval bombardment plan called for ships to open fire when they came in range of their assigned targets, or when there was sufficient daylight that German defense batteries could potentially engage the assault fleet. Most waited for enough visibility to observe fire or to react to enemy observed fire. In the Western Task Force area, several German batteries delivered accurate fire on the ships at sea, forcing the Allied ships to fire blindly in hopes of knocking them out.

The German defenses included howitzers and guns ranging from 75mm up to 380-mm. Guns generally fired direct fire with a low trajectory from near the beaches. Howitzers were capable of high angle fire and could fire from behind hills away from the beaches. Fire control of the guns was most often located away from the beaches. Concrete casemates built for guns were designed for different missions: heavy coast and anti-ship batteries, casemated field guns and howitzer batteries, open field gun and howitzer emplacements, and beach defense points.

Pointe du Hoc Ranger Monument



The Pointe du Hoc Ranger Monument is located on a cliff eight miles west of Normandy American Cemetery, which overlooks Omaha Beach, France. It was erected by the French to honor elements of the American 2d Ranger Battalion under the command of Lt. Col. James E. Rudder. During the American assault of Omaha and Utah beaches, these U.S. Army Rangers scaled the 100-foot cliffs and seized the German artillery positions that, if active, could have fired on the American landing troops at Omaha and Utah beaches. At a high cost of life, they successfully defended against determined German counterattacks.

The monument consists of a simple granite pylon positioned atop a German concrete bunker with tablets at its base inscribed in French and English. The monument was formally transferred to ABMC for perpetual care and maintenance on January 11, 1979. This battle-scarred area on the west of Omaha Beach remains much as the Rangers left it.

Allied commanders coordinated a Joint Target Plan designed to ensure the maximum neutralization of the German defenses. They used naval gunfire, support rocket fire, and aerial bombardment to support the assaulting troops. During the air forces' pre-invasion bombing, batteries that would threaten the fleet were repeatedly hit. During the night before D-Day, night bombers again hit the batteries. During the early hours of the invasion even more accurate medium bombers hit precision targets, particularly in the area behind UTAH Beach.

The Eastern Task Force's bombardment group arrived on station at 0515 and was attacked by four German motor torpedo boats obscured by smoke. A Norwegian destroyer was sunk in exchange for an enemy trawler. Enemy shore batteries proved ineffective, largely due to the pre-invasion bombing and the effectiveness of aircraft spotters directing gunfire. Rocket launchers mounted on landing craft to the flanks also drenched the defenses. These tactics were effective on four of the five beaches, reducing the defenses and giving support to the assault waves. At OMAHA Beach, cloud cover reduced the effectiveness of the beach defense neutralization plan. The British placed their "lowering positions" for their landing craft 7-8 miles offshore. U.S. "transport areas" were farther out and in rougher water at a range of about 10 to 11 miles. This was to better avoid shore battery fire. However, this greater distance posed additional problems for the landing craft given the sea state and wind west-northwest at force 4 with moderate waves at 3-4 feet. The troops on the craft doubtless suffered from these rougher seas as they attempted to climb down into the boats.

OMAHA proved to be the most hotly contested beach in the American sector, and along the entire Allied line. Assault Duplex Drive (or DD) tanks, tanks able to "float" and move through the water with a separate propeller, were released off OMAHA at three miles out but most sank in the rough waves. All but three of



A dual drive tank with its canvas flotation screen lowered.

the thirty-two tanks were lost along with their crews. The sea state and smoke caused a confused landing at OMAHA, which met heavy German opposition. The American troops unexpectedly were met on the beaches by the veteran *352d Infantry Division*. These experienced troops poured devastatingly effective rifle and machine gun fire down on the troops as they staggered off their landing craft and into the waters offshore. For a time, the issue was in doubt.

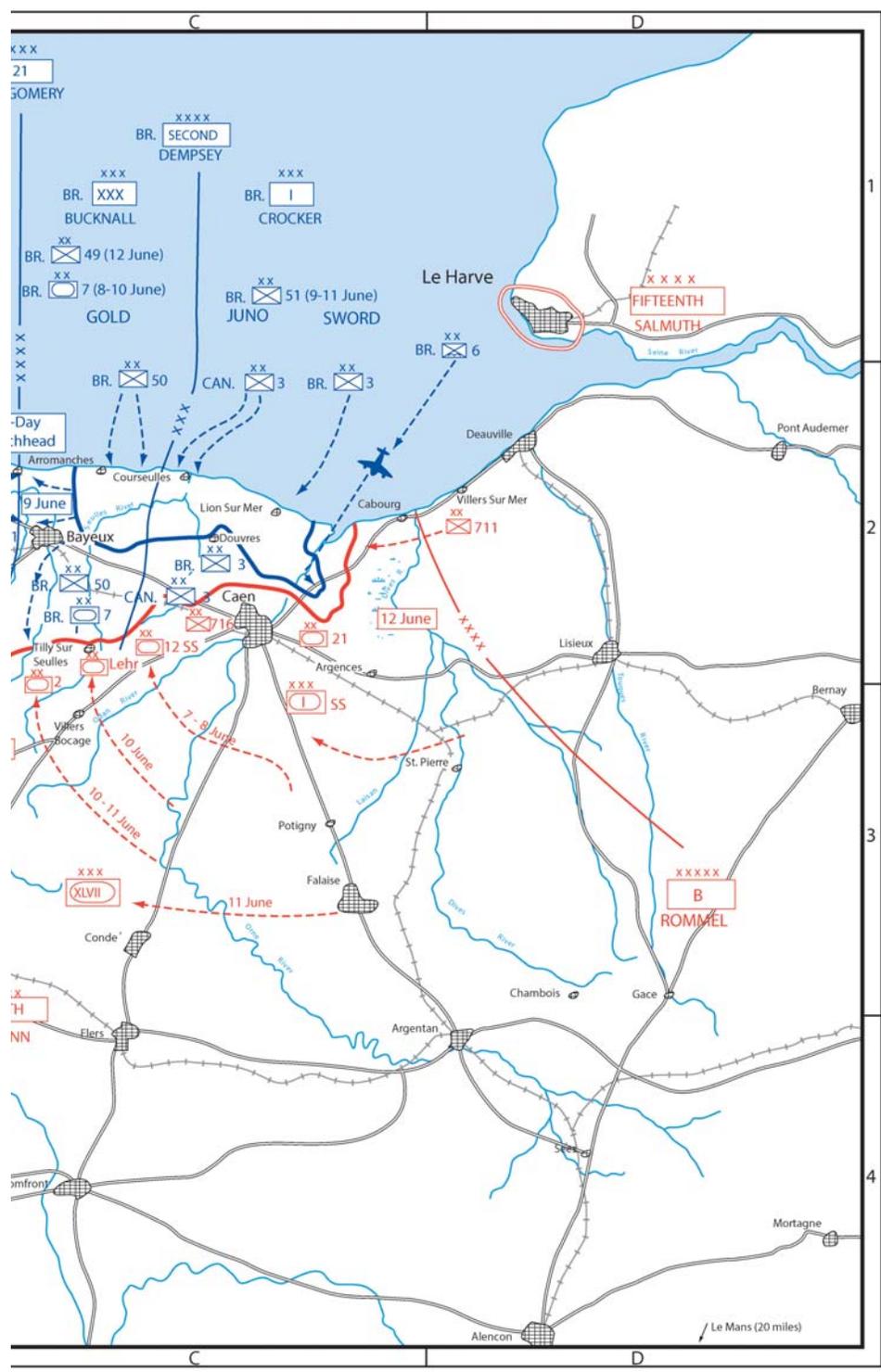
The situation was not as critical at the other American beach: UTAH. The early loss of two control vessels caused a 2,000-yard shift southward for the landing forces at UTAH. This placed the assault units upon the wrong beach. This turned out to be a favorable event since the original beach was more heavily defended. Tanks were landed directly on UTAH because of decisions by local commanders. This proved fortuitous as well and the troops made steady progress off the beaches.

By midday footholds had been solidly established on all of the beaches and forces on four of the five beachheads were securely positioned. The three major airheads were secure and follow on air drops of supplies and reinforcements by glider and parachute occurred in the late afternoon. Every division had established a command post ashore, as had most of the corps. Advance elements of both Army Headquarters were ashore, and these would be followed by Army Group Headquarters' elements the next day. Air headquarters coordinating tactical air support were ashore. By midnight, estimates held that both armies were firmly ashore on all beaches.

OMAHA, the most heavily contested beach, had the shallowest penetration, varying from 2,000 to 3,000 yards deep. First Army nevertheless asserted that V Corps had a firm base, 10,000 yards wide, established there and was within reach of connecting with its flanking corps in a day or so. It had not yet reached its D-Day objective line. VII Corps, on the right flank, had linked up with one of the airborne divisions and had cleared the offshore islands of St. Marcouf. Although still receiving fire from coastal batteries, it had landed its full force without appreciable disorganization. However, it would have to contend with the flooded fields to its front. A link up with the 82d Airborne Division had not yet been accomplished, nor had the link up with V Corps. The depth of VII Corps' penetration, added to that of the airborne divisions, assured a firm base at the bottom of the Cotentin Peninsula for further advances.

The scattered nature of the airborne drops had rendered the airborne divisions temporarily out of contact with about half of their forces. They nevertheless had accomplished their basic missions and most of their forces, even those out of contact, continued to operate in accordance with the original plans. German reinforcements to the Cotentin peninsula had been momentarily neutralized, permitting VII Corps to establish a strong beachhead. With nightfall, the Germans rushed counterattack forces forward across the front and planned their counterstrikes. Allied units reorganized for the next day's advances to achieve their objectives.







A large group of infantrymen use a sea wall as cover from incoming fire.

The Battle Inland (June 7 – July 24)

D-Day had been a success overall for the Allies, but the Normandy Campaign was only beginning. The buildup of forces in contact and reserves by both the attacker and the defender would now be the critical contest. Heroism, initiative, and luck had heavily influenced events on the first day. Now numbers would become critical in determining the future course of events. German reserves moved forward with the advantage of known roads and night moves unhampered by Allied airpower. However, they faced challenges posed by members of the French resistance who blocked roads, destroyed telephone lines, and blew up railroad tracks to slow German responses. They did not, however, have to contend with the congested beaches, bad weather, soft sand, and logistical bottlenecks through which the Allies pushed their assets forward. The Allied buildup of supplies, especially with respect to artillery and mortar ammunition, gasoline, and ordnance for aircraft would fall behind in the first weeks. This would have a significant effect on the tempo of battle.

Eisenhower sent this message to Army Chief of Staff Marshall at the end of the first day, based on the limited reports he had received in Portsmouth:

All preliminary reports are satisfactory. Airborne forces apparently landed in good order with losses out of approximately 1,250 airplanes participating about thirty. Preliminary bombing by air went off as scheduled. Navy reports sweeping some mines, but so far as known, channels are clear and operation proceeding as planned. In the early morning hours, reaction from shore batteries was sufficiently light that some other naval spotting planes have returned awaiting call.



U.S. Army V Corps wounded soldiers waiting for evacuation from OMAHA Beach.

On the seventh, the senior commanders were afloat on destroyers off the beaches. Montgomery briefed Eisenhower after discussing the situation with his commanders afloat, then went ashore. He ordered the individual beach penetrations to be joined laterally to give a broader base for the lodgment. He also exhorted his forces to push inland. Caen was still the objective for the British 3d Division.

Heavy resistance prompted British I Corps to move to outflank it while fending off counterattacks by German *panzers*. In the center, the critical artificial harbor intended to supply the British Corps, a Mulberry harbor, was to be built even as

Omaha Beach First Wave Landings (Infantry)

The first wave landed on OMAHA Beach with winds gusting from 10 to 18 knots. Waves were three to four feet high in the transport area and up to six feet high in the landing zone. Breakers on the beach were three to four feet. Choppy seas sank many Duplex Drive (DD) amphibious tanks almost immediately as the waves broke down their upright canvas barriers. Half of such tanks diverted from swimming ashore to being transported to the beach on their LCTs (Landing Craft, Tank). A strong easterly tide, smoke, errors made aboard the control boats, and poor visibility caused landmarks to be missed. The landings drifted eastward. Errors ranging from several hundred to a thousand yards scrambled units assigned to reduce specific obstacles and clear pathways for the following troops.

Heavy direct fire, particularly in the east coming from the WN 62 strongpoint position, wreaked havoc on the first wave. Artillery fire added to the deadly mix. At least ten craft were hit by artillery, although none were sunk. Of the 1,450 men in the first wave landing at 0630, many were killed or wounded. An estimated 13 DD tanks finally arrived on the beaches. Several were almost immediately lost to enemy fire, but the rest provided vital fire support against enemy positions and dug-in defenses. Engineers attempting to clear obstacles were especially hard hit, but continued to dig their way forward.

Casualties remain difficult to estimate, but most assault units lost at least half their effective strength in the first minutes. Brig. Gen. Norman D. Cota remained up and on his feet trying to move his 29th Division infantrymen forward. Battle tested leaders in the 1st Infantry Division area did the same. Their embattled soldiers pushed on and got off the beach.



With the beachheads established, troops and supplies pour in to continue the Allied assault into Northern France.

troops seized the high ground of Bayeux and the hills beyond to give depth to the lodgment. Intelligence pointed to this sector as the main objective of the German *panzer* divisions moving on Normandy.

Caen, with its road network spiraling towards the beaches, Bayeux, and Cherbourg, was an obvious choice for the German *Fifteenth Army* to funnel its mechanized reserves through to counterattack. Fighting here would threaten the buildup on the Allied eastern flank and threaten General Dempsey's left throughout most of the campaign. It would also stymie attempts to move towards better terrain for building forward airfields. The early presence of the *21st Panzer Division* in the vicinity of the city and the rapid build of armor in that sector prevented its early capture. Coupled with fighting on the flanks, this sector became the focus of large armor actions in the coming weeks, with hundreds of tanks destroyed on both sides.

Bayeux was also a magnet for German *panzers*. A corps-sized counter attack desired by Field Marshal von Rundstedt was planned for the Bayeux sector. The *Panzer Lehr* and *12th SS (Hitler Youth) Panzer Divisions* were to split the Allied invasion at this point and then roll outwards to defeat it in detail. Montgomery's insistence on the early landing of tank brigades and armored divisions in the British sector proved instrumental in holding off the German *panzers* around the eastern half of the invasion perimeter.

In Lt. Gen. Bradley's U.S. First Army area, V Corps remained the principal concern. OMAHA Beach developed slowly as the 2d Division joined the 1st and 29th Divisions to form a solid perimeter. German holdouts fought fiercely and had to be rooted out. The hard-fought Point du Hoc defenses were cleared by the Rangers who assaulted them and then held against fierce counterattacks. The Isigny Canal separated V Corps from VII Corps. German parachute reserves deployed here fought desperately to keep the two beachheads from joining.

VII Corps, which landed on the wrong sub-beach of UTAH on D-Day, had linked up with 101st Airborne Division elements on D-Day. In the following days it linked up with the 82d Airborne Division and pushed northwards towards key Cotentin objectives and the port of Cherbourg. VII Corps held 4,000 yards of beach initially and its troops had already penetrated to about 10,000 yards.

First Army landed most of nine infantry regiments on D-Day. Five divisions were ashore on D plus one including the two airborne divisions. The U.S. beaches were under artillery fire and their own ammunition was in short supply. This was especially true in V Corps, which landed only 100 tons of supplies the first day. UTAH Beach had faced less opposition and the 4th Division was successfully pressing outwards to secure a stronger beachhead. Troops on OMAHA Beach still had to clear most of its obstacles. For two days they continued their assaults to clear the corps beachhead maintenance line. This secured enough space to permit follow on units to assemble and deploy for their attacks.

Overhead, Ninth Air Force flew 2,312 sorties with eighteen fighter groups. Eighth Air Force fighters provided escort for bombers that hit targets on OMAHA. Naval shore and control parties facilitated naval gunfire support in response to immediate requests beginning as early as H plus 90 minutes. In the case of the airborne divisions, two armored field artillery battalions landed on UTAH and immediately deployed to provide direct fire support to them. Glider-landed airborne artillery reinforced them with additional fire support when it arrived later.

More than 156,000 men were ashore by the second day. Although the Allies had taken close to 10,000 casualties and important objectives had yet to be seized, Rommel's plan to win at the water's edge had failed. A rising tide of assault troops was ably supported by naval gunfire and aerial interdiction which slowed the German reaction. The Allied deception plan had fixed itself in the one mind it was most intended to confuse. Hitler personally intervened to hold back the main *panzer* reserves, believing Normandy was only a preliminary operation for major landings in the Pas de Calais still to come.

Utah Beach American Memorial

The Utah Beach American Memorial commemorates the achievements of U.S. VII Corps forces that landed and fought in the liberation of the Cotentin Peninsula from June 6, 1944 to July 1, 1944.

The monument is a red granite obelisk set in a small park overlooking sand dunes of the historic site.

VII Corps units landed by air and sea to pursue three missions: expand the Allied beachhead, seal off the Cotentin Peninsula, and thrust northward to liberate Cherbourg. The Utah Beach terrain differed from other invasion beaches. Its dunes were relatively shallow, followed inland by expanses of flooded and marshy terrain crossed by narrow causeways.

German defenses included multiple obstacles along the beaches, plus infantry and artillery capable of blocking exits inland. The Germans also reinforced their units throughout the Cotentin Peninsula and enhanced fortifications around Cherbourg.

The Utah Beach Monument is located at the seaward end of Highway D 913, about 3.6 miles northeast of Ste. Marie-du-Mont.



In the American sector, V Corps remained in the most precarious position. The placement of the *352d Division* well forward had rendered the German defenses stronger than initially contemplated and added additional thickness to their in-depth positions. The VII Corps was also sorely tried by the depth of the defenses of the Cotentin Peninsula by the *91st Airlanding Division*. Difficult bocage terrain produced another brake on First Army operations. Its small fields separated by stone walls heavily overgrown with vegetation fragmented unit moves into caterpillar steps along narrow lanes. The wide-open fire and maneuver tactics most practiced by the Americans were out of place in this terrain. Small columns headed by men armed with automatic weapons and grenades predominated in bocage tactics, resulting in short but intense fire fights at extremely close ranges. Once enmeshed in the bocage, American soldiers experienced jungle like conditions for which they had not been adequately prepared.

On the VII Corps front, the Germans defense centered on two initiatives. First, it attempted to prevent the capture of Carentan, which if held would keep a gap open between the two American beaches. A formidable strong point provided a base for this purpose and the *6th Parachute Regiment* provided capable troops. Second, the defenders pressed against the beachhead on all sides to prevent it from growing. They could ill afford an uncontested build up leading to a march on Cherbourg. By keeping the beachhead compressed behind the Merderet River and its ancillary swamps, then held by the 82d Airborne, the Germans could keep open a corridor to provide reinforcements for the defense of the northern Cotentin. These might eventually compress the beachhead further or eliminate it altogether. VII Corps commander, Maj. Gen. J. Lawton Collins, determined not to be bottled up, and pushed his reserves forward to gain the ground he needed for a move on Cherbourg.

V Corps landed the remaining regiments of the 29th Division and the 2d Division on June 7th. It continued to clear snipers from the OMAHA sector and also cleaned up mines and wreckage from its beachhead to develop a corps rear. Patrols reached the corps boundary with the British on the east flank overlooking Port-en-Bessin and cleared the high ground inland. Troops entered Isigny early on the 9th and seized a bridge over the Vire. By June 10th, the landing of the 2d Armored Division's advanced elements and the XIX Corps Headquarters began. The V Corps occupied its planned D-Day objective line and cleared remnants of stay-behind snipers and units scattered through the corps area. It tied in to the flank with the British XXX Corps and held positions extending to the Vire Estuary. Work on the Mulberry artificial harbor complex began.

V Corps estimated its losses on D-Day to be approximately 2,500 men. Replacing these, the corps moved out to hold the high ground along the Bayeux-Caen road linking the beachhead area to Cherbourg. It crossed this road in strength by June 8 and reached Caumont by June 13th. Here it tied in with the British Second Army, although a gap to its west existed at St. Lo.



Artillerymen emplace a 155-mm M1 Howitzer in a concealed position.

VII Corps' push to Carentan was facilitated by the 4th Division's relief of the 101st Airborne at the edge of the causeways and the la Barquette lock. This permitted the division to push southeast to seize the approaches to Carentan and then the town itself. Meanwhile the 8th Infantry Regiment of the 4th Division moved into St. Mere Eglise and contacted the 82d Airborne. VII Corps could now establish itself along the Carentan-Cherbourg road. The German guns firing on the beaches from batteries to the north were captured on the 7th. These had inflicted continuous harassing fire on the beachhead but had caused few casualties. Naval gunfire supported the northward moves of the 4th Division as it expanded its perimeter. The 90th Division landed on June 8-9 and began operating to the southern flank of the 82d Airborne on June 10th. Both crossed the Merderet River. The corps now moved in two directions, northwards towards Montebourg and westwards towards St. Sauveur-le-Vicompte. Carentan still held out, blocking a final link-up with V Corps.

By June 9th, the Germans had seven infantry and three *panzer* divisions on a continuous front around the Allied bridgehead. Montgomery opted for an encircling move around Caen to avoid heavy casualties in frontal attacks. The Allies made some gains in the center of the front. The Germans aspired to destroy the Allied beachhead, but remained cautious regarding an expected, and perhaps larger, second Allied landing. These fears influenced their actions in withholding reinforcements from the Normandy sector to keep in reserve behind the Pas de Calais.

A tenuous link-up of UTAH and OMAHA beaches occurred on June 10th at Auville-sur-le-Vey and Le Rocher. The road to Carentan and the rail line alongside it remained under artillery fire observed from the high ground to the southwest at Montmartin. The connection between the beaches would not be fully robust until Carentan's fall on June 12th. The Ninth Air Force flew 2,526 bomber sorties, dropping 3,251 tons of bombs, and conducted 6,745 fighter sorties over the First Army during this period.

First Army had two major missions under the Initial Joint Plan published in February. It was to seize the port of Cherbourg and also to drive south on the flank of the British Second Army. These tandem moves depended on the Allied buildup of forces overcoming the German buildup of forces and any counterattacks. Supplies had to be moved forward from the still developing artificial ports. Cherbourg would be the first major port captured in the lodgment area and was crucial insurance against the limitations of the artificial ports. Montgomery placed his highest priority on its capture. Since air superiority had been readily attained, the capture of Cherbourg rated higher than the capture of terrain suitable for airfields that had been a major concern for his airmen.

The Battle for the Cotentin Peninsula and the Drive on Cherbourg June 9 - 25 1944.

By June 9th, VII Corps had five divisions under its command: the 4th Infantry and the 82d and 101st Airborne Divisions which had landed on D-Day, and the subsequently landed 9th and still landing 90th Infantry Divisions. Its situation was good. It had caught a break by landing south of the more heavily defended beach planned for its D-Day assault. It had not suffered the heavy casualties its sister corps had, although the two airborne divisions had taken significant losses. Their scattered drops amidst German defenses put them instantly in contact with the enemy. Over subsequent days they fought hard and suffered losses but paved the way for an expansive VII Corps bridgehead.

Maj. Gen. Collins turned to his major task, clearing the Cotentin Peninsula to seize the port of Cherbourg. Bradley and Montgomery put little direct pressure on him, but their concerns expressed and discussions concerning the port were constant. Collins rapidly secured his own flanks to establish a base for attack. With his airborne divisions securing his western and southern flanks, he turned north with his two infantry divisions. The 4th anchored his north flank. Collins inserted the veteran 9th Infantry Division with its regiments echeloned to clear the beaches to the northeast. The 9th Division moved on Montebourg where it confronted the *709th Infantry Division* and elements of the *243d Infantry Division*. The U.S. 8th Infantry Regiment and the 505th Parachute Infantry Regiment from the 82d Airborne Division attacked north on line on June 10. The next day they received support from naval gunfire and continued the attack. The batteries at Crisbecq and Azeville had been surrounded and were being reduced. The Azeville battery fell after holding out for four days and Crisbecq was abandoned after six days. The latter was occupied by the 9th Division's 39th Infantry Regiment on the 12th. This battery was believed to have fired the first rounds at the Allied invasion fleet at 0652 on D-Day. It was also the first to have given warning of airborne assaults in the Cotentin.

The remaining regiments of the 9th Division pushed west of the Merderet River to bolster an attack being made by the 90th Division. The attack towards Montebourg rested with the 4th Division and the 39th Infantry Regiment of the 9th Division, which had cleared its seaward flank to the beaches. Montebourg remained in enemy hands but it was encircled by the 4th Division on two sides from the high ground.

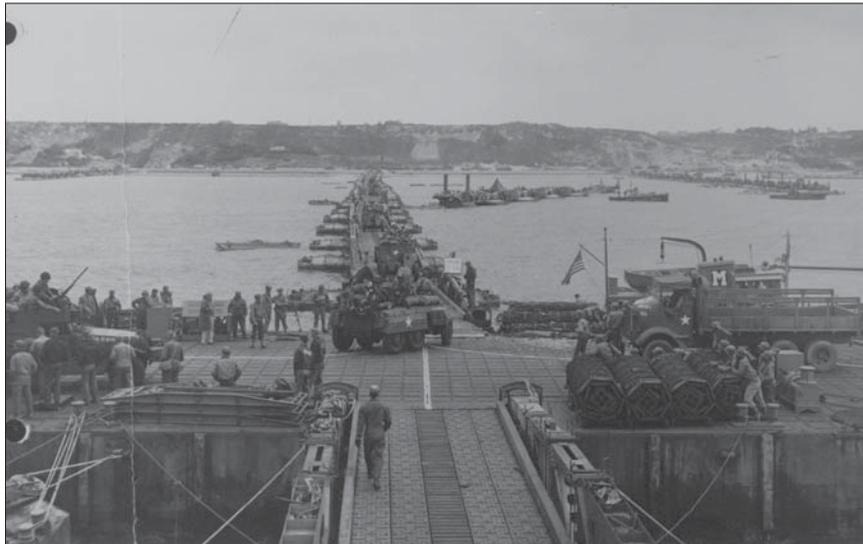
Collins saw his attack to the north as dependent on his now stalled drive to cut the peninsula. He moved the remainder of the 9th Division to bolster that drive and to form a bulwark against German attempts to attack from the south and reinforce their hold on Cherbourg. The 9th moved to replace the temporarily ineffective 90th on the flank of the 82d in the Merderet sector and to attack westward. The 82d took St. Sauveur-le-Vicompte. The 9th sought to finish cutting off the peninsula north of the 82d objectives and to move onto the flank of the 4th Division. In a week of fighting it took the high ground and bocage areas reaching to the main rail line along the west side of the peninsula. Meanwhile the 4th Division reorganized its lines around Montebourg.

Further advance on Cherbourg depended on breaking the German line centered on Montebourg. Once the peninsula had been cut on the 19th, the VII Corps faced elements of four German divisions: the *709th*, *243d*, and *77th Infantry Divisions*, and the *91st Airlanding Division*. The German divisions had been fighting since D-Day and none had received rest or replacements. The newly arrived VIII Corps assumed command of the 90th Division and the two airborne divisions and faced south to secure the rear of VII Corps. VII Corps concentrated on its major objective, Cherbourg. General Collins intended to use the 4th, 9th and newly arrived 79th Infantry Divisions in his drive on Cherbourg. His flanks were secured by the sea. Carentan had been captured and XIX Corps out of OMAHA beach had linked up with VIII Corps, so his rear was secure as well.

The Great Storm and the Problems Of Supply

The OVERLORD Plan has been characterized, with some degree of accuracy, as a logistically based plan. A central assumption was that a lodgment supporting thirty divisions would be captured. This required not simply a successful assault in accordance with NEPTUNE, but also a buildup and deployment of follow-on divisions from the United Kingdom and United States. This required ports. It caused Montgomery to favor operations against Cherbourg with the placement of UTAH Beach and the majority of his airborne troops. He adopted the COSSAC's priority for capture of the Breton ports. The Mulberries, the artificial ports, were a critical logistical link until actual ports could be captured.

The Allies landed in marginal weather, building their two artificial harbors at Arromanches and OMAHA Beach in uncertain conditions. By mid-month, the offloading of supplies had averaged about 60 percent of the supplies required for operations. On June 16th, the American Mulberry finally began to offload vehicles. Three days later, a great gale struck. For three days high winds tore at the harbor, wrecking the floating components attached to the "phoenixes". The American harbor was abandoned. The less damaged Mulberry B in the British harbor was deemed repairable. Ferrying operations continued to dominate on the American beaches thereafter. During bad weather, unloading fell drastically. Winds as high as 32 knots (36 mph) made even ferry use impossible. Mulberry B continued in use but the need for a permanent port or ports before winter was apparent. By the end of the month 290,000 tons of supplies had been unloaded despite weather and mishap. This represented about eighty percent of planned requirements.



"Mulberry A," the artificial port that would supply troops participating in the Normandy Campaign.

The Final Attack on Cherbourg

The attack on Cherbourg was the culmination of the VII Corps drive north beginning on June 19th. Three divisions began the assault with the 4th, 79th and 9th on line from right to left. Montebourg fell first. The 4th Division took Montebourg and the 79th Division entered the town of Valognes on the main central highway. By June 21st, all three divisions had reached the enemy main line of resistance outside the port. This was along the forward edge of the high ground overlooking the city and port. VII Corps was not yet in sight of its objective when the enemy, with his back to the wall, received an ultimatum to surrender.

The ultimatum expired the next day without an answer. Eleven groups of medium bombers from IX Bomber Command hit pre-planned targets within the enemy perimeter and the harbor area on the afternoon of June 22nd. Artillery shelling followed the bombing as assault troops moved forward. The high ground was partially cleared when darkness fell, and the troops halted. The next day the attack resumed. For two days the divisions chipped away the German defenses yard by yard into an ever-smaller perimeter. They pressed the defenders up against the environs of the harbor. On the 25th the commanders of the garrison, Konteradmiral Walther Hennecke and Generalleutnant Karl-Wilhelm von Schlieben agreed to surrender. By this time the 4th and newly 79th Divisions were already fighting in the harbor area. When the final isolated defending groups were notified, and resistance ended, about 10,000 prisoners had been captured. Mopping up the peninsula jutting out to the west of Cherbourg continued for several days more.

Due to extensive mining and demolition work in the harbor, American engineers required until the end of September to fully clear Cherbourg. Cherbourg was nevertheless receiving cargo in August through the use of booms, landing 8,500 tons of supplies in one day. By September's end, Cherbourg's port facilities could move a total of 20,000 tons of supplies a day. By mid-August the port started to receive fuel through PLUTO, the Pipeline Under The Ocean. This ambitious fuel line originated from the Isle of Wight. Cherbourg's seizure more than offset the OMAHA beach artificial harbor disaster. Logistics became far more reliable, although additional ports would be required as the campaign progressed and Allied forces grew.



Battles in Central and Eastern Normandy

German tactical responses had been strongest against Lt. Gen. Dempsey's British Second Army, as the Caen plain led directly to Paris. The invasion's flanks rested there, the city and key road junction of Caen possessed some port facilities, and the position was close to Le Havre and the Calais beaches. The Germans held this to be their most important defensive sector and concentrated their arriving reserves here.

The terrain inland from Caen favored German involvement on that flank. Here German armored forces had their most favorable ground. This development had been predicted during the final pre-invasion briefings in May, as Allied intelligence had noted *panzers* stationed at Caen. Allied planners had also assumed that additional *panzers* would probably be released to Rommel. Once the Allies were ashore, the Germans were determined to fight a classic battle in depth. They sought to grind down the Allied forces, destroying their strength piecemeal. Possibly, as in the Anzio beachhead containment operation, they could trap them for months in a stalemate. This raised the possibility that their V-Weapons could turn the tide through the terror of aerial bombardment with these new weapons.

NEPTUNE assumed a steady campaign against defenses based on predictable successive lines. This would permit the Allies to build up at a reasonable rate, expanding their perimeter by capturing and opening ports, stockpiling supplies forward, building airfields in France, and pushing up to thirty divisions into the lodgment area. The lodgment would reach to the Seine River but the ports necessary to sustain it were in Brittany and on the Loire River. This pulled the Allied offensive, or major components of it, towards the southwest. The period necessary to establish the lodgment was estimated to be up to ninety days. Drives across the Seine and through Paris and beyond would await this development. The German *Wehrmacht*, despite being in its fifth year of war, receiving lesser qualities of personnel as replacements, and suffering logistical and equipment shortages, remained a formidable force. It would bitterly contest Allied advances at every stage.

FORTITUDE's success as a deception operation fixing the bulk of the German reserves behind the Pas de Calais beaches proved crucial in permitting Allied forces to cope with the German buildup. Military planners often cite a three to one superiority in combat power when attacking as a criteria favoring success. Artillery concentrations augmented by naval gunfire assisted the Allies in achieving this ratio as they pushed forward, engagement by engagement. The Germans counterattacked frequently and used up valuable armor reserves as they did so. The pace was tedious, grating on those who believed the timed phase lines of the plans constituted a blue print rather than a rough estimate for logistical purposes.

The Attack on Cherbourg

German POWs being led out of Cherbourg by American troops.



The Battle for Cherbourg, coming on the heels of the successful landings on Utah Beach, involved air, sea, and land forces. Bradley, Eisenhower and Montgomery were anxious to have the harbor opened to supply their forces. Maj. Gen. J. Lawton Collins, the VII Corps commander, was determined to deliver it to them. Collins had earned the nickname “Lightning Joe” commanding the “Tropic Lightning” 25th Infantry Division on Guadalcanal. He exploited his jungle savvy to fight through the jungle-like bocage of Normandy

in his advance on Cherbourg. His corps soon came up against 85 resistance nests, or *Widerstandsnesten*, in a semicircular defense line around the port. Behind these concrete positions were infantry counterattack forces to react quickly against any penetrations. Within the positions artillery, antitank guns, machine guns, and mortars were integrated with the terrain to cover expected avenues of approach. The Germans deployed three *Kampfgruppen* (battle groups) to assist with the defense. A line of pillboxes provided a final line of defense before the roads that led down into the port.

Lt. Gen. Lewis H. Brereton's Ninth Air Force hit the Cherbourg defenses on June 22 employing the entire IX Bombardment Command's eleven medium bomber groups. This came to a total of 396 bombers, 557 fighter-bombers, and an additional 118 aircraft from 2 TAF. The aerial armada hit targets beginning at H-80 minutes prior to the start of the VII Corps ground attack set for 1400. In the center of the attack, Maj. Gen. Ira A Wyche's 79th Division slowly ground through three defense lines controlling Highway 13 into Cherbourg and Fort Roule. By the 24th, the 4th Division reached the sea just outside the harbor area. The next day, as naval units approached to provide gunfire support, the 9th and 79th Divisions entered Cherbourg from the west and southeast. Fort Roule fell to the 79th.

Naval Task Force 129, including the battleships USS Texas and USS Arkansas, bombarded German 240-mm gun batteries which endangered the offensive. The battleships' 14-inch guns, assisted by the fire of five U.S. destroyers, managed to put one gun out of action. More than 200 14-inch shells, 58 12-inch shells, and 552 5-inch shells were fired in the engagement, but had little effect on the formidable concrete defenses. Two Royal Navy cruisers had better luck using spotter aircraft, and knocked out two more guns. The embattled German batteries were eventually seized by ground action.

On the 26th, the great subterranean fortifications at Saint-Saveur fell to the assaulting infantrymen, and the Cherbourg Commander and the German naval commander both surrendered. Pockets of resistance remained to be reduced by further infantry action, largely because of destroyed communications. U.S. psychological warfare teams broadcast news of the surrender to convince holdouts. The offshore islands surrendered on June 28th and 29th, freeing up the badly damaged harbor for clearing operations. The harbor and peninsula were finally cleared by July 1, 1944, as fighting had continued for a time on the northwest tip of the peninsula.

VII Corps casualties in the fighting for the Cotentin Peninsula totaled 22,119, including 2,811 killed in action. The Germans lost about 8,000 killed or missing at Cherbourg, and 30,000 were captured.



V Corps reached its D-Day objective line on June 7th and 8th as the 1st and 29th Divisions consolidated their beachheads, moved across the Bayeux road, and expanded outward to the flanks. Higher ground inland beckoned, and the First Army stretched to reach St. Lo. This major objective lay to its south and dominated the roads coming into the Cotentin Peninsula. The 29th Division was assigned St. Lo as its objective while the 1st Division pushed towards Caumont and the high ground around it. From Caumont the 1st Division could support the turning movement the British planned in order to sweep the ridge and clear potential airfield terrain south of Caen. 1st Division and thus V Corps reached Caumont by the 12th, but heavy fighting to its left by several *panzer* divisions held the British to small gains. The British kept the *panzers* pinned to their front line, unable to withdraw or be replaced by infantry. Recurrent limited objective attacks and massive artillery barrages kept the German *panzers* fixed in place.

Montgomery now hoped to move the U.S. forces southward while British forces ground up the *panzers* in limited objective attacks supported by airpower and artillery. Several corps-scale attacks moved the British line forward slowly, pulling up to eight *panzer* divisions to the east and away from the Americans. Meanwhile the U.S. First Army cleared the bocage in painful, field by field fighting. Montgomery made his intent clear to his commanders and Eisenhower in written directives. He laid out his further plans after the early battles in the bocage in directives M501 and M502, dated June 18th. These were adjusted as the campaign progressed.

U.S. XIX Corps went into line on June 14th west of V Corps. It assumed command of the 2d Armored Division and 30th Infantry Division and absorbed the 29th Infantry Division in sector. V Corps kept the 1st, 2d, and the 5th Infantry Divisions. XIX Corps pushed southwards into the bocage alongside V Corps to keep up with the British offensives in June and early July. The British were fighting to clear the Villers Bocage ridge and seize Hill 112.

Having seized Cherbourg, First Army pushed out from the Cotentin Peninsula as well. VIII Corps was on the right of Bradley's line along the coast and, with VII Corps, wheeled southward. The German divisions in front of them had been reduced to battle group strength but continued to resist. The familiar numbers, *352d*, *243d*, *91st*, and *77th Divisions* fought on as remnants cobbled together by their headquarters. These were reinforced by the *353d Infantry* and *17th SS Panzergrenadier Divisions* in the defenses south of the Cotentin. The Germans had lost 40,000 men in the defense of Cherbourg. *LXXXIV Corps* had lost its redoubtable commander, Lt. Gen. Marcks, to a fighter-bomber attack. It continued to fight on under Lt. Gen. von Choltitz, newly arrived from the Eastern Front. Establishing a double line of defenses in the marshes at the peninsula's base near La Haye du Puits, the Germans hoped to contain the American advance.

Normandy American Cemetery



Normandy American Cemetery in France is located in Colleville-sur-Mer, on the site of the temporary American St. Laurent Cemetery, established by the U.S. First Army on June 8, 1944. The cemetery site, at the north end of its half mile access road, covers 172.5 acres and contains the graves of more than 9,380 of our military dead, most of whom lost their lives in the D-Day landings and ensuing operations. On the Walls of the Missing, in a semicircular garden on the east side of the memorial, are inscribed 1,557 names. Rosettes mark the names of those since recovered and identified.

The memorial consists of a semicircular colonnade with a loggia at each end containing large maps and narratives of the military operations; at the center is the bronze statue, "Spirit of American Youth Rising from the Waves." An orientation table overlooking the beach depicts the landings in Normandy. Facing west at the memorial, one sees in the foreground the reflecting pool; beyond is the burial area with a circular chapel and, at the far end, granite statues representing the United States and France.

In 2019, the Normandy Visitors Center was renovated with new exhibits. The center is sited in a wooded area of the cemetery approximately 100 meters east of the Garden of the Missing.

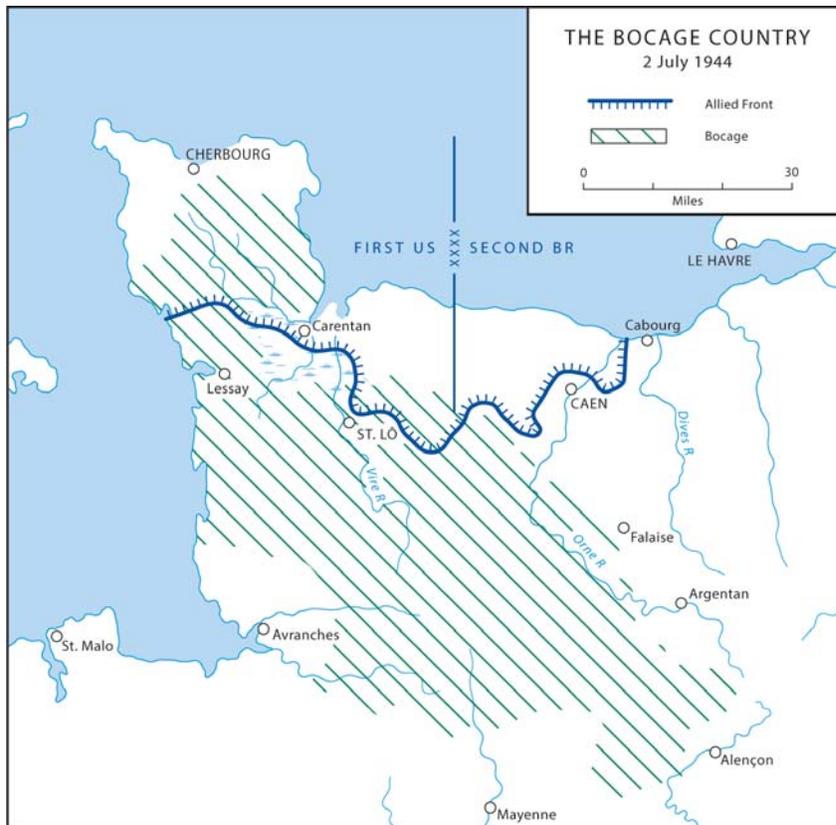
Due to security concerns, the pathway from Normandy American Cemetery to the beach was closed to the public in 2016. However, public beach access is available nearby.

Maj. Gen. Troy Middleton's VIII Corps fought for a week to clear the marshes between the first German line at St. Saveur le Vicompte and the second at La Haye du Puits. He ground away with the 79th and 90th Infantry and 82d Airborne Divisions beginning on July 3. Encompassing a mix of marsh and high ground, the battle rolled forward slowly. The 90th Division was roughly handled by the *17th SS Panzergrenadiers* and suffered over 2,000 casualties. The 82d Airborne was replaced by the 8th Infantry Division and returned to the United Kingdom to refit for further airborne operations. The 79th Division captured La Haye du Puits in fierce house to house fighting on July 8th. Maj. Gen. Raymond L. McClain, a National Guard Officer who had been called to Federal Service in 1940 and who had served in Sicily, replaced the division commander of the 90th.

VII Corps launched an attack in concert with VIII Corps, south of Carentan towards Perrier. The veteran 4th and 9th Divisions attacked, and the newly arrived 83d Division held the east flank on the Carentan-Perrier road.

A full attack by the British Second Army in late June was impaired by rainy weather but drew most of the German armor into bloody exchanges. This was Operation EPSOM, which left a long salient around Caen from the east and completed the capture of the Capriquet airfield. Canadian forces subsequently seized Caen during Operation CHARNWOOD on July 8th. Eight known *panzer* divisions were arrayed along the British front.

St. Lo defied the 29th Division through much of July. Two hills dominated the city, Hill 122 to the north of the town and Hill 192 to the northeast. St. Lo featured a bridge across the Vire River to its immediate east, and radiated roads on three sides. Held by the *II German Parachute Corps*, it figured prominently in D-Day planning as a route to the interior. Three *Kampfgruppen* (Battle Groups) drawn from the remnants of three German divisions defended in the area.



In the bocage, infantry patrols and small units bore the brunt of the fighting. Every field and small trail seemed to plunge them into mines, machine guns, and close-in ambushes. Mortars in particular exacted a heavy toll on infantry in the small fields. The bocage made large unit cohesiveness difficult and called for individual courage and leadership at the platoon and squad levels. The Germans used the outside hedges of a hedgerow-bounded field to shape a box ambush for troops entering a field through an opening. Multiple fields had to be cleared simultaneously to avoid such ambushes. This was difficult to control and coordinate. Until the arrival of innovative “hedge cutter” tanks, the hedgerows presented costly and difficult tactical problems for the American divisions. Casualties were high in the embattled rifle companies.

First Army’s attacking corps swung westward as Dempsey’s Second Army postured itself eastward after the fall of Caen on July 8th. The German buildup conformed to the terrain. Infantry pressed against the U.S. sector, which was primarily bocage terrain. *Panzer* and mechanized *panzergrenadier* units concentrated on the left of the Allied line, in and around the Caen plain. Here the open fields favored their maneuvers, although ambushes and short rush counterattacks were common tactics as well. Artillery hit masses of armor when spotted. Allied air superiority also kept German armor at bay. Dempsey was forced to grind through a thick antitank defense based in stone villages and using tanks, anti-tank rockets or *panzerfausts*, antitank guns, and networks of machine guns.

By July 1, 1944, Bradley started to realign First Army for its final Normandy battles. The Army now was composed of four corps and ten infantry, two airborne, and one armored divisions. More were arriving. Meanwhile the British conducted limited objective attacks to their front every several days in a tempo determined largely by weather for visibility and air support. Stocks of artillery ammunition accumulated to smother German defenses and



American soldiers fire a 105-mm howitzer towards the city of Carentan.

systematically chew-up German armor reserves. A bulge in the center of the Allied line pushed along the ridges in that sector and ground down other German units that had received no replacements in a month of fighting. Bradley's divisions kept pace to outflank the roads pointed southwards towards Brittany and toward the key objective of St. Lo.

General Eisenhower now offered the full weight of the heavy bomber force to support a major ground attack. Eisenhower viewed this as a final showdown. Montgomery and Bradley instead viewed their next attacks as preliminary to a final breakout. They were to achieve the essential conditions of weakening German *panzer* reserves and destroying their forces in depth. This difference in nuance would lead to misunderstandings as operations progressed in July and August.

St. Lo was the key to moving southward out of the Cotentin area. VIII and XIX Corps, using divisions that had arrived across UTAH and OMAHA beaches, fought their way south. V Corps now leaned towards St. Lo. XIX Corps assumed control of the veteran 29th Infantry Division. The 29th had been the first to attempt to take St. Lo and now was given the town as its objective again. In fierce fighting from July 11-18, the division cleared the high ground northeast of St. Lo and formed tank-infantry teams for a final assault. Task Force COTA led the way into the town under the command of Brig. Gen. Norman D. Cota. Cota had landed with the first wave on OMAHA Beach and was instrumental in the initial breakout from the beach. After seizing the town, the division prominently displayed, under a flag in the ruins of a church, the body of Maj. Thomas D. Howie who had vowed he would lead his soldiers into St. Lo.



The body of Maj. Thomas Dry Howie covered by an American flag outside the church at St. Lo.

After Caen fell, Montgomery designed major attacks on both flanks supported by a mass of strategic bombers. Dempsey's Second Army would attack south of Caen towards the Bourgebous Ridge and, if it broke through, continue. If it did not break through, it would continue to fix the German *panzers* in the east as before. The next day Bradley's First Army would attack on a narrow front with the VII Corps in Operation COBRA, driving south towards Granville. Both offensives were designed as attrition battles but presented the option of further exploitation if successful. If Bradley achieved a major break-through in the west, he might follow up with an encirclement of the enemy still fighting in the Caen sector while other forces moved into the Brittany Peninsula. Bradley would have the use of the newly created U.S. Third Army under General George S. Patton to accomplish his missions. Montgomery had envisioned a potential breakthrough in the west, referred to as LUCKYSTRIKE Plan B, in a July 10th order.

Weather and the enemy modified the Allied concept, somewhat. Air Marshal Leigh-Mallory enthusiastically moved to provide air support to twin battles designed to be a day apart. The Americans were not postured along their proposed line of departure on time and the drizzly Normandy weather further complicated air support. Not wishing to let the Germans grow stronger, Montgomery let the British attack go forward. This produced a break of several days before the American attack and caused the twin drives to look like separate operations.

GOODWOOD, the British assault, was launched on July 18th. A massive bomber strike blasted a deep path from the British lines through a narrow corridor of villages and hills towards the Bourgebous Ridge. Allied intelligence had not portrayed the German tank positions as existing in such depth, and the British tanks were not able to move forward and outward rapidly enough to clear their flanks and gain the high ground. After a seven-mile advance, the attack stalled with heavy losses. Bypassed Germans refused to surrender and fought back with surprising vigor. Rain turned the battlefield to muck and made armor movement even more difficult. Weather preempted additional air strikes and restricted the movement of massed artillery to support the battlefield. The offensive stalled, and Montgomery made plans to shift his armor west as the Americans waited for good weather to start COBRA.

Bradley's COBRA plans had been under consideration since June. The rough outline of the roads to be exploited had emerged in earlier directives from 21st Army Group. Bradley further crafted the plan to fit his forces into the terrain. He envisioned VII Corps concentrating in a small area and attacking in the aftermath of intense carpet bombing. Like GOODWOOD, armor would exploit any breakthrough. Unlike GOODWOOD, Bradley would lead his attack with infantry divisions and then pass his mobile tank forces through.

Bradley planned on using the Lessay-Periers-St. Lo road as his line of departure. This was an easily identifiable line from the air and on the ground provided a landmark behind which the divisions could stage in their attack positions. VII Corps, as the main effort, was in the center. VIII Corps was on its right, and V Corps on its left. This committed the First Army's most experienced commanders to the attack.

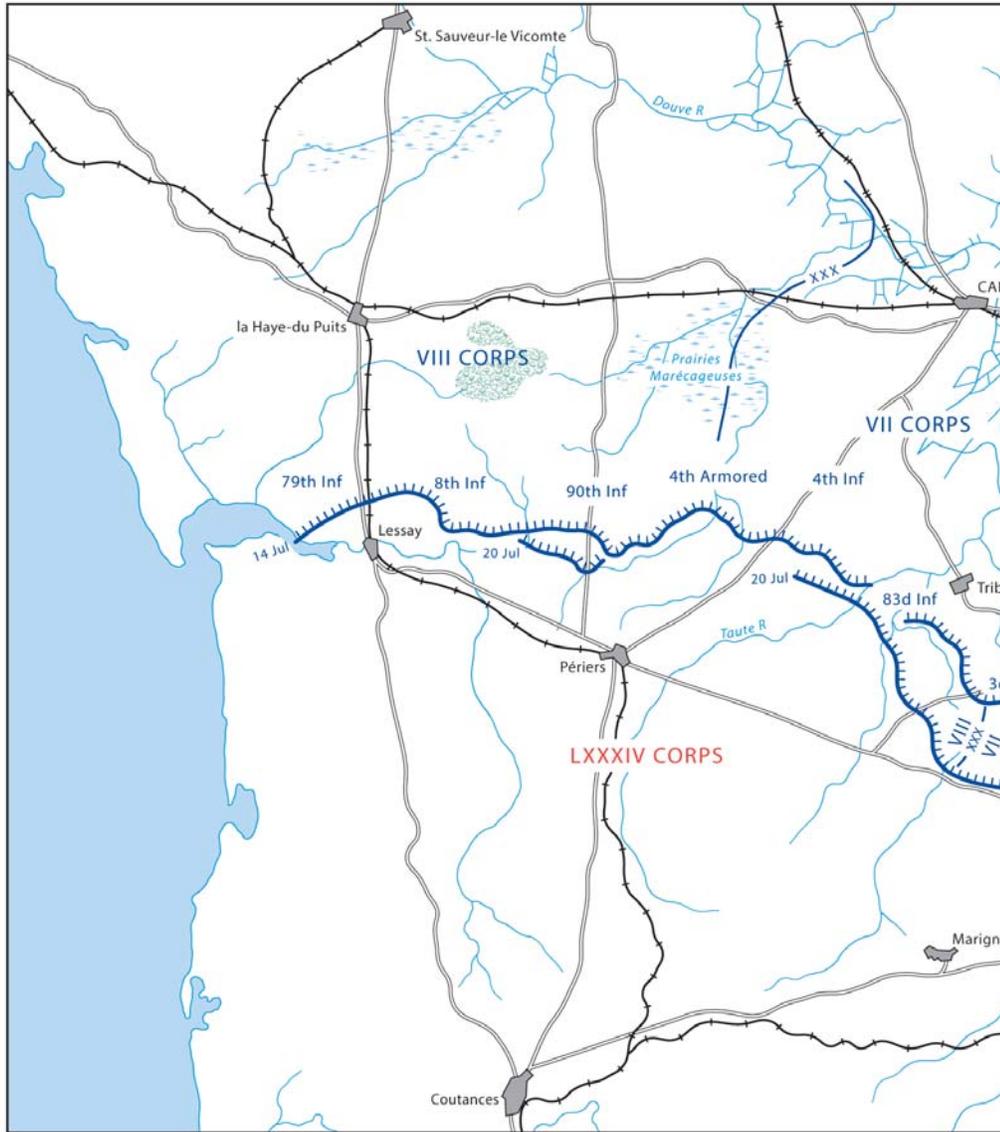
The order of battle for the attack was:

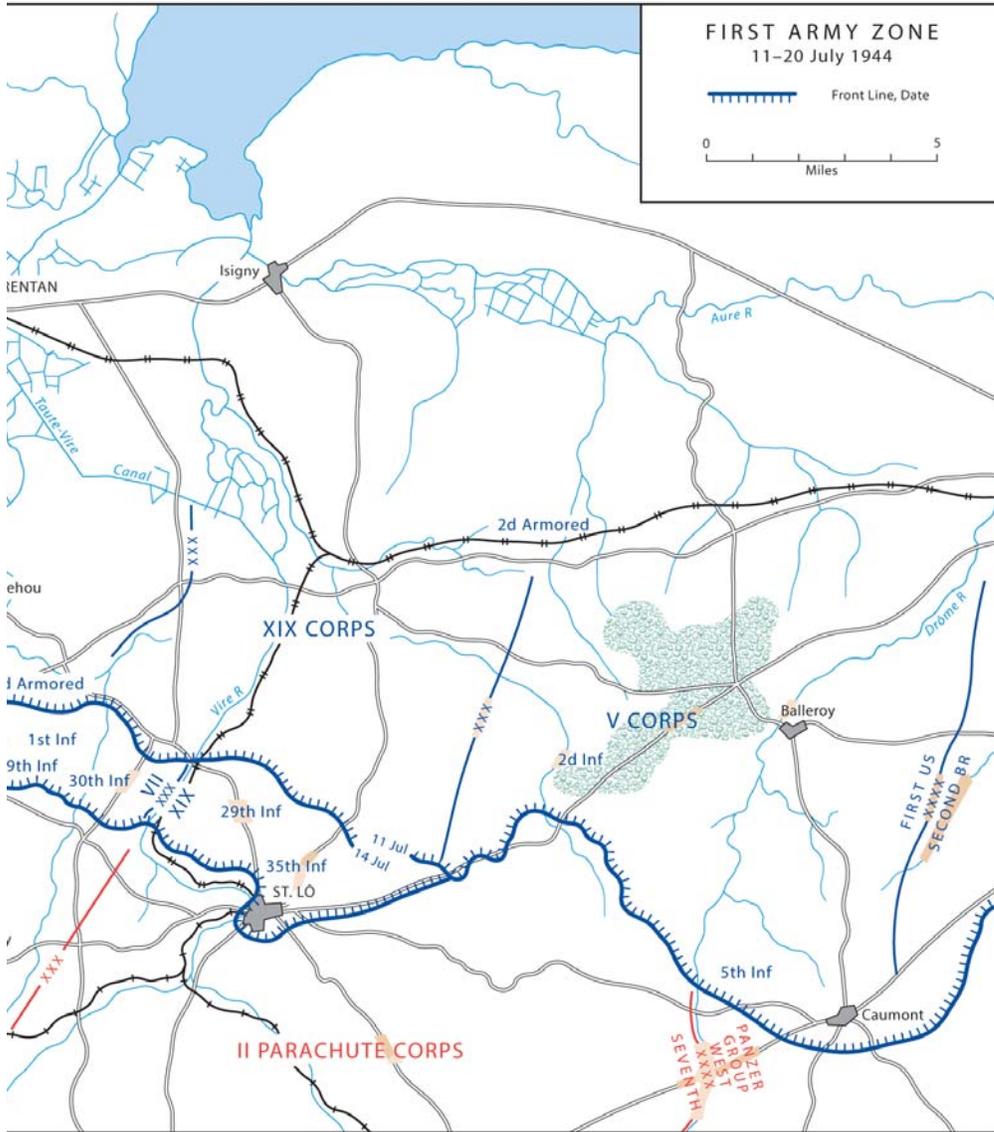
First Army			
VII Corps	VIII Corps	V Corps	XIX Corps
9th Div	79th Div	2d Div	35th Div
30th Div	8th Div	5th Div	29th Div
1st Div	90th Div		
4th Div	4th Armd		
2d Armd	83d Div		
3d Armd			

Facing the First Army in the St. Lo sector was the German *Seventh Army* with two corps and ten battered divisions. *LXXXIV Corps*, consisting of eight divisions, had most of this strength. These included the *2d SS Panzer* and *Panzer Lehr Divisions*, which had slid west from the battles around Caen. Most of the constituent units had seen heavy fighting in the Cotentin and bocage battles and had received no or very few replacements.

Collins' VII Corps faced its enemy with the 9th Division on the west (his right) and 30th in the East (his left) flank. The two armored divisions would follow, and the remaining two infantry divisions would follow them. The 3d Armored and 1st Infantry Divisions lined up behind the 9th Infantry Division and the 2d Armored and then 4th Infantry Divisions followed the 30th Infantry Division. Collins' force was nearly double the size of a normal force given to a corps to assure mass and to simplify command in the case of a breakthrough. XIX Corps was inserted into the plan at the last moment and placed between VII and V Corps with the 35th Infantry Division leading. This provided an extra corps headquarters able to pick up responsibility for multiple division sectors if needed as the breach widened.

The air support plan for the attack was controversial from the start. General Bradley wanted the bombers to fly parallel to the St. Lo-Perier road to avoid "short" bombings. His fear of bombs hitting friendly troops emerged from earlier bombings around Caen in support of British troops. Lt. Gen. Doolittle, however, ordered a perpendicular approach for his bombers with the planes flying over friendly troops just before they dropped their bombs. Since the bombs were to be





focused on a small area, concentration with respect to area and time was desired. Flights parallel to the front lines would have exposed his bombers to enemy fires much longer. To avoid friendly casualties, troops were withdrawn a distance of 1,200 yards behind the target area, which was marked by smoke shells. Friendly lines were marked by colored panels. The air plan called for an initial attack by fighter bombers and medium bombers for twenty minutes, then an hour of bombing by 1,500 heavy bombers provided by the Eighth Air Force. This would be followed by twenty minutes of bombing by fighter-bombers from the Ninth Air Force.

The COBRA plan had three phases:

Phase One: An aerial bombardment by heavy bombers and fighter-bombers in an area 2,500 yards deep by 6,000 yards wide would precede the ground assault. The northern edge of the bombardment would rest on the St. Lo-Periers Road, and its focus would be determined by the center of the enemy main positions. Heavy artillery would supplement the bombardment. Immediately following the bombardment, the two leading infantry divisions would attack, penetrate the enemy defenses, open a path, and fan outwards. These divisions, the 9th and 30th Infantry, would seize the towns of Marigny and St. Gilles. Secondary objectives to open crossings to the left on the Vire River had also been designated.

Phase Two: The two armored divisions would exploit the penetration gained by the leading infantry divisions, reinforced as necessary by a motorized division trailing them. The right armored division on the west flank would penetrate towards Cerisy-la-Salle, and then turn west to seize high ground at Coutances. The left armored division on the east flank would pass through St. Gilles, turn southwest towards Mesnil-Herman, pass through Hambye, take the high ground on the east bank of the Seine River and block enemy reinforcements moving north.

Phase Three: Consolidate on the objectives with VIII, VII, XIX Corps maintaining continuous pressure against the enemy. V Corps would retain contact with the British Second Army.

Despite the measures taken to prevent it, COBRA began with a much feared “short bombing” on the 24th, killing a number of friendly infantrymen. First Army rescheduled its attack and widened its safety zone. Another bombing the next day saw more bombs fall short, but also inflicted heavy destruction along the front lines of the German *Panzer Lehr Division*. This devastation permitted a successful American attack. However, in a tragic incident, Lt. Gen. Lesley McNair, the Chief of Army Ground Forces who was observing the attack, was killed by errant U.S. bombs.

Promoted to General posthumously, McNair was the most senior American officer killed in World War II. Nevertheless, General Collins quickly pushed his armor through the breach. He had already organized his tanks into exploitation columns to drive deeply towards their objectives. While the German front was fortified in depth with reserves and multiple defense lines behind Caen, it was relatively shallow behind the American lines. This played to the advantage of the Allies.

Bradley's plan called for an exploitation along the western coast of Normandy after the breakout. Finding the German line had been broken through, his three corps continued to attack. British Second Army, following its attack at Caumont in OPERATION BLUECOAT, provided flank support for a massive envelopment turning on the pivot point of Caen. The First Canadian Army became operational on July 22nd at Caen and began attacking to fix the enemy *panzers* with limited objective attacks.

VIII Corps, the western-most corps in the COBRA attack, had Lt. Gen. George S. Patton accompanying it. He assumed command of Third Army as it stood up on August 1, 1944. First Army split its forces and introduced yet another corps headquarters. Divisions in the west of its sector went to Patton's command and those to the east remained with the First Army under the command of Lt. Gen. Courtney H. Hodges. Hodges had been Deputy to Lt. Gen. Bradley. Bradley became Commanding General of the 12th Army Group but remained under the operational control of Montgomery until Eisenhower's Headquarters became fully operational on the continent.

Within days Lt. Gen. Henry Crerar's Canadian First Army joined the battle. The Canadians were inserted on the far left of the line towards Falaise. Patton's Third Army pointed south and then turned westward into Brittany towards its ports. It also formed the far marching flank of a massive Allied wheel around the German armies, which were now falling back with their right anchored in the hills south of Caen. Here the Canadian divisions were slowly pushing them back as well, reducing their options. They could withdraw or be encircled. Patton's Third Army did in fact swing in a wide arc that eventually encircled Falaise, linking up with the Canadians on August 19th. Over 50,000 German prisoners and much equipment were caught in this trap although many more Germans were able to escape. This is not to mention the tens of thousands more killed or wounded in the fighting for Normandy or the later harried withdrawal across the Seine River and towards the German border.

The sustainment of the momentum of the invasion initially depended upon the success of the Mulberry Harbors and the effectiveness of over the beach supplies until actual ports could be captured and put into operation. The capture of Cherbourg had helped, but only the seizure of further ports in Brittany, at the mouth of the Loire, and along the Biscay Coast could truly resolve the supply dilemma. British forces would do their part as well, moving eastward to capture further ports along the Channel coast.

The original optimism of the Allied logistical plan had the Breton ports in Allied hands by D plus 57 and fully operational by D plus 90. As Third Army turned the corner into Brittany, it sent one corps to clear the peninsula but shifted the majority of its weight to encircling the German *Seventh Army*. The encirclement inflicted a devastating defeat on the Germans in the field but resulted in the commitment of too few infantrymen and insufficient artillery to seize the largest Breton and Biscay ports. The major ports of Brest, Lorient, and St. Nazaire held out under siege. Allied landings in southern France on August 15, 1944 and the subsequent seizure of such major ports as Marseilles and Toulon ultimately resolved the Allied supply situation, but not until the Fall.

The Allies cracked the outer shell of Hitler's Fortress Europa with daring airborne and amphibious assaults on June 6, 1944. Subsequent fighting around Caen and in the bocage region of Normandy was brutal and costly. Nevertheless, the Allies inched forward, thinning out the German forces even as they reinforced their own. With the German lines stretched to the limit, the Allies launched a sledgehammer blow at St. Lo that achieved a breakthrough and rolled on to take deep objectives. German counterattacks, to include a particularly dangerous one at Mortain on August 7th, were handily repulsed. Supply and the constraints of limited ports remained a dilemma throughout the campaign, however, with ever larger masses of Allied forces forward being sustained by narrow margins. Overwhelming victory in France, to include the invasion of its southern beaches, ultimately brought the Allies to the German border with the means to sustain themselves in their hands. Normandy was a pivotal point in the long march towards victory in Europe.



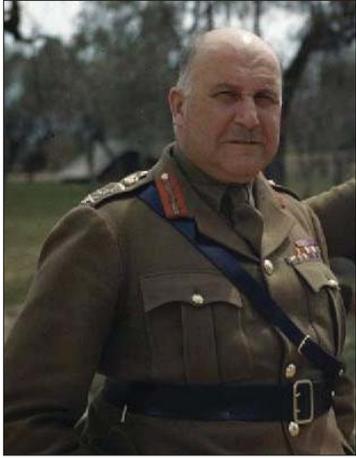
An American Jeep struggles through the heavy mud between the hedgerows of the bocage.

Southern France

August 15 – September 14

The idea of a campaign in southern France originating along the Mediterranean coast predated the Normandy invasion plans. As the British investigated early concepts for a return to the continent, landings on the southern coast of France were explored by the Joint Plans Staff. The 1941 plans, however, assumed that the current British operations in the Mediterranean were sufficient to defeat Italy if it did not gain substantial assistance from its German ally. German reinforcement of Mussolini's positions in the Balkans, and later in North Africa, reversed this thinking. The British considered the Mediterranean critical to the survival of its Empire as both an avenue to its oil supplies in the Near East and a shorter supply route to its territories in the Far East. The United States, on the other hand, did not view the Mediterranean as being that central to the war. However, British staff officers were better prepared than their American counterparts during their initial talks and, for the most part, British views on strategy prevailed in the early days of the war. For the British, Italy held a crucial position in the Mediterranean. Churchill named Italy one of the first targets of the Allies in 1941 and 1942. He insisted that its fall would weaken the Germans by exposing their weak "underbelly" in the Mediterranean and perhaps open invasion routes across the Alps or through the Balkans into Germany. Army and air strategists saw the possibilities of air missions launched against the Ploesti oil fields in Romania in 1942 and 1943. Italy also was seen as the key to opening up an air offensive against many German industries which were out of range of bombers based in the United Kingdom.

With the invasion of North Africa, Operation TORCH, and the subsequent operations in Algeria, Morocco, Tunisia, Sicily, and southern Italy, the Americans were fully involved in the Mediterranean war by September 1943. At the Casablanca Conference, in January 1943, the western Allies had renewed their commitment to Mediterranean operations. They also committed to opening an actual "Second Front" in France in due course, as Soviet leader Joseph Stalin had long insisted. An invasion of southern France could be launched by the Allies in cooperation with what was to be the OVERLORD Landings in Normandy. President Roosevelt was not convinced of the necessity for such an operation, but his comments were interpreted differently by many observers. Churchill preferred that forces be kept in the Mediterranean for a stronger prosecution of the Italian Campaign. After the lack of success of the Anzio landings in early 1944, Churchill fought to keep sufficient amphibious lift in the Mediterranean to support the faltering Italian campaign, and after the capture of Rome he wanted to keep enough units in Italy to forge northward.



Field Marshal Henry M. "Jumbo" Wilson, Eisenhower's replacement as Supreme Commander in the Mediterranean.

Given the authority to decide on a southern landing or a complete shift of Mediterranean assets to OVERLORD, Eisenhower opted to postpone ANVIL, the planned landings in southern France. However, he still saw its eventual utility. Seizure of the ports of Marseilles and Toulon in southern France could be important in deploying and supplying American divisions in Europe. Eisenhower had overseen the original ANVIL planning while Supreme Commander in the Mediterranean and was still in favor of the operation. He handed over responsibilities to Field Marshal Henry M. "Jumbo" Wilson of the British Army, his replacement as Supreme Commander in the Mediterranean, to finalize plans.

The American Joint Chiefs were eager to shift units and supplies from what they saw as a backwater area and turn operations in Italy into a mere holding action. This would keep several German divisions fixed in Italy, without committing enough Allied units to achieve an outright victory that could be used as an excuse to divert operations towards Eastern Europe or the Balkans. While Churchill supported such follow-on operations as useful grand strategic goals, the American president and his military advisors saw them as distractions from victory in central Europe. Eisenhower supported the Joint Chiefs' views and pressed for troops and air assets to focus on the main mission of confronting Germany in northern Europe. He worked with Army Air Forces Commander General H. H. "Hap" Arnold to ensure that the Mediterranean Strategic Air Forces were used for the Combined Bomber Offensive missions against key targets in Germany and France and not politically driven missions farther east.

The southern France operation thus became a subordinate component of the OVERLORD design. It provided the southern "wing" of the Allied offensive, which would also ensure the effectiveness of the "broad-front" strategy against Germany. It would allow Allied units to attack everywhere along a unified line across the entire Western Front. This would stretch German defenses to their maximum limit and offer multiple possibilities for the Allies to operate anywhere along a line from the North Sea to the Alps using their superior air, naval and ground forces.

Allied Force Headquarters, Mediterranean, first directed Seventh Army to begin planning for an invasion of southern France on December 19, 1943. It asked the planning staff to undertake plans for an operation the size of HUSKY (the invasion of Sicily). The Seventh Army Commander, Lt. Gen. George S. Patton was relieved on January 1, 1944 and reassigned to the European Theater, leaving Lt. Gen. Mark W. Clark as Seventh Army Commanding General along with keeping his current job as Fifth Army Commanding General. He would oversee ANVIL's planning and was assumed to be ANVIL's eventual commander.



Lt. Gen. Mark W. Clark in Italy 1944.

While the earliest drafts of ANVIL proposed a landing on the southern coast of France in early May 1944 using two-to-three American divisions and a follow-on force of up to ten French divisions, this concept fell aside when SHINGLE, the landing at Anzio, was adopted. This was a bold amphibious landing just south of Rome which hoped to unhinge German defenses and open the road to the Eternal City. The landings in January 1944 were initially successful, but the Germans managed to move their reserves swiftly enough into place to contain the beachhead while still holding Allied units between Naples and Rome along the so-called "WINTER" Line. Anzio's force, which grew to six divisions, had to be supported entirely by sea using the shipping and landing craft earmarked for ANVIL. The resultant continuation of the stalemate in Italy put ANVIL on hold until the summer.

The breakout from Anzio and the seizure of Rome in June 1944, along with the landings in Normandy that same month, gave new life to American interest in using a Mediterranean landing as a means of entry into Europe. Eisenhower needed deep water ports to commit more divisions into the fight and stated that the Mediterranean ports were essential to supplement, if not replace, the Breton ports which had not yet been captured by his forces arriving through Normandy. Even when most of these were finally captured, the Germans had done such an effective job destroying their port facilities that they were of limited use for many weeks.

Field Marshal Wilson, the Allied Supreme Commander in the Mediterranean, had hoped to use the amphibious lift slated for ANVIL for another end run north into Italy, but offered up a choice of either a three division ANVIL or a full press in Italy. The Combined Chiefs of Staff chose ANVIL and Field Marshal Wilson loyally agreed that he could mount the operation in ten weeks, beginning it on August 15, 1944. The new operation seemed to demand a new code name and Churchill arranged that it be called DRAGOON, a verb he claimed to be descriptive of how he had been pulled into it against his will.

While Churchill felt that the new operation abandoned the chance to exploit the victory gained in taking Rome by removing forces from Italy, DRAGOON would add a full army group on the German's southern flank in France and threaten their entire position in the west. Additionally, it would provide ports and airfields to sustain an Allied advance into southern Germany.

Much of the air support for the landings would come from the Mediterranean Allied Air Forces commanded by Lt. Gen. Ira C. Eaker. Accompanying the DRAGOON Force would be the First Allied Tactical Air Force of the XII Tactical Air Command (U.S.) commanded by Brig. Gen. Gordon P. Saville and elements of the Free French Air Force. The main landing force for DRAGOON was comprised initially of the VI Corps (U.S.) under Maj. Gen. Lucian K. Truscott consisting of the U.S. 3d, 36th and 45th Infantry Divisions along with substantial French forces. Two French corps constituted the follow-on forces. These were seen as crucial to the liberation of France.



Lt. Gen. Lucian K. Truscott

DRAGOON was a complex operation, perhaps even more complex than OVERLORD to plan and execute although smaller in scope. Its forces were to be drawn from bases in Africa, southern Europe, and several Mediterranean islands. Its various headquarters and organizations were scattered among Allied major commands a thousand miles apart. It did not enjoy the intense study, preparation and priority of OVERLORD. Its shipping would have to come directly from carrying out another major operation, and many of the key airborne troop carriers would have to come from another theater with little time to integrate into their new command. The First Airborne Task Force, critical to the initial assault, had to be created out of whole cloth and had only one month to prepare. To compound the challenges, all the major planning would have to occur in only ten weeks before execution.

All of DRAGOON's assault commanders were American, given that the preponderance of forces in the initial landings were from the U.S. This served to simplify organizational and administrative issues across planning and support lines. DRAGOON would also benefit from the fact that the commanders planning and leading the operation were highly skilled and seasoned combat veterans. Besides the oversight at theater level provided by Field Marshal Wilson and his Deputy, U.S. Lt. Gen. Jacob L. Devers, the ground forces, naval units and air formations were filled with proven warriors, a rarity in major operations at the time. This was a contrast to the many inexperienced commanders who held key positions in OVERLORD.



Lt. Gen. Jacob L. Devers

The 6th Army Group, the headquarters which was eventually to undertake command of all Allied units in southern France after the success of the landings, was activated on Corsica on August 1, 1944, the same day General Omar Bradley's 12th Army Group became operational in France. Unlike the 12th, the 6th would assume command of both United States and French army-sized units. Its staff was almost entirely American with a few French liaison officers due to the lack of French officers trained in American staff procedures. Its commander, Lt. Gen. Devers, was already Deputy Supreme Commander, Mediterranean. He had formerly served as the American Theater Commander both in Europe and in North Africa and was experienced in combined planning and coalition operations. He was able to call on many American officers with experience in training and supplying the new Free French army. He was also able to secure the appointment of former U.S. Senator Henry Cabot Lodge Jr. as the senior liaison officer to the French for his Headquarters. Lodge was a gifted French speaker and diplomat who would serve with distinction throughout the campaign.



Gen. Jean de Lattre de Tassigny

The U.S. Seventh Army, commanded by Lt. Gen. Alexander M. Patch, and the First French Army, commanded by General Jean de Lattre de Tassigny, would form the invasion force. Initially the French Army would fall under the Seventh Army command. Seventh Army was given the VI Corps from Fifth Army with three divisions. The missions assigned to Patch's Seventh Army paralleled the OVERLORD concept. Patch had to seize a lodgment area with his VI Corps and develop it for further operations deep into the heart of France towards Germany. For this he had to rely heavily upon the rapid seizure of a series of ports. The ports of Marseilles and Toulon, over

thirty miles to the west of the landing areas, were critical. The Rhone River valley would then provide the natural gateway for the invasion force to debouch into the heart of France and, 170 miles north, allow the passage of forces eastward through the Belfort Gap into Germany. The post-landing strategy would give Patch the exploitation mission while de Lattre's Free French ROSIE FORCE was to have the crucial mission of seizing the ports and clearing the Riviera.

Following the Normandy invasion, German forces began to be bled off the southern French coast to reinforce their defense in northern France. These included two *panzer* and four infantry divisions. Replacing them were a few burned out eastern front (*Ost*) battalions. This weakening of forces emboldened the French Forces of the Interior (FFI), the French resistance, to greater action. The FFI coordinated with the British Special Operations Executive (SOE) and stepped up the interdiction of main roads out of the area. They eventually established their own FFI government sector, known as *Vercors*, in an area southwest of Grenoble. Once Free French regular army units landed in France, they intended to recruit a new cadre of soldiers primarily from this active resistance movement.



French Forces of the Interior and French Resistance members greet American troops following the Normandy invasion.

Allied intelligence estimated the German defensive strength in the planned invasion area to be about 115,000 men organized into nine divisions. One *panzer* division, the *11th*, was held centrally as army group reserve. German fixed defenses were numerous, but the units manning the defenses were of mixed quality and severely understrength. Their actual worth often belied their stated strengths.

The army units along the entire southern coast were part of *Army Group G*, commanded by Colonel-General Johannes Blaskowitz. His army group had been created in May 1944 to command the three corps defending the Mediterranean Coast. A capable soldier who had been relieved of his command in Poland for protesting atrocities, Blaskowitz had been left out of the French 1940 campaign but had been involved in the Atlantic Wall defense mission in northern France.

Under General Blaskowitz was the *Nineteenth Army*, commanded by General Friedrich Wiese, an energetic Nazi and able field commander. His headquarters near Toulouse reflected his belief that he would divide his time among his corps equally. His *LXII Corps* happened to sit astride DRAGOON's invasion area. Wiese had only been in command for a month by mid-August. Under him he had the *IV Luftwaffe Field Corps* (3 divisions), the *LXXXV Army Corps* (338th and 244th *Infantry Divisions*), and the *LXII Reserve Army Corps* consisting of the 242th and 148th *Infantry Divisions* in sector along with the 157th *Infantry Division* based near Grenoble. The German naval command was separate from the *Nineteenth Army*. It possessed 12 warships and 15 minesweepers along with 10 submarines of the 7th *Submarine Flotilla*. The 2d *Air Flotilla* provided air cover. A flak brigade was attached to the army. The 11th *Panzer Division* was the theater reserve. In violation of the principle of unity of command, no single individual commanded all of the army, air and naval units in the theater, unless one counts Hitler at his distant eastern front headquarters. This required the German High Command to directly involve itself in many command issues.



German tanks drive through the city of Toulouse, France.

Five different sectors in southern France were considered for the invasion: the Cete-Agde area, the Gulf of Fos, the Gulf of Hyeres, the Marseilles-Toulon area, and the Cavalaire-Agay area. Many of these areas had substantial problems. Cete-Agde provided an insufficient lee for shipping and had shallow berthing capabilities. Cete was small, nearby beaches were poor, and they were out of range of Corsica-based fighters. The Gulf of Fos was known to be heavily mined. The Gulf of Hyeres was likewise mined and could not be cleared in darkness before any landing attempt. In addition, it was subject to enemy bombardment from neighboring islands. The Marseilles and Toulon sectors were protected by strong coastal batteries. This left the Cavalaire-Agay area, almost by default, as the best choice.

The Cavalaire-Agay area was closest to the Corsica-based air support and it also had a good sea approach, not heavily mined or strongly defended, with weaker defenses than most of the other coastal areas. With good beaches and three ports nearby offering sheltered anchorages, it was nearly ideal. The *Wehrmacht* seemed unaware of its value as a beachhead to launch advances on Toulon or Marseilles, perhaps due to a belief that it was too far distant from those cities to support an attack upon them.

On the negative side, the location did not seem to be readily suitable to support an attack in depth. Inland, the terrain was rough and had to be seized immediately to secure the landing sector against enemy artillery. In addition, the major objective of Toulon was thirty-eight miles from the landing beaches. The plan required driving inland some fourteen miles by D plus 1, an optimistic and aggressive task based on the OVERLORD and Anzio experiences. Heavy resistance could quickly imperil the landing.

Wilson's Allied Force planners discarded the original plan produced during Eisenhower's tenure as Supreme Allied Commander, Mediterranean. In its stead, they moved the initial objectives farther eastward, greatly widened and simplified the naval landing zones, and provided for a more aggressive, and deeper airborne penetration. This second plan reflected the wishes of many of the combat experienced commanders who would have to execute the plan, not those of a staff producing only a theoretical outline.

The landing was planned for 8 o'clock in the morning to ensure sufficient daylight for naval preparation fires and to allow for the maximum amount of daylight for landing and offloading of troops and supplies on the first day. VI Corps would control the three assaulting infantry divisions, the 3d, 45th, and 36th, landing from Cape Cavalaire to St. Raphael and Antheor Cove along a forty-five mile-wide front. Deep behind the Maures Massif, the First Airborne Task Force of division size would parachute or land by gliders to block roads and seize deep objectives. French Commandos and the U.S.-Canadian First Special Service Force would seize naval guns near Cape Negre and the offshore Hyeres Islands of Port Cros and Levant to

secure the flanks of the landings the night prior to the main operation. The BLUE LINE, drawn some twenty miles inland and encompassing most of the Maures Massif, would delineate the beach lodgment area that needed to be protected from artillery fire and counterattacks.

American ground forces would draw units from North Africa, Italy, and Sicily. General Devers was able to muster about 125,000 men from these sources. General de Lattre de Tassigny's French force, called "Army B" and only renamed the French First Army on September 19th, totaled seven divisions and approximately 256,000 men. They provided the follow-on force for Patch's Seventh Army assault spearheaded by the U.S. VI Corps. The



Vehicles gathered in Naples to participate in Operation DRAGOON.

French troops had for the most part been reequipped with modern equipment from American stores. Many were colonial divisions cadred by regular French officers. They had been stationed in Africa awaiting shipment to France in 1940 as the strategic reserve but were left in place when France surrendered to the Germans in June of that year. Holding France's colonies under the authority of the Vichy French government, they took the opportunity to change sides after the Allied invasion of North Africa. Many of the units fought in Tunisia and then as part of the French Expeditionary Corps in Italy. While Algerian, Moroccan, and Tunisian soldiers predominated in the French Corps d'Afrique, recruited replacements were also drawn from France itself. France was not short of brave men or willing patriots hoping to liberate their own people and avenge the defeat of 1940.

In depth of penetration desired, in broadness of objectives to be gained, and in dispersion of forces to gain objectives, the DRAGOON plan dared far more than the NEPTUNE plan for Operation OVERLORD. However, it counted on a far weaker and poorer quality force to oppose it. The Germans had only one *panzer* division in central reserve as a major counterattack force. To be completely successful the plan relied upon the rapid seizure of two widely dispersed ports held by dug-in German forces.

The selection of Truscott to command the assault with three veteran divisions of the VI Corps underscored the priority given to DRAGOON by the Mediterranean Theater. The commander and his staff were seasoned veterans. After being briefed on the draft plan on June 17th in Algiers, Truscott's key planners made significant changes in tasks and methods with respect to the operation. No commander likes to be handed a finished plan to execute blindly. Truscott, whose experience and style demanded no less, reshaped the operation to suit his conceptions. Patch supported his commander without misgivings despite changes crossing both national and service boundaries.

The VI Corps Concept of the Operation was to land with three divisions abreast with the 36th Division (CAMEL Force) on the right, the 45th Division (DELTA Force) in the center, and the 3d Division (ALPHA Force) on the left. They were each to seize their landing beaches and move quickly inland while destroying the enemy in their own sectors and maintaining contact with their flank divisions. The 36th was ordered to capture the town of Frejus and move in sector towards the Airborne Task Force (RUGBY Force). The 45th Division's mission was to capture the seaside town of St. Maxime, cross the river, seize the high ground to its north, and move to the BLUE LINE to link-up with RUGBY Force. On the left, the 3d Division would take St. Tropez and move west to make contact with the French Commando group which was under its command. All forces would press forward as far as the BLUE LINE, also called the Corps Beachhead Line, which was at sufficient distance to protect the beaches from enemy artillery fire once it was taken by friendly ground forces.

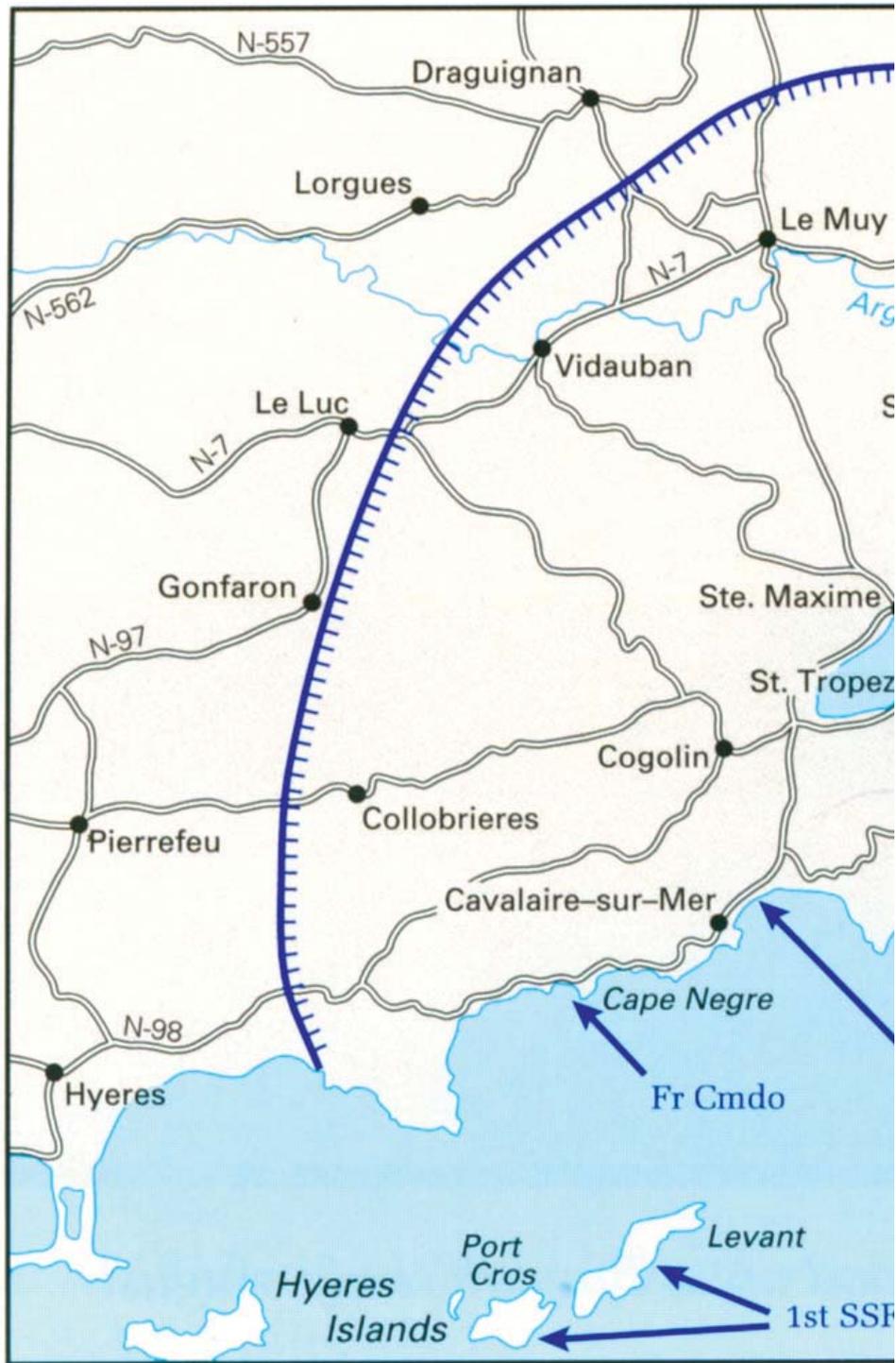
II Corps of the Free French Army (GARBO Force) was to land on the beaches as a follow-on force in the St. Tropez-Cape Benet Sector. I Corps of the French Army would land in a port as reinforcements. VI Corps' three U.S. divisions were also augmented by a Combat Command of the French 1st Armored Division in reserve which would revert to French control after the success of the landings.

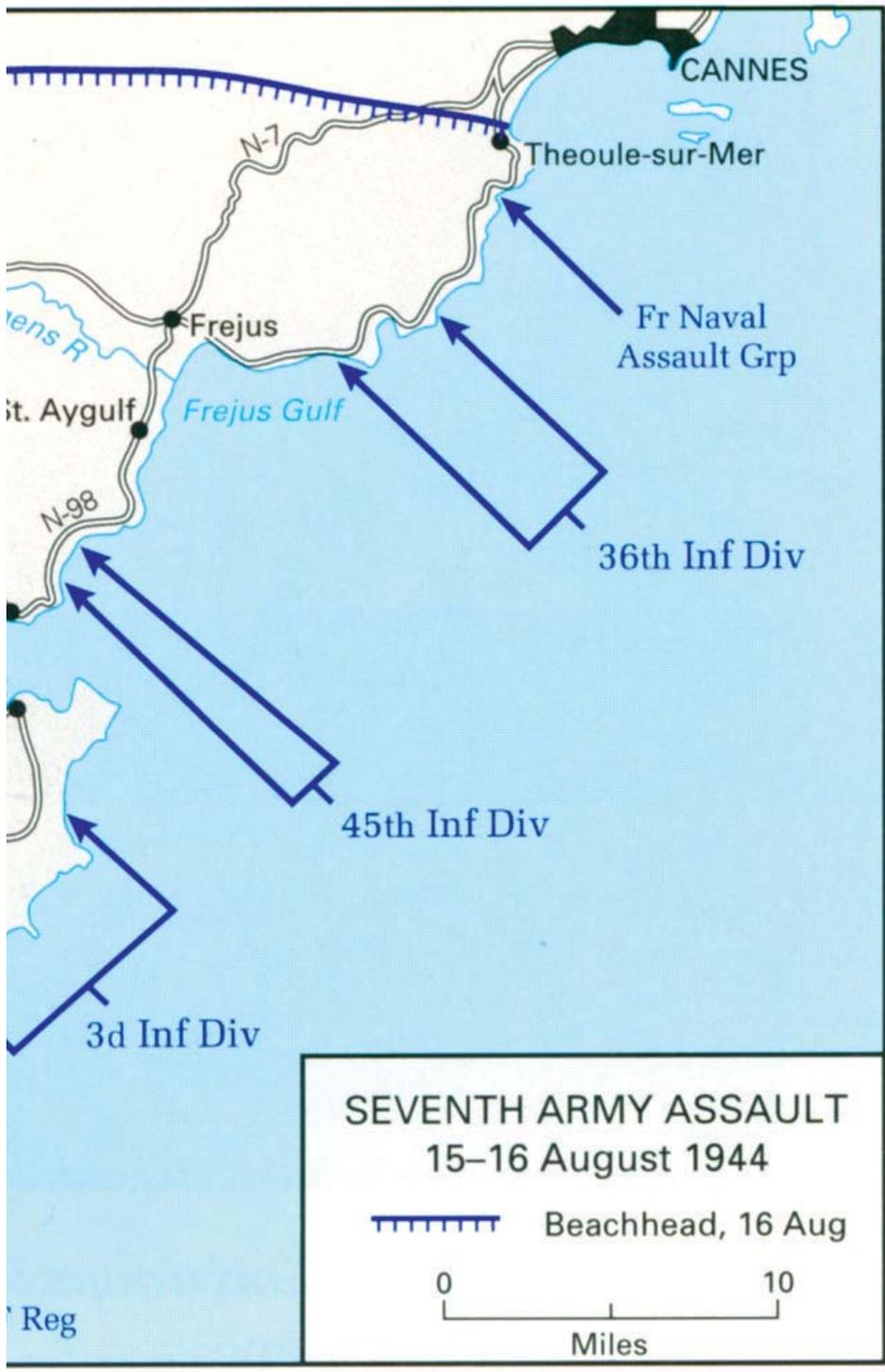


Paratroopers drop into Southern France in support of Operation DRAGOON.

The First Airborne Task Force was given the mission of extending the beachhead to the Corps Beachhead Line, the BLUE LINE, by the airborne insertion of a division-sized force in the vicinity of Le Muy to dominate the roads in the area and to cover the landing of the VI Corps. The Mediterranean Theater had no division-sized airborne elements, but Seventh Army formed a special Airborne Task Force under the command of Maj. Gen Robert L. Frederick, noted commander of the First Special Service Force. He was given the 2d Independent Parachute Brigade from the British Eighth Army, the 509th Parachute Infantry Battalion from the U.S. Fifth Army's reserve, the 517th Parachute Infantry Regiment of the 17th Airborne Division detached from the European Theater, the 1st Battalion of the 551st Parachute Infantry, the 550th Glider Infantry Battalion, the 460th Parachute Field Artillery Battalion, the 463d Parachute Field Artillery Battalion, and the 602th Glider Pack Howitzer Battalion. Two chemical mortar companies, a signal company, a medical collecting company, and an ordnance detachment were also to be flown in by glider. An antitank company of volunteers drawn from the Japanese-American 442d Regimental Combat Team (RCT) manning British 6 pounder guns was added to the force mix. They had to be flown into the drop zone by British Horsa gliders which more easily handled the British guns. Totalling 9,732 men, the Task Force needed 535 C-47 and C-53 transports and 465 gliders to lift it into the assault area. A composite staff composed of officers from the newly formed 13th Airborne Division and the Airborne Center in the United States assisted Frederick in planning and assembling the force in the four weeks prior to the mission start. Brig. Gen. Paul L. Williams, IX Troop Carrier Commanding General, formed a provisional Troop Carrier Division for the assault bringing troop carrier wings from the Normandy invasion as well as absorbing veteran troop carrier squadrons from within the Mediterranean theater. Working with Frederick, he also had just a month to form a team prior to executing the mission.

Williams planned for the air armada to avoid overflying the invasion fleet. This had proven to be fatal during the invasion of Sicily when nervous sailors shot down many Allied aircraft at night despite attempts to warn them of the friendly air passage. Combining the flow of aircraft from ten airfields near Rome, flying at different times, altitudes, and speeds with some towing gliders, made the air movement very complicated. The nighttime airborne assault targeted three drop zones (DZ) in the Le Muy area designated O, A, and C. The pilots would use the Nartuby and Argens rivers, visible by moonlight, to navigate towards radio beacons placed by pathfinders on each drop zone for their final placement of troops. DZs O and A were suitable for both glider and parachute operations, but Zone C was small, rocky, and wooded and thus the least desirable. The timings and targets for the DZs for D-Day, August 15th were: 509th Airborne Battalion Combat Team in DZ C at 0430; the 517th Regimental Combat Team in DZ A at 0435; and the 2d Independent Parachute Brigade in DZ O at 0510.





Offshore, British Admiral Sir John Cunningham, Commander-in-Chief Mediterranean Naval Forces, directed a total of 887 warships and 1,370 landing craft in support of the invasion. Five battleships, 21 cruisers, and 100 destroyers of the U.S. Western Task Force under Vice Admiral Kent Hewitt, fresh from the Normandy landings, were central in this force. Seven British and two U.S. aircraft carriers supported the effort with air missions against German defenses ashore. They were assisted by strikes flown by the Corsica-based units of the XII Tactical Air Command. The invasion fleet was mounted from ports in the heel of the Italian peninsula, from Naples, and from North Africa, converging together for the landings. The total naval force supporting the landings came to over 2,250 craft.

The Mediterranean Allied Air Forces (MAAF) extensively prepared for the invasion. The first task was to neutralize the enemy air force. The *Luftwaffe* was believed to have only 200 operational aircraft in the entire DRAGOON area on airfields scattered throughout the sector. These airfields would be attacked and the enemy planes either destroyed on the ground or shot down should they attempt to rise to meet their attackers. Having learned the lessons of previous landings in Africa, Italy, and Normandy, and the ongoing support of the Normandy beachhead, Lt. Gen. Eaker planned to maximize the effect of crippling enemy lines of communications across the entire Mediterranean. This would prevent the shifting of forces from Italy or within the battle area, while also maintaining information security concerning the landing intentions of the Allies. In addition to preparing for the invasion, the air arm needed to protect the six major naval task forces comprising the sea component of the invasion. The British Desert Air Force, part of MAAF, was detailed to provide air support for both the U.S. and Commonwealth Forces in Italy during the invasion to allow the U.S. Twelfth Air Force to totally focus on support to DRAGOON.

Phase One of the Combined Air Plan focused on bombing and fighter attacks to destroy German aircraft in southern France and northern Italy beginning on August 5th. There also were to be attacks on lines of communications and occupied submarine shelters. The next phase, Operation NUTMEG, began with attacks on shore batteries, troop concentrations, and radars starting on August 10th. Phase Three, Operation YOKUM in direct support of the landings, began at 0600 on D-Day, August 15th with aircraft flying from as far as the United Kingdom to strike beach defenses, guns, and close inland targets during a ninety-minute operation. Phase Four, Operation DUCROT, followed with strikes duplicating the interdiction efforts in Phase One against targets east of the Rhone River.



Vice Admiral Kent Hewitt

The far western sector of the invasion beaches required the seizure of two islands that dominated the approaches to the shore. For this special mission, Seventh Army planners selected the First Special Service Force (FSSF). The FSSF, (SITKA Force), was composed of volunteers from the United States and Canadian Armies and had been formed for special missions early in the war, including proposed raids against heavy water plants in Norway that were cancelled. Recruiting loggers, woodsmen, skiers, and outdoorsmen, the unit undertook parachute and “commando” type training including mountaineering and specialized individual training. Never more than 3,000 men in size, the brigade saw its first combat in the recapture of the Aleutian Islands of Alaska. Subsequently, the unit was transferred to Italy where it undertook attacks on difficult mountain objectives on the WINTER Line to break open the Mignano Gap. The force later spearheaded the attack out of the Anzio beachhead. Southern France was to be its third amphibious assault.



Allied LSTs underway in the Mediterranean approach the southern coast of France.

Commanded by Col. Edwin A. Walker, the FSSF would be the first unit of DRAGOON to land. It had the mission of seizing the off-shore islands of Port-Cros and Levant which dominated the approaches to the invasion area. The Force was ideal for the special task of taking the island forts. Close inshore the French Commandos were to attack other gun emplacements on Cape Negre to assure the fleet safe passage.

The two islands which were the objective of the “Forcemen” shared similar descriptions: near vertical cliffs, numerous coves, spindly fingers reaching to the sea, and razor-backed ridges. Both islands were heavily forested. Old fashioned forts topped promontories with their batteries.

Virtually a year to the hour from its combat debut in the Aleutians, the FSSF soldiers approached the island of Port-Cros silently in rubber boats from the northwest just before midnight on August 14th. Due to the cliffs on the island, no guard was watching to see the boats approach. Rapidly the raiders, using ropes, scaled the 80-foot cliffs. One additional landing was made on the eastern nose of the island where a small stub of land permitted putting a small force ashore. A firefright broke out there, but resistance was quickly quelled.

The landing on the island of Levant was a different matter. The troops were discovered as they approached the island and met heavy resistance. The assault on Levant undertook to destroy three large 164-mm guns sited in an old Napoleonic fortress atop the northeast spur of the island. These guns were reported to have been destroyed by the French in 1942, but aerial photography still showed their presence. One fortress required naval gunfire from the battleship HMS *Ramilles* to break down its walls. During the attack, German shore-based artillery responded to harass the attackers, but the Forcemen persevered in the attack. The 164-mm guns proved to be dummies, pipes impersonating former coastal guns, and the island's radars pointed not seaward but inward towards the channels. These were destroyed or dismantled for study. The Forcemen were relieved by French Forces and joined the units ashore, moving to the Corp's right flank near the 36th Division landings by D plus 3. They then moved east up the coast toward Italy.

The French Commandos from the Corps D'Afrique, ROMEO Force, composed of nearly 950 volunteers, were the first Free French Forces to land. Already veterans of fighting in North Africa and the landing on Elba, they spearheaded the main invasion by destroying the coastal battery at Cape Negre. The commandos went ashore in landing craft and rubber boats guided by U.S. Patrol Torpedo Boats. Blocking the coastal roads and moving inland, they raided German troop concentrations and by 1800 on D-Day had moved westward on the road to link-up with 3d Division's 7th Infantry Regiment coming from their landing beach. The predawn operations of the First Special Service Force and the French Commandos were successful in clearing the way for the landings. Their crucial missions laid the groundwork for the success of the entire DRAGOON operation.

With the German defenses alerted by naval gunfire along the Cape Negre and Hyeres Islands chain and German patrols reporting naval movement, DRAGOON's nighttime fire missions provided a measure of concealment for the landings. At twilight, naval gunfire conducted a two-hour preparation fire on known targets in the beach areas. Minesweeping close inshore began while the air forces continued their bombing inland from the planned invasion beaches. The officers on board ship, from the Fleet Commander down to the regimental leaders of the 36th, 45th and 3d Infantry Divisions, could only watch and wait for the landings to start.

In darkness in the early hours of August 15th, the troops of VI Corps' divisions scrambled down cargo nets to load into their bobbing landing craft. The sound of aircraft overhead flying their support missions and the predawn crash of naval guns announced the beginning of the invasion. For many soldiers, their rendezvous with destiny had begun.

The 36th Infantry Division (Task Force CAMEL) on the Corps' right flank was a veteran unit, although it had its share of new replacements. Its Commander, Maj. Gen. John Dalhquist, was also new. He had assumed command in June, just before the division left the line in Italy to start the invasion rehearsals. Dalhquist had seen combat in the Vosges in World War I, and had served earlier in World War II on the European Theater Staff and as the commander of a newly activated division. He replaced a veteran division commander who had served through nine months of heavy combat.

The 36th Division's mission was to seize beaches at Agay (St. Aygulf Point) and Saint Raphael, capture Frejus, link-up with the airborne units in the vicinity of Le Muy and take them under its command while clearing its sector up to the BLUE LINE. The ports of St. Raphael and the rail center of Frejus were crucial for the subsequent buildup of forces. VI Corps planned for the division to use the Argens valley for the advance towards Le Muy.

The ample, sandy beaches were heavily fortified. Beach CAMEL RED at the mouth of the Argens River, was to be reduced by assault from the rear no later than H plus 6 hours on D-Day. CAMEL GREEN Beach, west of Cape Drammont, was large enough only to support initial operations. CAMEL YELLOW Beach was also slated to be attacked from the rear. At the right of the division sector, CAMEL BLUE Beach was a small beach in an inlet near Port Antheor suited only for small unit operations.

The CAMEL sector's strategic importance lay in its entry into the depth of the corps sector via Frejus toward the BLUE LINE. Its best beach, at St. Raphael, would have to be captured by ground assault from the rear and not from the sea in order to open the avenues offered by the Argens river valley and National Route 7. This mission would be accomplished by landing the 141st Infantry Regiment



Naval gunfire fires at known targets ahead of the amphibious infantry landings.

on CAMEL GREEN and CAMEL BLUE beaches to seize the area, occupy the Rade d'Gay sector, and move north protecting the Corps' right by sending a force to seize Theole sur Mer. The 143d Infantry would land next on those same beaches and, passing through the 141st, wheel westward to seize St. Raphael and then Frejus. The division's remaining regiment, the 142d, would land on the cleared beaches at St. Raphael.

Frejus was heavily defended by two battalions of the *765th Grenadier Regiment* and one of Eastern Front volunteers, supported by three artillery groups. CAMEL RED, the large beach south of St. Raphael naval base, was ideal for over the beach supply operations and the placement of supply dumps. As a result, the areas were heavily mined and well covered by German guns and defenses. The strength of the German defenses suggested that the Allied landings be made east of St. Raphael. The capture of the town and the clearance of both the bay and the beach of mines and obstacles had to be accomplished before it could be developed fully for logistical use.

In the Corps center was Task Force DELTA, comprised of Maj. Gen. William W. Eagles' 45th Division. The "Thunderbird" Division had already earned four campaign streamers in the Mediterranean with landings at Sicily and Salerno and had seen hard fighting in the Naples-Foggia, Rome-Arno, and Anzio campaigns. Its central sector included the Gulf of St. Tropez and Saint Aygulf. Taking and clearing its beaches in zone, it would seize Saint Maxime, capture the high ground south of the Argens River, capture Villedieu, and assist its neighboring 36th Division in achieving its objectives.

The 45th attacked fanwise by battalions to link-up along the coast road outwards in both directions as well as inland toward the airborne perimeters in the vicinity of Le Muy. Operating independently, these battalions spread widely in an attack designed not to hold high ground, but to clear the ridges and move rapidly towards the BLUE LINE to secure the final beachhead line designated for D plus 1.

The 45th landed the 157th Infantry across the DELTA GREEN and DELTA RED beaches. The beach at St. Tropez itself was too heavily defended for a direct landing. The town would have to be taken by overland assault by units coming from the landing beaches one mile to the east. The BLUE LINE objective was almost twenty miles inland at this point. The 180th Infantry Regiment landed its 1st and 2d battalions on DELTA YELLOW and DELTA BLUE beaches with the 3d Battalion following the 1st. They were to clear the high ground inland, and then move northeast to capture Villedieu to assist the 36th Division in clearing CAMEL RED. They would then press on immediately to relieve the paratroops at Le Muy on the BLUE LINE.

Task Force ALPHA, commanded by Maj. Gen John M. “Iron Mike” O’Daniel, was the highly experienced 3d Infantry Division, “Rock of the Marne”. It was to make its fourth D-Day landing of the war on ALPHA RED and ALPHA YELLOW beaches at Cavalaire and Pampelone. Having already conducted assaults in Morocco, Sicily, and Anzio, the 3d was one of the Army’s most battle honored divisions. Its previous commander, Truscott, now the VI Corps Commander, changed the Army plan and moved the division from the Corps’ right to the left flank to give it the critical covering role for the French assault towards Toulon. Behind the 3d’s fast-moving infantry, Truscott planned to land the two corps of the French “Army B” which would eventually form the basis of the French First Army. The division would clear the way for the French.

Combat Command C of the French 1st Armored Division was to be the corps reserve until the beachhead was fully established, when they would revert to de Lattre’s command. Until then, Truscott was free to use the French as a fire brigade within the corps beachhead as the divisions closed on their objectives.

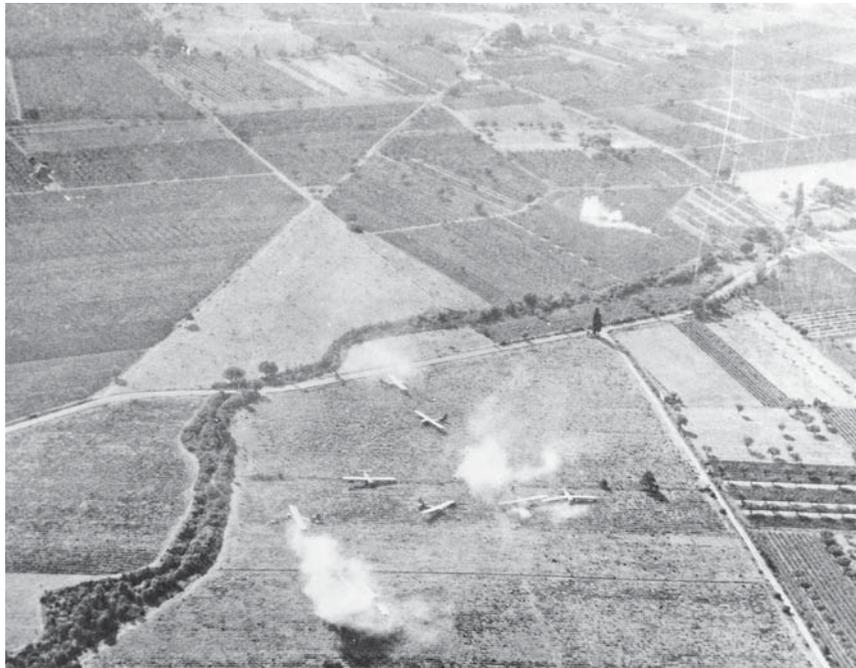
Seventh Army’s plan forecast the landing of 84,000 men and 12,000 vehicles on D-Day. In the following four days, an additional 33,500 men and 8,000 vehicles were to land with supplies for seven days. Six truck convoys would supply the force for the next thirty days over the beaches, after which the Seventh Army’s Coastal Base Section would be in place to manage theater supplies. It was critical that Toulon, the objective of “Army B”, be opened as close as possible to D plus 30 in order to establish a long-term logistical supply network.



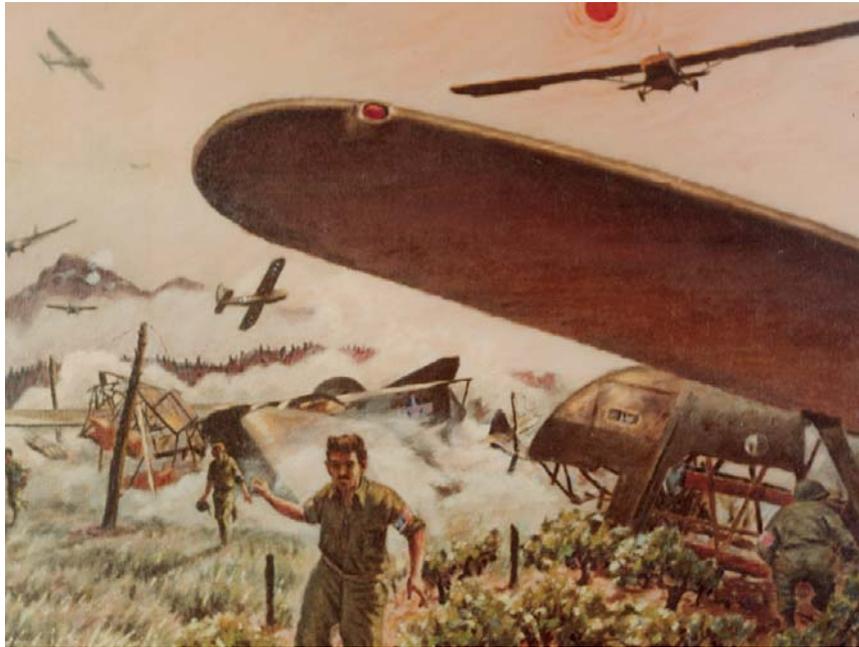
Infantry step off their LCVP and onto the clearly marked beaches.

DRAGOON's D-Day began with an airborne assault. The planes carrying the paratroopers and towing the gliders began their takeoffs from airfields in Italy after midnight on August 14th. The British 2d Parachute Brigade and the two American parachute battalions were in the first lift. Beginning with nine planes carrying the pathfinders, a total of 852 sorties were flown on D-Day, including 444 for parachute infantry and 402 for glider tugs. More than 9,000 troops were delivered by air during the course of the operation.

General Frederick's airborne landings began with 121 pathfinders at approximately 0320 on August 15th in fog that hampered operations. About 50 percent of the pathfinders were mis-dropped due to extremely poor visibility in the last twenty miles of the flight route. One of the three "GEE beacons" essential for triangulation of the drop zones failed, making dead reckoning and map reading using the visible tops of mountains in moonlight above the fog the only real guide. The British group, whose aircraft had trained navigators using celestial navigation, dropped their pathfinders perfectly, the only group to do so. Still, 396 aircraft dropped 5,600 paratroops on three separate drop zones around the town of Le Muy about twenty miles north of St. Tropez. The airborne assault met little or no opposition but subsequent fighting for the objectives was fierce.



Gliders in an open field where they landed.



The use of gliders greatly impacted the overall success of the air portion of Operation DRAGOON.

The first gliders landed in clear daylight on Drop Zone O at 0930 on the 15th. Throughout the day gliders arrived, with the rest of RUGBY Force closing by the afternoon. By 1800 the division established its command post and reported the villages of La Mitan, La Motte, Castron, and Les Serres as liberated. Roads along the BLUE LINE were effectively screened but Le Muy, though blocked, was not yet taken by the British. The enemy counterattacked at Les Arcs late in the day but were repulsed. By last light, the 550th Glider Infantry prepared to reinforce the British for the next day's assault on Le Muy, which fell on D plus 1 at 1500. With about half the force effectively landed and under control, Frederick's American and British paratroopers captured their objectives by 1700 on D plus 1.

The airborne assault was successful. 50 percent of the paratroops landed within a mile of their planned targets and more than ninety percent of gliders delivered their loads accurately. Drop casualties were low from enemy fire and injuries. Despite the fog which badly scattered half the force, every parachute landing "stick" contributed to the amphibious landing by attacking some enemy objective. The First Airborne Task Force was a success with a mere month's preparation, matching the performance of OVERLORD's jumps in every measure of success. By dark on D plus 1, the Airborne Task Force had linked-up with elements of the 45th Division. It had captured 493 prisoners during its two days -- and all its objectives.



A Duplex Drive tank with its separate amphibious propeller drive and canvas waterproof screen.

The 36th Division made its first assault landing since Salerno beginning at 0800 on August 15th, running into the bulk of the German defenses. The German Army commander had identified the beaches east of St. Raphael as being the most likely enemy landing areas. He had fortified them to some degree and stationed the 2d Battalion of the *765th Grenadier Regiment* to defend them. Screening the mouth of the Argens River valley, the grenadiers were supported by a field artillery battalion, a nearby naval battery, and the *1038th Antitank Battalion*. Behind the port of St. Raphael in the 141st Infantry area lay the town of Frejus, key to any inland movement. This area was defended by the *3d Battalion, 765th Grenadiers*. An *Ost (East) Battalion* and the *239th Grenadiers (148th Division)* held the six miles north of Antheor Cove to Theole-sur-Mer, the corps' extreme right flank.

The main landings for the division were on CAMEL GREEN and CAMEL BLUE beaches. Minesweepers cleared to within 500 yards of the beaches while the naval preparation fires and last-minute aerial bombardment softened-up the beach. Preceding the landing craft were vessels with triple-tiered rocket launchers. The assault touched down meeting scattered machinegun fire, small arms, and some antiaircraft fire on CAMEL GREEN but heavier fire on CAMEL BLUE from antitank guns. The 2d and 3d battalions of the 141st Infantry landed at CAMEL GREEN and moved west towards St. Raphael. The 1st Battalion of the regiment landed at CAMEL BLUE and moved slowly toward Theole-sur-Mer. They were supported by eight amphibious DD (duplex drive) Sherman tanks of the 753d Tank Battalion which landed successfully after a 4,000-yard swim to shore.

The beaches near St. Raphael were backed-up by a steep embankment topped by the National Route 98 and a standard gauge railroad line for the main rail line in the Toulon-St. Raphael corridor. This rail line continued along the coast eastwards to Cannes and Nice. Interspersed throughout the area of the landing beaches were large villas for the wealthy, now surrounded by trenches, pillboxes, field fortifications and German defenders.

The 2d and 3d Battalions of the 141st quickly cleared their halves of CAMEL GREEN and the ground north of the beach. The 2d Battalion then seized the village of Dramont, attacking along the beach road towards Agay to clear the bay area. The 3d Battalion established a defensive position north in the hills above the beachhead. The 143d also landed on CAMEL GREEN Beach at 0945.

During the night of August 15-16, the 1st Battalion of the 141st continued to move slowly off CAMEL BLUE towards Theole-sur-Mer, reducing pillboxes along the route. By the night of D+1, it had established a defensive position at La Napoule after retrieving the survivors of a naval assault force of demolition swimmers that had supported the landings. The 141st Infantry thus dominated its sector and, reinforced by tanks and artillery, established strong points for defense. It cleared Agay Bay and the peninsula for landing and held the high ground between Frejus and Cannes. Following the successful landing of his division, Maj. Gen. Dahlquist and his staff landed to assume control of the operation.

CAMEL RED beach in the west of the 36th Division sector was the heaviest defended due to its ideal beach, its closeness to the port of St. Raphael, and the fact that it lay near the town of Frejus, at the mouth of the Argens River valley. Truscott recognized this valley as an opening for large-scale maneuvers towards the ports of Toulon and Marseilles. Always expert at defense, the Germans had moved their forces to cover these approaches. This meant that fighting in the port of St. Raphael would not be easy.

The landing craft were to assault CAMEL RED beach following a wave of radio-controlled drone boats carrying explosives designed to clear obstacles in the shallow water. This experiment failed. Receiving reports that the waters and beaches were heavily mined and defended and that the drone boats had failed, the landing's commander Admiral Lewis, out of touch with division commander, withdrew the assault waves heading for RED Beach. Instead, he directed them to land on the beaches already secured by the 141st Infantry. While the Corps Commander believed this delay in the landings upset his force availability in the long term, it almost surely prevented the needless loss of life to mines and intact defenses. The division continued on its mission of clearing the coast, capturing St. Raphael and Frejus and opening the roads in the Argens River valley.

DELTA FORCE, the 45th Division, landed in the Corps center with the mission of clearing the coast and the inland sector and linking-up with the First Airborne Task Force at Le Muy. Maj. Gen. Eagles was also to ensure that he maintained contact with the divisions on his right and left flanks. The 45th Division sector included four main beaches: from west to east, DELTA RED, GREEN, YELLOW, and BLUE. The Gulf of St. Tropez dominated the sector, but its fortified flanks prevented its use by assault troops. The heavily defended port town of St. Maxime was similarly unassailable. The main objective, the BLUE LINE, extended a distance of from fifteen to twenty miles inland.

The 45th landed after four hours of naval and air preparation fires. Scout boats cleared the zone, and, after a ten-minute rocket barrage, the landing waves came ashore at 0800. Four battalions landed abreast. The 3d Battalion, 157th Infantry landed on GREEN beach. Mines and underwater obstacles were present and scattered fire met the attackers, but the assault rapidly proceeded inland eight miles to Plan de la Tour. The follow-on battalion stayed at the beachhead that night and moved near to the BLUE LINE at Vidauban the morning of D plus 1. The 3d Battalion moved quickly toward the major objective of St. Maxime, west of the landing site. While its Company K attacked frontally from the coastal road, Companies L, I, and M (Heavy Weapons) maneuvered from the inland flank north of the seaside town with Company I taking the inside position. A pillbox and obstacles stopped Company K and Company I ran into heavy resistance trying to enter the town from the north. House to house fighting raged, with one platoon sent to clear the waterfront while companies from both battalions attacked strongpoints and a center of resistance in the Hotel du Nord. The Hotel fell after stiff fighting with numerous German casualties and some seventy prisoners. The 3d Battalion did not rest, but moved down the coast to clear the beaches for later use. By 2100, it had linked-up with elements of the 3d Infantry Division on the 45th Division's left flank.

The 45th Division's 180th Infantry Regiment landed with two battalions abreast, one each on DELTA YELLOW and DELTA BLUE beaches. The regiment's mission was to seize the beaches and clear the high ground east and northeast of the left flank of the neighboring 36th Division. It was to seize the village of Villepey and assist in the clearing of Beach CAMEL RED if necessary. The 2d Battalion of the 180th landed on beach DELTA YELLOW, quickly destroying four pillboxes with its amphibious tanks and losing only one tank to a mine. It then moved northward towards Vidauban. At H plus 1 Hour, the regiment's 3d Battalion landed and moved inland toward the high ground. It skirmished with a few German troops and suffered a few casualties but succeeded in killing perhaps a dozen of the enemy and capturing thirty prisoners. It maintained a position screening the beaches by dark on D-Day.



45th Infantry Division troops disembark from an LCI.

The DELTA BLUE beach was attacked by the regiment's 1st Battalion. It successfully seized its objective but lost its four accompanying amphibious tanks to mines on the beach. It turned northward fanning out with its Company A taking the next beach town, St. Paire, from the rear, while the B and C Companies straddled the high ridge north of the town and continued to move to the northeast. Companies A and B joined to take the enemy position on Hill 150 before clearing the terrain along the coast road. Both companies met a road block outside St. Aygulf in the late afternoon that held them up until the next morning. At that time, with tank and naval gun support, Company B attacked the town while Company C attacked the heights. St. Aygulf fell to Company B.

Shortly after 1100, the remaining regiment of the 45th Division, the 179th Infantry, landed on beach DELTA GREEN, but did not see action until the next day. By 2300 hours on August 15th, the 45th Division units were within two miles of Le Muy and the First Airborne Task Force, which it would contact the next day. The division suffered 109 casualties on D-Day, had captured 205 enemy soldiers, and had cleared most of the central sector.

On D plus 1, August 16th, 45th Division units cleared the lateral road running from Le Muy southwest through Viadaun and Le Luc just south of the BLUE LINE. The 2d Battalion, 180th Infantry cleared the heights south of the BLUE LINE, cleared the cross roads north of it, and began to move north to meet patrols of the 517th Parachute Infantry. Meanwhile, to the south, Vidabaun was captured by the 1st Battalion, 180th, and the hills northeast of it out-posted with Company B south of the road and Company A to the north. This covered the approaches from Lorgues. The 2d Battalion, 157th, fought a series of battles against road blocks supported by the 160th Field Artillery Battalion. Reinforced with tanks, it assaulted the road blocks in front of Le Luc. By morning, Company A, 30th Infantry Regiment, 3d Division, passed through the town clearing this major objective on the BLUE LINE and linking-up the two divisions.

The 3d Division, ALPHA FORCE, landed on the Corps' left flank. The division was making its fourth assault landing of the war, but its first in daylight. Its landings in Africa, Sicily, and Italy had been night operations using the element of surprise. Here it would follow a heavy naval preparation and a wave of radio controlled "drone boats" that were to blast through reported underwater beach obstacles.

The 3d Division landings were widely separated by the prominent jutting coastline, forcing each regiment to fight its own battle before joining up inland on the high ground. ALPHA RED Beach was the farthest from the rest of the VI Corps at the far left of the line on the Bay of Cavalaire. ALPHA YELLOW Beach lay to its north around the cape on the Bay of Pampelonne. It was the largest of the division's beaches and its seizure would be critical to ensure support for the 45th division on its right flank. A smaller beach on the St. Tropez peninsula lay between the two main beaches, but it could only be used administratively since it was too small for assault purposes.



An LCVP hits a naval mine on approach to the beach as troops look on.

3d Division's mission was to assault the beaches between the Gulf of St. Tropez and the Bay de Cavalaire, seize the high ground inland as far as the BLUE LINE, and support the 45th to its right while covering the deployment of the French II Corps through its beaches on D plus 3. The French would move towards Toulon and Marseilles to the west, the two major objectives of Operation DRAGOON. The Germans defended the area with an *Ost Battalion* of volunteer troops assigned to the *765th Grenadier Regiment, 242d Division*. A coastal artillery battery and two artillery battalions supported their sector.

The division's 7th Infantry Regiment landed with two battalions abreast on ALPHA RED Beach with the 3d Battalion on the left and the 2d on the right. While concrete tetrahedrons dotted the waves near the shorelines and wire and mines were on the beach, the troops met only sporadic resistance. The tetrahedrons were blown-up by demolition teams landing in small boats to clear paths for the landing craft. Amphibious tanks landed to support the infantry. Special battle patrols, a division innovation, cleared the flanks while engineers dealt with the mines and wire on the beach to clear lanes for movement. Rockets peppered the beaches in the final ten minutes of the run in of the landing craft, thoroughly dazing the few defenders. A number of prisoners were taken early in the battle. 2d Battalion moved off the beach to clear La Croix to the east by mid-morning. While the two assaulting battalions moved inland, the 7th Infantry's follow-on battalion landed and turned westward, clearing the coast road and seizing Cavalaire-sur-Mer.

A critical tactic used by the division involved a unique innovation: reinforced special battle patrols. The division's special units, which had evolved from its own experiences, landed on the flanks of each beachhead with the objective of quickly driving inland to a depth of 2000 yards. These units shattered any coherent attempt to firm up a defense as they overcame resistance to clear a path for the landing of successive waves of troops. Staff Sergeant James P. Connor of the Division's 3d Reconnaissance Troop, part of the 7th Infantry's special battle patrol landing on ALPHA GREEN, earned the Medal of Honor for his actions that day. He incurred two painful wounds but continued to lead his troops in clearing Cavalaire sur Mer in support of the regimental assault.

The 30th Infantry landed as a second wave behind the 7th and moved rapidly off the beach to the right through a cleared lane. Despite obstacles and scattered resistance, eight successive waves of troops landed and moved rapidly off the ALPHA RED Beach. The 2d Battalion turned westward to Collobrieres and took up position at the BLUE LINE. So quick were the 3d Division's maneuvers that Collobrieres fell by 2300 hours on D-Day, one day before the BLUE LINE was expected to be reached. The rest of the 30th Infantry moved north toward Le Muy to link-up with the First Airborne Task Force, closing to within five miles of Le Luc by 1700. The German *Ost* troops opposing them proved of poor value,

surrendering easily, but mines scattered in the area caused delay and casualties. While the proportion of casualties was relatively low, the danger of friendly fire casualties was high as night came on and movement froze rather than complete planned link-ups with the scattered airborne units.

On the right of the division sector, the 15th Infantry landed at 0800 on ALPHA YELLOW Beach with two battalions on line. The 3d Battalion on the left and 1st on the right moved inland onto their objectives after securing their beach positions. They captured the high ground 5000 yards from the beach by midafternoon with relatively light enemy resistance. The 1st Battalion, 15th Infantry seized the St. Tropez peninsula by clearing the high ground north of the town. It destroyed a strong point and captured forty prisoners at a cost of eight casualties. During the fighting near St. Tropez, Staff Sergeant Audie L. Murphy of the 1st Battalion earned the Distinguished Service Cross for extraordinary heroism. By war's end, he was one of the most decorated soldiers of World War II.

The VI Corps landings were successful. Truscott called for the French II Corps to land immediately, a day earlier than planned. With de Lattre's forces landing and moving quickly to assault the two critical port cities, Truscott initiated his bold plan for trapping the enemy by taking Montelimar a hundred miles north of the bridgehead. His intention was to move a blocking force there to trap the enemy against this choke point, using artillery and air power to drop the bridges on the Rhone and cut off retreating German units.



Advancing troops step over an improvised pillbox which has been fitted with a tank turret as armament.

Seventh Army commander Lt. Gen. Patch concurred and pressed for the immediate exploitation of DRAGOON's objectives before the Germans could mount a concerted counterattack. Ashore on D plus 1, Lt. Gen. Patch, Admiral Hewitt, and the French Naval Task Force Commander Admiral Andre-Georges Lemonier conferred on how to expedite the transfer of army command posts to the continent. This would allow the movement of more French units ashore so that they could take a more active role in the liberation of their homeland. The Seventh Army advanced command post opened in Saint Tropez on D plus 1 and orders for expediting the landings for French units after D plus 2 were issued the next day.

Seventh Army quickly assumed control over beach operations. It established a Beach Control Group which created supply dumps, laid communications wire, matted the sand for roads and tenting, organized troop reception areas, and passed forces rapidly from their landing beaches to their specific exits and lodgment areas. Wounded were evacuated, civil affairs/military government operations were established to deal with local government, and liaison with the French Forces of the Interior solidified.



Audie L. Murphy awarded the Medal of Honor June 2, 1945, Salzburg, Austria.



Medics move a casualty on a stretcher down the beach to be evacuated.

High among the list of the invasion's successes was the value provided by the Office of Strategic Services (OSS) Field unit. The OSS, founded by World War I hero and Medal of Honor recipient Maj. Gen. William "Wild Bill" Donovan, coordinated world-wide espionage efforts, intelligence collection, and a wide variety of secret operations outside the realm of normal army channels. For the invasion, the OSS was tasked to verify the truth of ULTRA intercepts and to provide "eyes on the ground" confirmation of aerial photographs to separate "dummy" installations or guns from real ones. Downplayed and sometimes misused in the European and Pacific theaters, OSS was taken to heart by the Seventh Army. Its contributions to the battle paid off with excellent intelligence. The OSS not only provided valuable liaison with sources in the FFI, but throughout the campaign excelled in the exploitation of captured documents and the interrogation and turning of prisoners of war. The Seventh Army G-2, Col. William W. Quinn, was especially gifted in the use of the OSS and of other creative intelligence schemes. His skills would prove key in General Patch's campaigns throughout the war.

While Truscott pushed his follow-on units ashore and the beachhead units continued to press towards the BLUE LINE, General Frederick with the Airborne Task Force dealt with the continuing fighting at Le Muy. The Germans continued to hold the village even as the 550th Glider and 509th Parachute Infantry Battalions attacked after midnight on August 16th, making little headway. With additional artillery and tank support from the 191st Armored Battalion, they finally cleared the town by midday on August 17th. The German *Army Group G* Commander, General Blaskowitz, tried to move his reserves against all these attacks but his main reserve unit, the *11th Panzer Division*, was halted by destroyed bridges on the Rhone River which effectively isolated the invasion area.

Free French units were continuing to demonstrate their valor and resolve. The German reserves were not able to get to the BLUE LINE before Truscott's units moved up and General de Lattre, who had opened his Corps/Army Command Post at Cogolin, ticketed his "Army B" for rapid movements to the west as VI Corps moved north and west from the BLUE LINE. French Forces immediately organized for their attack towards the ports of Toulon and Marseilles. De Lattre divided his "Army B" into five combat groups, each tasked to rapidly exploit their successful landings and attack towards those port cities. The French units did not waste time consolidating in their assembly areas but rapidly moved to the attack. The French armored division landed immediately behind the 3d Division and attacked westward and then north to envelope Toulon.

Toulon was the principal French Naval Base in the Mediterranean prior to World War II. The harbor and city had a pre-war population of 150,000. Its extensive quays and deep-water berth capabilities made it an ideal logistical base but its defenses, surrounded from land-side by high ground, made it difficult to approach and attack. Luckily, the French had a detailed knowledge of the port which made planning the attack simpler.

Toulon was encircled by two rings of fortifications, some dating back to Napoleonic times. Stone and concrete casemates, modern minefields, and antitank guns reinforced the garrisons. Calling on U.S. naval guns, the French troops moving along the coastal road battered down any opposition. Overhead, planes from the XII Tactical Air Command bombed stubborn fortress holdouts with medium bombers and fighter bombers.

Toulon's best defense, its heavy coastal batteries, were negated by de Lattre's northward envelopment, as the guns could not be turned from their seaward orientation in their casemates. The German garrison comprised about 5,500 naval troops, and 2,800 *Luftwaffe* troops. The *918th Grenadier Regiment* of the *242d Division* was badly scattered in its defense of Hyeres to the east and remnants of the unit retreated into the suburbs of Toulon. Two battalions were destroyed in Hyeres by French attacks. Pockets of troops remained in the southwestern suburbs of the city. The defenders attempted to reorganize and establish a perimeter defense in the hills north of the port. Heavy fighting by French Commandos from August 22-23 decided the fate of the northern front, with the French clearing the hill forts in the foothills of Le Coudon and Mount Faron. French forces soon held three sides of an arc enveloping the port with the 3d Algerian Division, the Corps de Commandos, and elements of the forces that had fought in Hyeres. The port's center had to be reduced systematically. The Germans held diverse types of positions and obstacles from ancient Vauban forts



Aerial view of Toulon, France, which will be captured by French forces on August 26.



French troops secure a captured German 7.5-cm *Pak 40* anti-tank gun.

to modern pillboxes. The seizure of one fort on the ridge of Lamalague yielded a prisoner haul of thirty-four officers and 1,000 men from its cavernous tunnels. Toulon fell on August 26th.

As the battle raged for the city, the Allies had to deal with the German forces controlling the harbor. The harbor was dominated by some German 340-mm guns on the peninsula of St. Mandrier. To deal with this strongpoint, the XII Tactical Air Command began the saturation bombardment of the peninsula. Assisting the aerial attacks was the near continuous naval bombardment of these fortifications which began on August 21st. The German naval gunners finally withdrew from their battered positions and surrendered the night of August 28th. More than 1,800 prisoners were taken. The rehabilitation of the harbor and its facilities could then begin.

The Toulon battle cost more than 2,700 French casualties. German dead and wounded counted in the thousands. More than 17,000 prisoners were taken in the area. Three days before, Paris had fallen to Allied arms and a French general had led his division into the city as part of the spearhead. De Lattre, as part of the Allied coalition, was similarly leading a Free French Army into a major city as liberators. French regulars, resistance forces, “Pied-Noirs,” (the sons and daughters of France born overseas), along with Moroccans, Goums, Algerians, Senegalese, and Tunisians had struck back with a vengeance.

De Lattre's "Army B" moved on to its second objective: Marseilles. The second largest city in France, Marseilles, had a population of 914,000. It was located near the mouth of the strategic Rhone River, a main supply artery. A rail line connected it to Arles. It was the largest port in the Mediterranean with quays served by rail and air. It also had several subsidiary ports, dry docks, and deep-water berthing facilities. Its value to the Allies was priceless.

The attack on Marseilles was orchestrated by French General Goislard De Monsabert even as the Toulon battle was just under way. Starting with only part of his own 3d Infantry Division along with the French armored unit returned to French Command from VI Corps reserve, his force moved past the outer rings of Toulon and began an encircling maneuver towards Aubagne and the outer works of Marseilles. De Lattre had thrown out his pre-landing time table and plan but kept the scheme of maneuver for taking the harbors. Keeping to his principles of boldness and speed, he permitted his subordinate to press forward even while Toulon still held out and despite Monsabert's forces being outnumbered by the Germans in Marseilles. The French Army commander would be fighting two siege battles, without his full force having landed, on a logistical shoestring, and with forces separated by twenty miles. Still, neither he nor the Seventh Army commander hesitated. The air forces, now required to support an invasion divided into four parts moving in four different directions, also never hesitated to support the maneuver. Assuming a measure of risk, the Navy sent ships to add gunfire support, weakening its own screen covering the landing beaches.

Marseilles was soon wrapped in Monsabert's grip. His forces moved quickly to the north of the port outside the double barrier of customs forts, the eighteenth-century Vauban fortresses, the Napoleonic construction, and the modern Nazi supplements to the defenses consisting of field fortifications and guns.



The docks at Marseille after the German attempt to destroy them with explosives before surrendering the city.

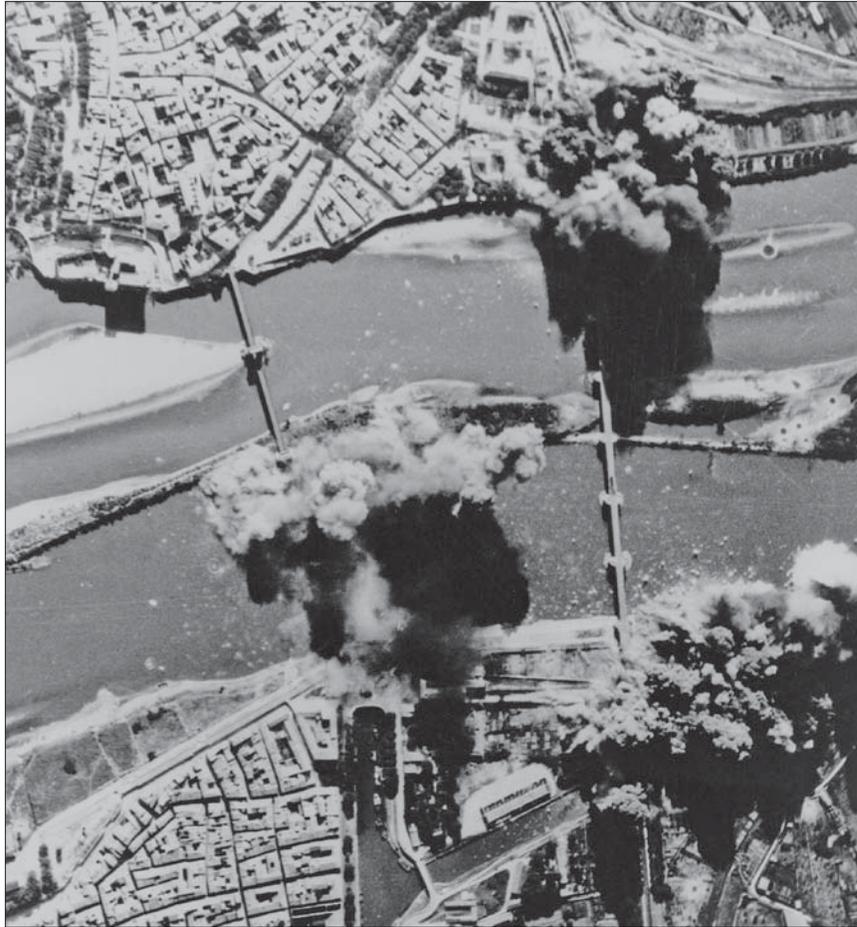
The roads were covered by columns of colonial troops and tanks. The coastline and cape were assaulted and cleared while the main fortifications were being besieged. The first operations began on August 20th, almost simultaneously with the attack on Toulon.

The German defense of the city hinged on defenses on both sides of each of the four roads entering Marseilles. In addition to these road blocks, they also had two major concrete redoubts, one within the perimeter of the port fortifications to the north and the other on the hill of Notre Dame de la Garde to the south. A large number of medium artillery guns in casemates were manned by the naval garrison along with elements of the *244th Division* which had withdrawn into the city. They were augmented by a handful of stragglers from other destroyed units. This formidable defense was encircled by August 21st and the Germans were now entrapped in their enclave.

Arriving at Aubagne, French General Guillaume's Berber Cavalry systematically destroyed fortified structures to their front in concert with mountain gunners from the division. Led by the tanks of the French 1st Armored Division, an infantry column made up of a colorful collection of Zouaves, Cuirassiers and Berbers, some marching barefoot to spare their precious boots, attacked the fortified town despite the obstacles. Outflanking Route National 8 through the ridges and hills, they tackled Marseilles from the north.

As the attacks on the city began from the north, French resistance patriots began an insurrection inside the city. Army columns bypassed mined and heavily defended roads to speed to the assistance of the civil population. The FFI and some other forces captured the port, but there were not enough troops to secure the entire city. The German artillery within the city outnumbered French guns some three to one and many German troops were well hidden in tunnels and fortifications. Nevertheless, bold frontal assaults and heavy aerial bombardment cleared many of the holdouts. About 2,000 Germans were killed with the French taking 1,800 casualties of their own. The French also took a remarkable haul of 11,000 German prisoners from the Marseille environs, indicating the risk that Monsabert's small force took in attacking a force that outnumbered them. The city surrendered on August 27th. Marseilles eventually served as the entry point for fourteen U.S. divisions into the European theater.

One of France's major rivers, the Rhone, was to the west of the harbor of Marseilles. The Rhone's large north-south valley was a major geographic boundary in the German western defenses. Now that the Normandy front had collapsed and the German armies were in full retreat, the major rivers along their frontier provided the Germans their best hope for halting the Allied advance. France's major rivers provided natural halt lines behind which German stragglers and unit remnants might be regenerated into new units.



Allied bombing of bridges over the Rhone River to hamper German east-west movement.

In southern France, the bulk of the German defenders were relatively immobile, trapped by a lack of organic transport. Their units had been bled of much of their strength by the demands of competing theaters of war. Although equipped with a large number of antitank and artillery weapons, these guns were a mix of captured Russian, French, and even Italian weapons, often manned by “volunteers” pressed into service in lieu of rotting in prisoner of war camps. Most of the pieces were horse-drawn since motor transport serviced less than a fifth of the German war machine. Fuel shortages, overuse, lack of parts, and near-constant Allied aerial attacks reduced the pool of mechanized transport even further.

The German crisis in the west, begun in response to the Allied successes in Normandy, prompted a theater wide decision to economize forces, create a new defensive line, and try to save *Army Group G* and its beleaguered forces. That splintered command was to withdraw north, its eastern most units to pull out last so as not to collapse the front. The forces inland and those capable of breaking contact with the coastal garrisons would retreat. The ports would be held by their defenders as long as possible and, when their fall became inevitable, the defenders were to destroy the harbor facilities as thoroughly as possible. ULTRA intercepts had alerted both General Devers and General Patch to this German withdrawal decision as early as August 18th, but Truscott, already beginning a pursuit of the enemy, was not given access to this sensitive intelligence source.

The German moves were designed to prevent their Mediterranean forces from being isolated after the withdrawal of forces in the west back towards Germany. The German High Command had wrestled with trying to consolidate their splintered line of defense. Hitler and his western commanders realized that a successful force moving up the Rhone Valley could trap thousands of German soldiers.

The primary German withdrawal route, the Rhone Valley, runs north from Avignon to Lyon, over 130 miles. East of the river, Highway 7 extends along the valley and is best for military traffic. On the west bank is Highway 86 which moves through higher ground in a serpentine manner through turns and over narrow passes. Crossroads into the valley enter from southwest France offering exits to the main routes for escaping troops. Detailed plans had been issued by the Germans to establish delay lines across the narrow valley. The *338th Division* was to be the main German unit left in contact to hold the Allies back and delay their northern thrust.

The Germans were not unhindered in their withdrawal. XII Tactical Air Command attacked the roads during the day, ravaging columns of retreating German troops and leaving behind the smoking ruins of burning vehicles, the corpses of dead men and horses, and wrecked carts. The Rhone Valley soon looked much like the air-ravaged Falaise Gap simultaneously under assault to the northeast as the Germans escaped from Normandy. The German army was relearning the lesson that Rommel had preached: no maneuver forces can survive intact on the battlefield without air superiority.

Patch had precisely the right commander, General Truscott, to orchestrate the drive north. He sent his assistant corps commander, Brig. Gen. Frederick B. Butler, forward to the airborne perimeter on D-Day to assemble an exploitation force to be named TASK FORCE BUTLER. Truscott gave Butler a mobile force approximating an armored combat command assembled from a variety of corps units. They would join General Butler in an attack position/assembly area located within the Airborne Task Force objective area near Le Muy. Here, they would be given their attack missions based on the combat situation. Essentially

drawing from corps and 36th Division troops, Butler was given the corps cavalry squadron, a tank battalion, an infantry battalion, an artillery battalion, and other mounted supporting elements with enough fuel and supplies for a limited mission. Truscott envisioned them as the sword in the enemy's back, or hopefully, the plug in the bottle to run around the enemy flank and prevent an escape. At the very least it would be a mobile force that would spearhead the exploitation.



A dead German near his vehicle and gun after being hit by an American air strike.

While Truscott and Patch moved forces to take advantage of the favorable situation and de Lattre moved his forces towards Toulon and Marseilles, General Blaskowitz moved to save his embattled *Army Group G* and Weise's *Nineteenth Army*. He hoped to organize a mobile defense inland, in line with von Rundstedt's basic concept for the West, but he quickly realized that once his thin line of defense was penetrated, his units would be susceptible to being cut off and destroyed due to their lack of organic transport, wide frontages, and lack of a sufficient mobile reserve. His new defense directive permitted him to pull his main force back while leaving Marseilles and Toulon to fight to the death as "fortresses" to prohibit their use as ports. The *11th Panzer Division* would cover the move of his main units up the Rhone to prevent their entrapment. Blaskowitz would establish a line to meet the forces retreating from Normandy, roughly on line with Orleans, but facing west to east.



Troops and tank destroyers move inland.

Blaskowitz's problems involved more than just Wiese's imperiled *Nineteenth Army*. His *Army Group G* also included the *First Army*, currently unengaged on the Bay of Biscay. This army would be trapped south of the Loire and be unable to link-up with its northern or eastern neighbors if the fast-moving columns of Patton's Third Army bypassed it to the north and the American VI Corps successfully moved up the Rhone Valley into the Grenoble Gap. Leaving some units behind in Fuhrer designated "fortresses" on the coast to starve in irrelevancy, the main elements of the *First Army* were released and began the move to the east. Those soldiers capable of movement travelled by foot or by whatever transport could be found towards the Grenoble Gap to link with the northward moving *Nineteenth Army*. The *Nineteenth Army* would cover this move and would thus have to be pulled out last.

General Wiese scraped forces together and concentrated them at Brignoles, ready to counterattack against the Allied Airborne Task Force or other Allied units heading north. The German units were the *932d Grenadier Regiment*, an artillery battalion from the *244th Infantry Division*, battalions drawn from the *338th Infantry Division*, and the *189th Reserve Division*. These units formed up on two antitank companies already in Brignoles and were placed under an *ad hoc* headquarters under the command of Maj. Gen. Richard Von Schwerin. Von Schwerin first moved to destroy the Airborne Task Force, but his attack had only two battalions supported by the guns of a field artillery battalion, and it was stopped at Le Luc. He had also hoped to rescue the isolated *LXII Corps* headquarters in Draguignan, although that element was able to escape the trap on their own.

The VI Corps operations plan for the pursuit did not specify a route or task organization, assuming that Truscott would issue one when Patch provided guidance. TASK FORCE BUTLER, already being formed, had been planned by Truscott prior to the landings to conduct any mission, “on order” as his reserve. Truscott leaned heavily towards using them as an exploitation force to attack northwards after the landings were successful. Truscott’s “saddle orders” were thus carefully thought out and coordinated even if they had not been fully written out beforehand. Each division of the corps got an axis of advance, a mission, a task organization, and the requisite, if finite, amount of supplies. The air force was to support the advance, hitting targets and flying from forward-based airfields as they were built. Most of the planes, however, still had to come from Corsica. This limited their range and turn-around time, cutting sortie rates. Patch had cut de Lattre loose for his operations to the west. The entire operation was ahead of what the planners had believed possible.

Logistical shortages driven by a shortage of trucks, a limited across the beach supply capability, and not yet available operational ports caused Patch to immediately consider tethering VI Corps to a limit of advance no further than along a line parallel to Aix-en-Provence. This would give the 3d Infantry Division, the western most division, the covering mission for De Lattre’s move against the ports. While implementing this plan, Patch received a windfall in the ULTRA decrypt of the *Nineteenth Army* withdrawal orders. This caused him to loosen the restraints on Truscott’s divisions. They were now to move rapidly to the north with TASK FORCE BUTLER in the lead.

Patch was now in a secure position to break away from the coast to the north in pursuit of the Germans. The DRAGOON landings alone had put over 85,000 men, 46,000 tons of supplies, and 12,000 vehicles ashore. The long-term DRAGOON build-up plan included bringing more than 367,000 men, 56,000 vehicles, and 278,000 tons of supplies ashore in the first month to comprise the bulk of the new Sixth Army Group’s force. With the rapid capture of the ports, which had not been destroyed with the usual German thoroughness, the southern France landings had garnered a massive enclave on the southern flank of the Western Front just as an Allied supply famine in northern Europe began. Marseilles and the southern ports would bring in nearly a half million tons of supplies monthly from December 1944 until the end of the war.

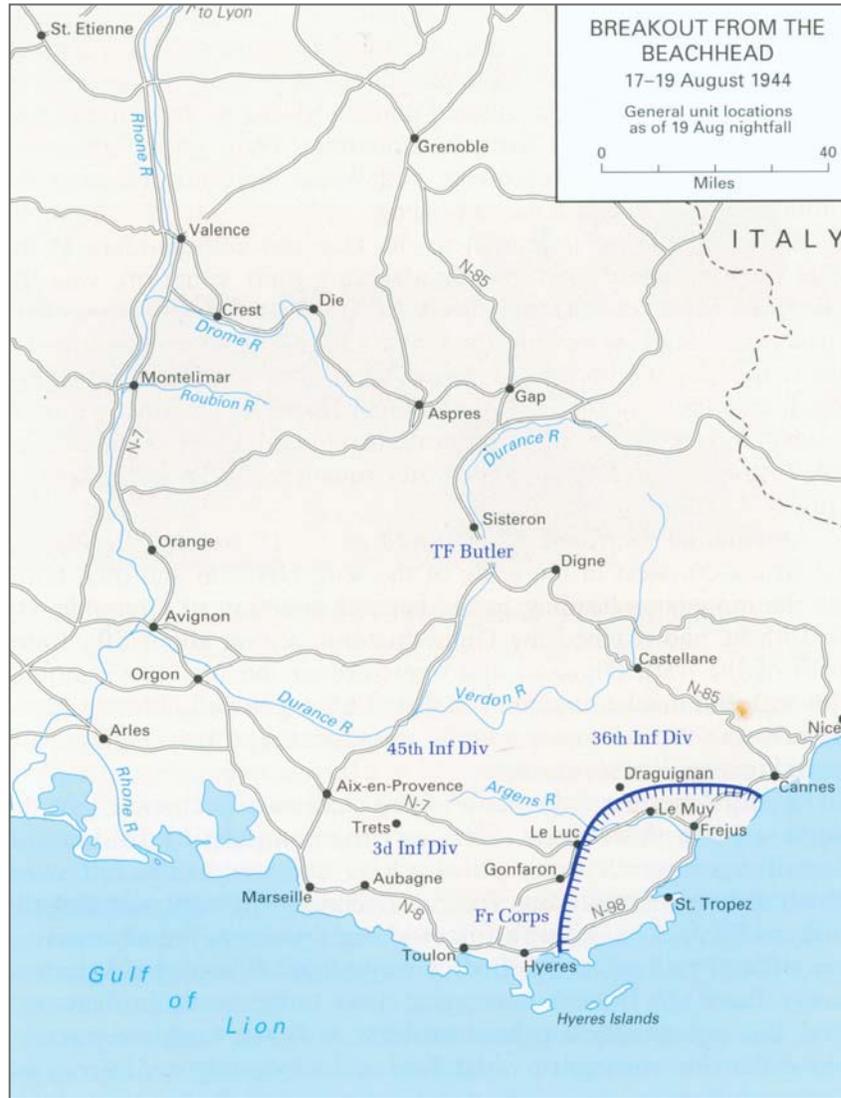
Rhone American Cemetery



The site of the Rhone American Cemetery and Memorial in France was selected because of its historic location along the route of the U.S. Seventh Army's drive up the Rhone Valley. It was established on August 19, 1944.

On 12.5 acres, at the foot of a hill clad with the characteristic cypresses, olive trees, and oleanders of southern France, rest 858 of our military dead, most of whom lost their lives in the liberation of southern France in August 1944. Their headstones are arranged in straight lines, divided into four plots, and grouped about an oval pool. At each end of the cemetery is a small garden. On the hillside overlooking the cemetery is the chapel with its wealth of decorative mosaic and large sculptured figures. Between the chapel and the burial area, a bronze relief map recalls military operations in the region. On the retaining wall of the terrace, 294 names of the missing are inscribed. Rosettes mark the names of those since recovered and identified.

Truscott moved north while de Lattre continued to reduce the ports. Seventh Army Field Order No. 2 had given Truscott wide freedom to fight his corps. Neither Truscott nor de Lattre needed close attention. Truscott pointed his divisions to the northwest, aiming to cut off the German retreat by taking advantage of the roads going north. The 3d Division first had to fight through a block at Brignoles, which was accomplished by the 30th Infantry Regiment on August 19th, and then prepare to break through German delay positions in the vicinity of Aix-en-Provence. After two days of maneuver supported by extensive use of airpower, that line was cracked.



Meanwhile, the 36th Division, spearheaded by TASK FORCE BUTLER began its move towards Grenoble. The “Grenoble Corridor” is the principal corridor leading from the southern French beaches north of the Isere River valley and is the natural terrain route into east central France. Following Highway 96, “the Route Napoleon,” it travels mostly north and then jogs west to Sisteron, which was the immediate objective of this Task Force.

General Butler's immediate orders from Truscott were to reconnoiter the road nets to the north and west and consider moving to the vicinity of Montelimar to block the Rhone Valley before continuing the advance to Grenoble. That evening, having already moved on Sisteron, he received a clear directive: "You will move at first light 21 August with all possible speed to Montelimar. Block all routes of withdrawal up Rhone River Valley in that vicinity. 36th Division follows you."

As it became apparent that the German *Nineteenth Army* was withdrawing, Truscott, reading the terrain correctly, intended to block their exit from the north. Ordering the reinforced 36th Division to catch up to Butler's force, he also put the 45th Division on the road to block the Grenoble Gap on its right and to prepare for a corps action. The 36th was to seize the high ground north of Montelimar and dominate the Rhone Valley by fire to block all movement.

Butler stopped at Marsanne, in the foothills, awaiting orders. When Truscott arrived at his headquarters in person, he put his own touches on the battle. He directed that Butler's force be kept intact, not broken up as Dahlquist had done, and directed the 36th to take the high ground. Truscott moved to secure Grenoble with the 45th Division, leaving a regiment to block the Grenoble Gap. Truscott started the 3d Division moving north feeling that the German reserve in the form of the *11th Panzer Division* was not going to come south but would withdraw to cover the retreat of the German forces in the Rhone Valley.

By August 25th, air reconnaissance painted a bleak picture. The Germans continued flowing up the Rhone Valley and, despite fighting for the ridges, the 36th Division's blocks had failed. Fighting would continue within a 250-square-mile "quadrilateral area," called the "battle square" of Montelimar. The square ranged from the town of Montelimar east to Pont de Barret, then northeast to Crest, northwest to Loriol on Highway 7, south westerly down the highway and valley, and finally back to Montelimar.

Elements of five German divisions had passed through Montelimar according to Seventh Army intelligence when the 36th established its main line of resistance on the Roubion River from Montelimar to Pont de Barret. The division was supported by four battalions of divisional guns plus four additional battalions of artillery from VI Corps. This line was the natural result of an earlier failure to take the town of Montelimar. The 141st and 142d Infantry Regiments, reinforced with tanks and combat engineers, held the line. While attempts were made to move westward to cut the highway, counterattacks by tanks and infantry of the *11th Panzer Division* forestalled these efforts. Only fire support was available to try and stop the fleeing Germans. Until August 28th, two bridges on Highway 86 remained open to Lyon. One, two miles west of Montelimar, remained in German hands and was used to divert traffic. The second, south of the battle area, crossed the river Drome and was out of Allied artillery range. Although the



A road is littered with abandoned and destroyed German vehicles.

FFI harassed the Germans with small arms fire and Allied artillery interdiction caused traffic stoppages, traffic continued to flow, albeit unevenly, as the Germans retreated.

The 3d Division attack into the southern Montelimar sector on August 28th diverted German strength and changed the balance of power in the battle square. Two battalions of the 7th Infantry Regiment attacked parallel to the 36th Division line on the Jabron River. Two battalions of the 15th Infantry Regiment also attacked from the south up the eastern side of the Rhone Valley to enter the town from the west and southeast. They finally were able to block all rail and road traffic and effectively ended the German movement north. This action permitted the 36th Division to concentrate its two regiments and counterattack to the southwest towards the pocket at Montelimar. Its northernmost regiment, the 142d, drove from its reserve position to Crest and then to the west to cut off the northern withdrawal at Loriol and close the pocket. The seven-day battle of Montelimar, envisioned as a major blocking move, was over.

Montelimar marked the end of the drive to encircle the retreating Germans, which was overall unsuccessful. The Germans, although far from their peak of effectiveness of just a few years prior, still managed to overcome a deficit in air power and numbers and were able to use superior local fire power and terrain to extract their divisions. The cost of the battle was high. The Allies took over 2,000

casualties of which 187 were killed and 365 missing. German losses were difficult to estimate given the confusion of the retreat. The best estimate was that 2,100 were killed and wounded and more than 8,000 captured.

General Patch did not mourn lost opportunities or criticize the execution of the operation. His men had done well, and he now moved quickly to focus on the challenges he faced in the near future. VI Corps was now driving on Lyon, seventy-five miles further north, and then to Dijon, a further 110 miles. Strasbourg on the Rhine lay another 160 miles to the east. But all plans were to shift as the Seventh Army and its VI Corps were due to be absorbed into a new command arrangement as part of the recently created Sixth Army Group. Eisenhower awaited Field Marshal Wilson's concurrence for a formal shift in command, whereupon the new Army Group as the "Army Group of the South" would get its future command directives from Eisenhower as part of the broad-front advance into Germany.



A local girl presents a bottle of wine to an American soldier who helped liberate her town.



B-24 Liberator bombers hit targets in Genoa, Italy, to keep the enemy confused as to the exact location of the invasion of southern France.

Tactical Air Support had been critical to the success of Operation DRAGOON. Much of that support came from the XII Tactical Air Command (TAC). Following the classic trilogy of battlefield preparation, deep interdiction, and finally direct support to troop movements on the ground, the XII TAC was a loyal and highly praised partner to the ground arms. This relationship only grew stronger as Seventh Army moved northwards and its ability to call on heavy bomber support from the Mediterranean Allied Air Forces diminished. The XII TAC increasingly became a direct tactical player as it became part of the European Theater of Operations air and ground strategy. To provide even better close air support, P-47 “Thunderbolt” groups moved onto fields near Sisteron in France and Free French Supermarine “Spitfire” Groups moved to support French “Army B”. First Allied Air Force encompassed the air headquarters to support Devers still-forming Army Group.

Seventh Army’s pursuit of the fleeing German Army consolidated the position in the south of France by liberating the city of Lyon, which was entered first by French troops. The Seventh Army reoriented the eastward wheel of the corps to give the French the inside track towards the Belfort Gap. This initially placed the French I Corps on the right of the VI Corps and the rest of French “Army B” was also deployed to the right of the Americans. This would give the Americans the benefit of being tied in with Patton’s Third Army when the armies joined. This would keep the lines of communication clean and give the French a key avenue of approach into Germany, an important political necessity for the coalition. VI Corps would be moved north to attack into the challenging Vosges Mountains.

Seventh Army continued to pursue the Germans in southern France as it moved to link-up with OVERLORD's easterly advance. VI Corps moved out of Lyon with the II French Corps to its west, and French I Corps to its east. The northern Italian frontier was held by the Airborne Task Force and the 2d Moroccan Infantry Division, while other French Colonial Divisions moved to clear the mountainous areas of the border. The vital link-up with Patton's Third Army, the advanced guard of the Allied advance through northern Europe, initially fell to General Monsabert's II French Corps, spearheaded by the 1st French Armored Division. On September 12th they linked-up with elements of General Le Clerc's French 2d Armored Division, attached to the U.S. XV Corps, part of Patton's Army. With a continuous Allied front line formed, the French moved to constitute a complete French Army sector of the front to the east of VI Corps, and Eisenhower prepared to assume full control of the DRAGOON forces as part of his Allied Expeditionary Force. The Seventh Army had accomplished its mission. The campaign for southern France was over.



Soldiers from the southern France invasion force meet and shake hands with soldiers of the northern France invasion force.



Lieutenant General Omar Bradley listens to Major General J. Lawton Collins describe how the city of Cherbourg was taken.

Northern France July 24 – September 14, 1944

With the establishment of a strong beachhead in Normandy, the Allies could now build up their forces, reorganize their command structure, and prepare for a breakout. The breakout would have to crack the German lines, widen the penetration, and open the way for the seizure of the Brittany ports along with major offensives across the north of France. The breakout plan was called Operation COBRA. The COBRA plan originally envisioned by Lieutenant General Bradley, U.S. First Army Commander, followed guidance issued June 30th which outlined both general routes for the attack and the line of operations. Montgomery's Army Group had drawn up plans in mid-June called LUCKY STRIKE Plan A and Plan B to theorize breakthroughs in the British and American sectors, respectively, after the German reserves had been worn down. However, Montgomery was still stymied at Caen and the panzer reserves still provided the Germans strength in depth. The LUCKY STRIKE Plan B would only be feasible if the *panzers* remained preoccupied by the British and if the *bocage*, the rough and compartmented terrain in front of the Americans, could be conquered.

Generals Montgomery and Eisenhower agreed that the success of COBRA required that the British and Canadians continue to fix the enemy in place in the Caen sector. German *panzers* continued to hover in this sector reacting to the maneuvers of U.K. General Miles Dempsey's Second Army's tanks. This kept them away from the American sector where the planned breakout was to occur. Bradley used the preparation time he was afforded to stage his forces and prepare for an assault by Major General J. Lawton Collins' VII Corps along the St. Lo-Perrier road. A break in the overcast weather forecast for July 24th signaled a chance for heavy bombers to assist the breakout.

Bradley originally allocated the forces for COBRA based on infantry divisions as the initial breakthrough force with armor following. When the plan was given to Maj. Gen. Collins, he adjusted its basic concept of operations. Infantry divisions would lead briefly, but he decided upon an early commitment of armor and emphasized the stunning power of the planned air bombardment. This would suppress the German antitank defense sufficiently for his armor to gain ground quickly and plunge into the depth of the enemy positions. He gambled that the powerful air bombardment could allow them to get through the defenses in time to gain maneuver room.



A Canadian Bren gun team watches for snipers in the streets of Caen.

Once deep into enemy territory, General Collins intended to move quickly, simultaneously combining infantry attacks with rapid exploitation by armored units. His infantry would mop up the enemy infantry as his tanks moved past them, gathering speed and attaining deep penetrations of the enemy defenses. Overhead, fighters from Brig. Gen. Elwood "Pete" Quesada's IX Tactical Air Command would cover the columns, attack targets of opportunity and respond to on-call missions.

Collins' VII Corps was reinforced to include six divisions for COBRA, several times the size of the average corps in Europe. The veteran 9th and 30th Infantry Divisions manned the front line to make the main attack and break the German lines right after the bombing ceased. These divisions would move to the immediate flanks to hold open the penetration. Behind them followed

the heavy 2d and 3d Armored Divisions, the largest armored divisions in the Army. Behind these followed the 1st and 4th Infantry Divisions, both D-Day veteran units but whose ranks were heavily salted with new men replacing combat losses from two months of heavy fighting in the *bocage*. The two armored divisions had converted many of their tanks to 'Rhinoceros' tanks by welding steel prongs from beach obstacles onto the front of their vehicles and sharpening them. These would act as cutters to lift and cut through earthen *bocage* embankments and hedges. This invention, attributed to Army Sergeant Curtis G. Culin of the 102d Reconnaissance Squadron, became crucial to Bradley's breakout.



Close up view of Sgt. Culin's improvised hedgerow cutter attached to the front of an M5 Stuart light tank.



An M4A1 Sherman medium tank busts through the *bocage* with the help of a hedgerow cutter.

The initial bombing for Operation COBRA signaled the beginning of the breakout attempt. It was not without problems. A last-minute cancellation of the planned air attacks on July 24th was not received by all the bombers and some air elements continued on to hit their targets. Some bombs fell short, killing twenty-five and wounding 131 men in the 30th Division. A rescheduled aerial attack was launched at 0900 the next day, again with some bombs falling short. However the vast majority of the bombs fell squarely on the *Panzer Lehr Division*, literally stunning the defenders. The saturation bombing, or carpet bombing, fell heavily on elements of the *901st* and *902d Panzer Regiments*, and the *Fallschirmjager (Parachutist) Regiment 14*. Additionally, a separate unit, *Brigade 30*, was caught in the area. The *Panzer Lehr Division*, considered an elite force, was composed of troops from the German tank school, and was commanded by Lt. Gen. Fritz Bayerlein, who had served in the *Afrika Korps* as Rommel's Chief of Staff.

Despite U.S. units pulling back farther from the planned bombing zones and efforts to mark them more carefully, human error seemed to plague the second bombardment which dropped numerous bomb loads short of their targets. The 30th Division was again hit, killing 111 Americans and wounding 490. These killed included Army Ground Forces Commander Lt. Gen. Lesley McNair who was visiting the front to reinforce the FORTITUDE deception. Promoted posthumously to full General, he was the most senior American officer killed in World War II. A total of 814 friendly casualties were incurred by the bombings but the success otherwise of the attacks was considered necessary for the breakthrough.

The devastating results of the bombings made the sacrifice somewhat easier to bear. German losses were almost incredible. *Panzer Lehr* reported a mere seven tanks operationally ready to meet the expected American attack. Hundreds were severely damaged or stunned beyond comprehension and were unable to meet the immediate Allied assault. The attacking U.S. regiments moved forward and achieved the breakthrough, although the 9th Infantry Division stalled by day's end. With the 30th Infantry Division still moving, Collins advanced his armored divisions even before his infantry had cleared the path for the tanks. He committed his armor despite the risk of German anti-tank defenses and completely ruptured the German lines. COBRA was rapidly expanding to become even more successful than planned. Collins was a hard driver and perhaps no other U.S. corps commander could have matched his energy in creating the ingredients for the breakthrough that had eluded the Allies so many times before in Normandy.



A convoy traverses terrain pockmarked by the Allied bombing campaign near Countances.

COBRA's success signaled something the Allied commanders had long hoped for. Initially, it gained a deep foothold and cracked open the German defenses. With the German reserves still held in the east and engaged by Dempsey or the air force, Bradley intended to use Collins in a rolling offensive that would completely un hinge the German defensive line in northern France. This would open the way for a mobile pursuit that might entrap thousands of enemy soldiers and reach all the way to Germany.

Montgomery was sensitive to the movement of German reserves and had his new Canadian First Army, commanded by Lt. Gen. Henry H. D. Crerar, launch a limited attack on Caen to tie up those reserves. Meanwhile, Dempsey shifted some forces to the west to mount a supporting attack on Bradley's flank as he drove south. Montgomery intended to implement some of the elements of the LUCKY STRIKE Plan B although he never openly mentioned the name. This was clear to the army commanders at the time but perhaps less so to HQ, SHAEF, which tried to insert itself into the moving battle without actually being in operational control.



The crew of an M8 Greyhound light armored car is handed a bottle of wine by a citizen as they pause for a security halt in Avanches.

VII Corps did not hold back. Collins drove them boldly, using his armor to lead the attacks, break through the German defenses, and then pivot outwards through the weak enemy rear areas. The bulk of the Germans he would face were then either returning from the center and east where they had hurried to defend against Dempsey's attacks or were in reserve awaiting a renewal of British attacks. Abandoning its limited objectives, First Army moved as rapidly southward as possible. Montgomery now shifted his units to execute LUCKY STRIKE B, the breakout in the west, with a smaller attack in the western British sector to "fix" the Germans in place. He shifted British Second Army's attacks forward to protect the flanks of the U.S. First Army's southern attacks. This transformed the attack into an even stronger wheel of the two armies.

The Germans had concentrated their armor heavily between Caumont, in the center of the sector, and Caen in the east. A total of eight *panzer* divisions had been located in that area by the end of June. Montgomery had shifted away from fighting to seize deep objectives south of Caen but remained committed to seizing the city itself. He accomplished this goal in early July. Dempsey's operations continued to support Bradley's attack by moving southward on his flank in the center as he moved towards his objective of St. Lo. In Operation BLUECOAT, Dempsey launched his armor both to cover First Army's flank as it exploited their attacks towards St. Lo and to complete the encirclement of Caen. The Canadian First Army, now forming, was preparing to launch its own major armored strike on the Allied left.

Meanwhile, Bradley's 12th Army Group was activated. He then spun off a new Army, the Third, from the First Army. The Third Army, commanded by Lt. Gen. George S. Patton, had already created a transitional army headquarters near the First Army headquarters so it moved quickly to take over a major role in the offensive. Third Army was to make a sharp right turn to the west and attack into Brittany. It would be the outside flank army for the new 12th Army Group. Lt. Gen. Courtney H. Hodges moved up from Deputy Commander of First Army to become its new Commanding General. The new 12th Army Group remained under the operational command of Montgomery since Eisenhower's SHAEF headquarters was not yet ready to exercise effective overall ground command. In addition, while the American contribution to the force was already double that of the British and Canadians in the field by this time, Bradley lacked Montgomery's experience and had only commanded an army in battle for two months. Montgomery had commanded Eighth Army from August 1942 to January 1944 and had achieved a number of important victories, including winning the decisive Battle of El Alamein. He was by far the more experienced commander.



From left to right; Generals Patton, Bradley, and Montgomery chat July, 1944 at 21st Army Group headquarters.

The press was not informed of either the creation of the 12th Army Group or of the Third Army due to security reasons and this rankled Bradley and others. American generals received and read British newspapers which understandably hyped British war news. This caused no end of problems since it appeared as if U.S. units were “sitting out” the big battles. Press camps on the American side soon took up a nationalistic battle against the British and their commander. Although Eisenhower had to appear neutral, U.S. Secretary of War Henry Stimson made it an issue that in an election year the Americans should appear to

be in charge and winning. SHAEF and the BBC squabbled for the rest of the war over various personality traits and issues between Montgomery and Patton. The Allied high command was frequently rent by issues between services, nations, and commanders and often seemed to make decisions based on nationality or personality. This is often the way in war, and memoirs are full of different versions of “reality,” generally based on individual or national perspective. At no point, however, did these internecine squabbles seriously threaten to unhinge the Anglo-American alliance.

A provisional Third Army planning staff had been given the mission to capture the Brittany Peninsula and take its crucial ports as part of the OVERLORD Plan in March 1944 -- while still in the United Kingdom. The staff planners immediately began terrain analysis of the region and carefully studied the enemy defenses before devising an initial plan. The headquarters moved to the Cotentin Peninsula in early July, awaiting the breakout to become operational. When that occurred, the introduction of Third Army into the exploitation operations was eased by the unofficial assignment of VIII Corps, commanded by Maj. Gen. Troy H. Middleton, to Third Army on July 28th. With Patton essentially directing Middleton's operations, the transition in battle was seamless when on August 1, Third Army became fully operational. In addition to VIII Corps, XII, XV and XX Corps would filter in and fill out Third Army's troop list as the battle proceeded southward.

The NEPTUNE Plan drawn from the COSSAC Outline had defined the capture of the Breton Ports as a key objective of OVERLORD. This was one of the major justifications for landing in Normandy rather than further to the east. The ports were crucial to facilitate the landing of American divisions deploying from the United States. The Allies needed a large lodgment area for up to thirty-six divisions. These would constitute the bulk of the huge liberation army that would begin the final campaigns for the liberation of France and the eventual conquest of Germany.

The campaign in northern France rapidly unfolded in multiple directions after the COBRA breakout. The Normandy front, long locked in a tight perimeter that only stretched outward as the result of painfully slow, limited depth operations, was now torn open. Allied airpower and the hammering attacks of Dempsey's divisions and corps had broken many



American infantrymen position their Browning machine gun.

German tank units. Likewise, Bradley's constant smaller unit actions had bled German infantry all along First Army's front. This left only a few German *panzer* elements in shape to resist and turned infantry units into mere shells. Both were unable to hold against the more powerful Allied divisions. In addition, Bradley's First Army was steadily receiving fresh U.S. divisions to maintain the tempo of his attacks while relatively few reinforcements reached German units.

In the 21st Army Group sector, Dempsey's and Crerar's armies continued to fight weakened *panzer* and *panzergrenadier* divisions on the major avenue pointing to Paris. While some German tanks moved westward to reinforce units facing the Americans, the Germans could not afford to give the tank-heavy formations of Dempsey's army room to operate. They could not be left free to strike toward open country suitable for the Allies to carve out forward airfields or to drive deep into the rear of the German army group. This posed an operational concern for the German commanders, who could not switch major formations to deal with Bradley or, later, the long southern flank formed by Allied units landing in the south of France. The large number of British and Canadian armored divisions and brigades kept the German *panzers* in check and prevented them from concentrating in attacks.

Following Bradley's COBRA breakout, and despite a shortage of combat-effective units, Hitler ordered a counterstrike against the Allied offensive. He directed the German theater command to take what armor could be safely pulled from the British front and to hit at a narrow juncture between German positions and the sea near Mortain. Dempsey had moved his armor toward the center to support Bradley and had already begun to move southward in the BLUECOAT offensive. Hitler still ordered Field Marshal Gunther von Kluge, who had replaced the fired General von Rundstedt as his commander in the west, to attack in early August. This attack began even as General Crerar was forming for his own attack just to the north of the planned counterattack.



German Field Marshal Gunther von Kluge.

The Fuhrer-directed plan was ambitious in the extreme. He directed Kluge to counterattack from the Vire area west all the way to the sea, cutting off Third Army and restoring the German front. However, Kluge had no such hopes and, as so often happened in the Normandy Campaign, German efforts to prepare the blow were marked by a lack of coordination and communication, a problem enhanced by the mutual distrust between Hitler and his generals following a coup attempt in July. Confronted with a desperate situation, Kluge lacked the time to prepare the massive stroke that Hitler had in mind. His buildup was hurried and disjointed. By the time the Germans launched their attack in the early morning darkness of August 7th, Kluge had been able to assemble only three understrength *panzer* divisions with a fourth *panzer* division ready for exploitation, a far cry from the full *panzer* army that Hitler had envisioned.

Nevertheless, the attack towards Mortain gave the Americans plenty of trouble. Achieving surprise, the Germans drove as much as six miles into the American front, particularly in the Mortain area. Here the *2d SS Panzer Division* overran positions that had only just been occupied by the 30th Infantry Division. By daylight, however, the German thrust was already faltering. Disorganized in the attack, the *2d SS Panzer Division* in the center had been able to employ only a single column in the early stages, and the *116th Panzer Division* in the north had not attacked at all. On the *2d SS Panzer Division's* front, a battalion of the 30th Division dominated the battle area from Hill 317 just outside Mortain, beating off every attack sent against it. Supplied by air drops, the unit held for four days until its relief, calling down artillery fire on German formations in



An American rifleman aims his M1 Garand through a hedgerow near Mortain.

the surrounding area and earning for its division the title “Rock of Mortain.” Meanwhile, as Allied aircraft pummeled the Germans, Bradley, Hodges, and Collins sent the 4th Infantry Division into the northern flank of the penetration while the 2d Armored and 35th Infantry Divisions struck from the south.

To compound the German woes, Allied air commands quickly sent every available fighter bomber to help. As the Germans attacked, Allied planes ravaged the three German *panzer* columns. With no air cover of their own, these columns were chopped up badly even before coming into contact with U.S. ground combat units. Their unarmored wheeled support vehicles suffered especially heavily, and the Germans were forced back, both due to the unceasing air attack and the fact that columns of attacking British tanks from Operation BLUECOAT threatened to overrun their rear and flank. Kluge’s attack was routed, though the 30th had been badly shot up during the first day. Between two and three thousand Americans were killed in the action, but the Germans took heavier losses. German losses were especially heavy with respect to armored and wheeled vehicles. They lost at least 120 tanks.

To the north of the German counterattack at Mortain, Crerar’s Canadian First Army made its combat debut on the eve of the twenty-sixth anniversary of its participation in the First World War Battle of Amiens where the Canadian Corps had first made its name famous. Crerar intended II Corps, commanded by Maj. Gen. Guy Simonds, to achieve exploits equal to this earlier fame, and addressed the press with some fanfare prior to their night attack. As with the COBRA and GOODWOOD operations, the Canadian offensive, TOTALIZE, was preceded by a wave of bombers saturating the German defenses in depth.

The bombing inflicted considerable damage on the enemy, but no small number of bombs dropped on friendly positions. The Germans moved deeper into their own lines, avoiding some of the bombardment. Partly as a result of this tactical withdrawal, the Canadian attempt to break through the German defenses, although determined and bloody, was not completely successful. A second offensive coordinating a night aerial bombardment with armored attacks called TRACTABLE, again was only partially successful as it hit the German *panzers* with the same mixed results. While the Canadian attacks did destroy significant numbers of the enemy forces, German units outside the “treated” area rapidly counterattacked and the efficient antitank defenses of the Germans still exacted a heavy toll, slowing the offensive. Infantry reduced their objectives in bloody battles which the Canadians with their small army could ill afford.

The Canadian attacks battered the German armor and managed to fix them in place while Hodges’ First Army and Dempsey’s Second realigned and pivoted east on Caen as the Germans rapidly withdrew from their Normandy positions. This gave Dempsey and Hodges the ability to spread their forces out in classic exploitation columns, chasing the enemy to the east. The Germans hoped to retreat over the Seine River and establish a new defensive line, and only rapid Allied attacks could disrupt these plans.



A British platoon entrenched along a hedgerow between Hill 112 and Hill 113 in the Odon Valley July, 1944.

On the southern flank, Third Army covered the western flank of the offensive pushing towards the Loire River with Maj. Gen. William Haislip’s XV Corps on the far right. Maj. Gen. Troy Middleton and his VIII Corps turned the inside corner at Avranches and reversed direction into the Brittany Peninsula to clear the peninsula and capture its ports. The original plans for the attack into the peninsula had considered that it might take the entire Third Army to clear it. However, the rapid success of COBRA meant that a single corps could do the job, freeing up the rest of Patton’s force to pursue the fleeing Germans. Third Army would cover the complete southern flank of the American army and pursue the Germans to the east along the north side of the Loire valley.

Meanwhile, the First and Second Armies were to press the enemy in the center. Nearly forty divisions of the two Allied army groups were now scrambling to coordinate their moves around the embattled German forces. In the confusion, the differing operational concepts and capabilities of the Allied force, coupled with the still potent fighting power of many of the enemy units, made trapping the retreating enemy harder than it might otherwise have been.

Part of the confusion lay with different concepts held by the Allied commanders concerning where to encircle the German forces. Field Marshal Montgomery envisioned that the Allied armies in northern France would move as a solid block toward the northeast on a single operational line. This would position the forces for a wide envelopment on the other side of the Seine that would entrap huge numbers of enemy units. He even planned for an airborne landing on the Orleans Gap to facilitate the movement of Patton's corps in a wide envelopment behind Paris while Montgomery's armies forced the Germans against the Seine. Aerial attacks had destroyed most of the bridges over that river and he believed that the crossing of heavy equipment was impossible by this point.

Bradley, keen to prove his own armies, pushed for a tighter envelopment and, with Eisenhower's blessing, pushed northward in front of the Seine trying to encircle the Germans near Argentan and Falaise. For that to happen, however, the Canadian army needed to push south faster than they had been doing. The Canadians faced stubborn German resistance that disrupted Allied timetables. That resistance held open an escape route for German units retreating to the east.

Trapped between the Allied armies pressing forward, major elements of the German *Seventh Army* retreated east after the collapse of the Mortain counterattack through a narrowing 60-mile gap between Falaise and Argentan. Under constant pounding from Allied air and artillery, lacking ammunition and supplies, and exhausted from endless marches to the east along clogged roads, a number of units panicked and abandoned their equipment. Other units maintained their discipline and fought grimly to keep the escape routes open. The Germans suffered heavy losses in the "pocket," especially in heavy equipment. After the battle, one American observer stated, "As far as my eye could reach (about 200 yards) on every line of sight, there were... vehicles, wagons, tanks, guns, prime movers, sedans, rolling kitchens, etc., in various stages of destruction." *Seventh Army* as an organized force, for all practical purposes, ceased to exist. Many survivors of the army were pushed northeast towards the coast and attempted to cross the Seine between Rouen and the sea. These were pursued by the Canadian First Army moving along the coast.

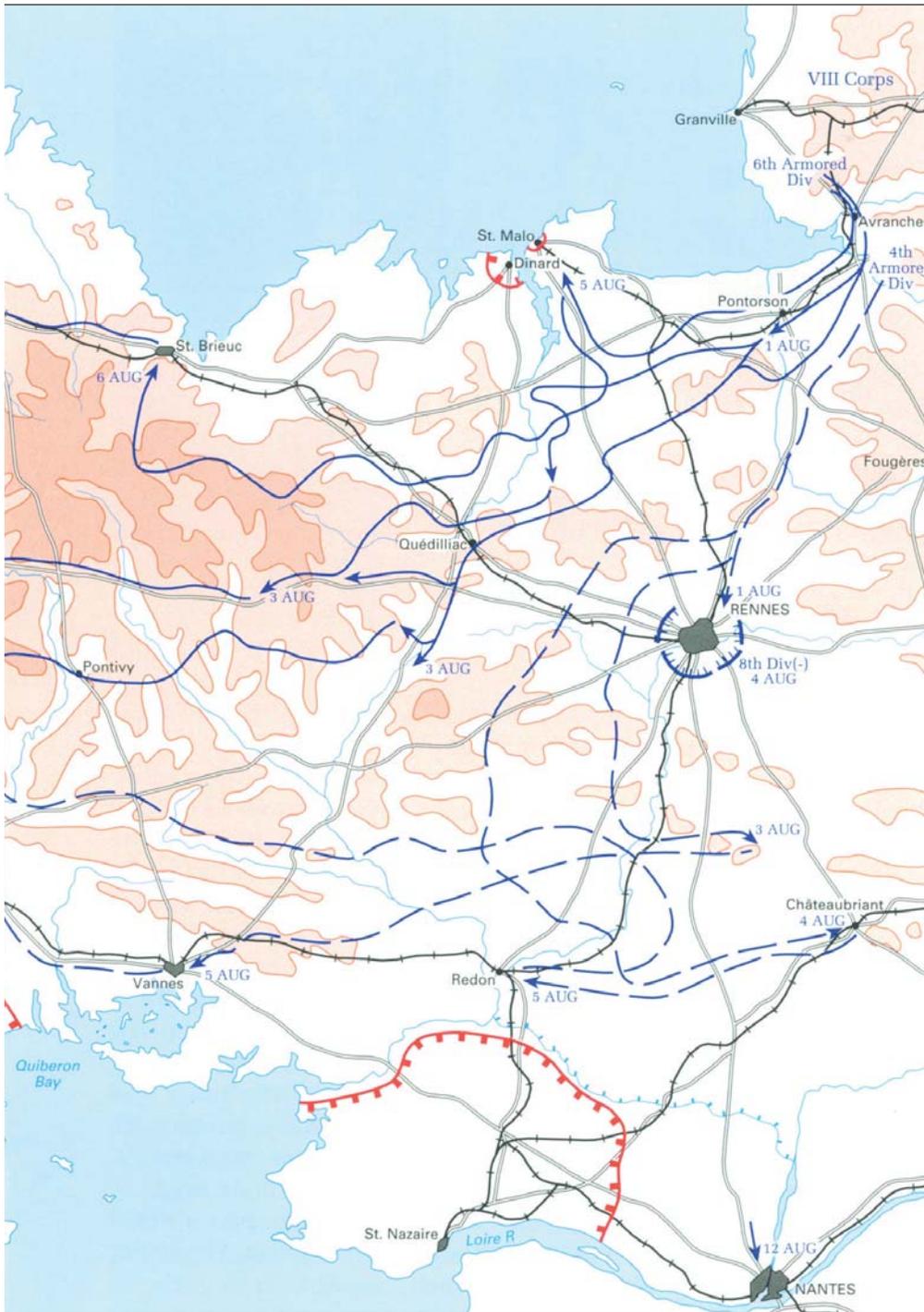


"Hitler's Doom," a 105-mm M3 howitzer, being sighted in at the siege of Brest.

Many Germans were able to escape the trap set by the Allied armies, although they lost some 50,000 men killed or captured along with much of their heavy equipment in the Falaise Pocket. Allied intelligence failed to account for the German capacity to ferry large numbers of troops across waterways despite Allied air superiority and the lack of many bridges. Although the Germans seemed defeated, they nevertheless retained a large measure of battlefield skill, discipline, and courage that boded ill for easy success in the final assault on Germany.

Immediately after the battle of the Falaise Gap, disputes emerged within Allied councils concerning the failure to close the final few miles of the distance between Falaise and Argentan quickly enough to capture all the retreating Germans. On the American side, General Bradley had not communicated his concerns about the escaping Germans with Montgomery, nor did Hodges with Crerar. Bradley and others later blamed Montgomery for delays closing the gap between the converging forces. Supposedly he should have overridden the deliberate orders of the Canadian forces and sped their attacks to the south. Bradley, on the other hand, failed to fully coordinate the movements of his own forces with those of the British, Canadians and accompanying Poles. A major fraction of the Germans fighting in France escaped to the east to fight again. The significance of their escape was not immediately apparent. The general mood among the Allies, correctly, was that of having achieved a dramatic victory.







Abandoned German vehicles and equipment litter the roads.

While many of the Germans were making their escape from the Falaise Pocket, Third Army conducted a brilliant campaign in Brittany. In addition to sending Troy Middleton's VIII Corps to Cherbourg, Patton's plan was to send the 6th Armored Division through Avranches followed by the 79th Infantry and 4th Armored Divisions. These were to cut across the peninsula to Rennes and Vannes and be followed by the 83d Infantry Division. Patton had chosen an armored division to lead the assault, fearing the Germans would destroy the vital port of Brest if it were not taken quickly. He counted on Maj. Gen. Robert W. Grow's 6th Armored Division to break through any defenses to seize the port before this could happen.

Grow's division moved rapidly through the rolling terrain in three balanced Combat Commands with powerful air cover, bypassing any opposition and leaving it for the infantry to mop up. He quickly seized a bridgehead at Pontfaron on the la Selune River, south of Avranches, giving the division a passage through the logjam of traffic caused as Third and First Armies expanded from their breakthrough and commenced exploitation operations to the south and east. Outside of Brest by August 9th, General Grow found himself sandwiched between the port and an unwary *266th Infantry Division* moving to reinforce Brest. He repositioned his division to attack the oncoming Germans. The *266th Infantry* was a so-called "static" division, designed to occupy a defensive position, and was no match for an armored division. Over 1,000 prisoners were taken and twenty antitank guns captured. Nevertheless, the delay gave the defenders of Brest further time to prepare. Grow was out of communication with his widely ranging contingents and with his own corps

Brittany American Cemetery



Brittany American Cemetery in France covers 28 acres of rolling farm country near the eastern edge of Brittany and contains the remains of 4,405 of our war dead, most of whom lost their lives in the Normandy and Brittany Campaigns of 1944. Along the retaining wall of the memorial terrace are inscribed the names of 500 of the missing. Rosettes mark the names of those since recovered and identified.

The gray granite memorial, containing the chapel as well as two large operations maps with narratives and flags of our military services, overlooks the burial area. Stained glass and sculpture embellish the structure. The cemetery is located on the site of the temporary American St. James Cemetery, established on August 4, 1944, by the U.S. Third Army. It marks the point where the American forces made their breakthrough from the hedgerow country of Normandy into the plains of Brittany during the offensive around Avranches, France.

headquarters some 200 miles away. Small liaison planes finally reestablished contact by dropping messages from the sky and picking up their situation reports in return by landing on tiny fields.

To the 6th Armored Division's south, Maj. Gen. John S. Wood's 4th Armored Division used two armored Combat Command columns to head to Lorient and St. Nazaire. Like Grow, Wood was unable to take the major ports quickly. The German defenders stubbornly held on and repelled the hasty American attacks. With only three battalions of infantry allocated to an armored division, Wood lacked the ability to fight and clear a defended port, especially one heavily fortified with concrete positions. Infantry divisions, not armored units designed for pursuit or mobile battle, were needed. The minor ports of Brittany fell quickly, but the great ports of Brest, Lorient and St. Nazaire held out.



American troops march into Paris, France, down the Champs-Élysées with the Arc de Triomphe in the background.

As the Brittany battles raged and the Germans continued their retreat, the Allies had to decide what to do about Paris. An outbreak of scattered acts of violence against the German occupation troops in the city, followed by a general uprising in various parts of the city, brought Paris forcibly into the war even as the Allies were moving to encircle the city. Eisenhower had wanted to avoid entering the city as long as possible, not wishing to assume responsibility for the feeding and administration of the crowded metropolis. Bradley had planned to encircle the city following his Seine crossing, bypassing it as an objective as long as possible. In the city, competition among various factions of the French resistance vying for influence in the post-war government had led to a general uprising, forcing Eisenhower's hand. He could not allow the resistance forces to be crushed. Free French leader General Charles De Gaulle wanted his French armored division dispatched from the main Allied armies immediately to aid the resistance and participate in the liberation of Paris. Military necessity, as well as French national honor, required him to commit French units immediately and Eisenhower was forced to agree.

On August 25th, the “City of Lights” was liberated, and with it came the symbolic liberation of France. As General Eisenhower had promised General De Gaulle, Maj. Gen. LeClerc’s French 2d Armored Division led the way into Paris, where it was met by the emerging resistance fighters. In disobedience to Hitler’s orders the Commandant of Paris, General Dietrich von Choltitz, had not destroyed the city and its many treasures. Indeed, he actively prevented its demolition and surrendered the garrison with the city mostly intact. The U.S. 28th Infantry Division in full battle gear marched through the city and down the famous Champs-Elysees as part of the triumphal liberation parade, creating one of the war’s classic photographic moments. After the parade, the division quickly moved to the outskirts of town to continue the battle.

In the third week of August, as the Falaise Gap was being closed and Allied armies were being reoriented, General Montgomery proposed a new operational concept for the drive into Germany. Eisenhower had not yet articulated his “broad-front” plan and Montgomery proposed that both army groups remain together in a block of approximately forty divisions and move on a relatively narrow axis of advance into the northwest of Germany and then down towards the Ruhr. The Allied units would sweep through the northern coastal ports of Antwerp and Rotterdam, cross the Rhine, dominate the open terrain north of the Aachen-

Naval Monument at Brest



The Naval Monument at Brest, France stands on the ramparts of the city overlooking the harbor, which was a major base of American Naval operations during World War I. The original monument was constructed by ABMC in the 1930s. During World War II, it was destroyed. The present structure is a replica of the original and was completed in 1958.

The monument is a rectangular rose colored granite shaft rising 145 feet above the lower terrace and 100 feet above the Cours Dajot.



Cologne corridor, and then attack into the industrial and population heartland of Germany. In his plan Montgomery would retain his present operational control of the two army groups.

Montgomery's proposal did not mention the new Sixth Army Group coming up from the south of France, assuming its movements would be coordinated by HQ, SHAEF. SHAEF would also be responsible for the air support for the two army groups in the north, leaving Eisenhower some role in the battle for the north European plain, albeit a peripheral one.

Eisenhower was not supportive of Montgomery's proposed command arrangement and responded with his announcement that SHAEF would assume full command of all of the army groups on September 1. Eisenhower formally assumed direct command of all Allied land forces in the European Theater on that date, essentially ending the OVERLORD campaign. This dissolved the original ground command relationship and Montgomery reverted to the command of his own 21st Army Group. Bradley's 12th Army Group now reported directly to SHAEF. The same day, the Combined Chiefs of Staff withdrew operational control of the strategic bombers from SHAEF so that the heavy bombers could concentrate on hitting deep strategic targets in Germany. The Allied Expeditionary Air Force was terminated on September 30th, with Eisenhower's headquarters maintaining a string on strategic bombardment as needed through his Assistant Chief of Staff for Air. Eisenhower personally held overall Allied ground command from September forward, and thus set the detailed strategy for his forces to accomplish their missions.

One major weapon in Eisenhower's arsenal as the new Supreme Allied Commander was control of the theater reserve forces which would allow him to intervene decisively in offensive or defensive operations. Upon assuming direct command of all ground European forces, SHAEF would have a strategic reserve consisting of the First Allied Airborne Army, created on August 8, 1944. The potent army included the British I Airborne Corps and U.S. XVIII Corps (Airborne) and major troop carrier assets. The assigned divisions included the 1st and 6th Airborne Divisions for the British, the U.S. 82d and 101st Airborne Divisions, the Polish Airborne Brigade, and the U.S. 17th Airborne Division which was still in training. Separate glider and parachute battalions also were assigned. The airborne army did not have a fully formed headquarters, and both its corps lacked robustness with respect to headquarters elements.

Rather than concentrating on Montgomery's relatively narrow proposed axis of advance into northwest Germany, Eisenhower instead articulated his "broad-front" plan. This would line up the three Allied army groups, once the southern army group linked up with the northern forces, into a continuous front. The three army groups would attack towards northern, central, and southern Germany at the same time along multiple axes of advance. This had the

THE LIBERATION OF PARIS August 19-25, 1944

Paris, the political and emotional heart of France, was a cherished objective for every Free French soldier in the invasion. For Churchill and many American soldiers, liberating Paris was a symbol of what the war was about. It played little in Bradley and Eisenhower's immediate plans, however. As Paris came within range both sought to delay its capture, lest requirements for logistical support and political control divert resources from the immediate campaign.

The Free French 2d Armored Division had landed in Normandy in July, and had been temporarily assigned to the U.S. First Army. The intent was that it be used in the Liberation of Paris. Its commanding general, Maj. Gen. Philippe LeClerc, was given orders from General De Gaulle through national channels to proceed to Paris. Here rail workers had risen in strike, and after the Riviera landings in southern France, the police struck as well. German Lt. Gen. Dietrich von Choltitz, the Military Governor of Paris, had been ordered to defend the city. If it could not be held, he was to destroy its historic buildings and vital infrastructure. He methodically prepared defenses around and within the city.

The French Resistance in the city was divided between Gaullists who wished to await the Allies before rising, and Communists who wanted immediate and all-out combat to free the city. When the Resistance was informed that Eisenhower's plans were to delay Paris' liberation until September in order to concentrate on pursuing the enemy, the Communists precipitated combat on August 19th. Eisenhower ordered Bradley's V Corps to Paris rather than leave the initiative with the Communists, and he attached the French 2d Armored to V Corps for the initial entry. While barricades appeared and some fighting occurred, Choltitz showed unexpected restraint in responding. An advanced body of the 2d Armored arrived at the Place de Hotel de Ville on 24 August under Captain Raymond Dronne. Choltitz surrendered the city the next day with only token resistance, as the U.S. 4th Infantry Division moved into the suburbs.

By sparing the city, Choltitz earned a death sentence from Hitler, the gratitude of the French, and may have avoided a war crimes trial for his eastern front activities. LeClerc later freed Strasbourg, the first city of Alsace, and died in an air crash after the war.

The U.S. 28th Infantry Division was offered as a "parade unit" to celebrate the liberation shortly after it occurred and became the subject of an iconic photograph marching under the Arch de Triumph on the Champs Elysees. The parade masked the fact that after the parade it was moving on to do battle east of the city. The 28th went on to fight in the Huertgen Forest, the Ardennes, and the Colmar pocket.



Jubilant French crowds surround the Arc de Triomphe to cheer on the Allied liberation of Paris.

advantage of forcing the Germans to defend everywhere while the Allies could attack anywhere. German reserves could not concentrate against a single thrust. The plan's principal disadvantage was that it would diminish the strength of any given Allied attack and stretch limited supply assets among multiple units. No major attack would have enough supplies to fully exploit whatever success it managed to achieve.

Under the broad-front plan, Montgomery was to continue his attack to the northeast to take Rotterdam and Antwerp with his own 21st Army Group and would stay tied into the flank of the U.S. 12th Army Group. There was to be a continuous line of forces and not a narrow penetration. Bradley was given the major avenue of approach into Germany towards Cologne-Aachen and the secondary avenue towards Metz-Saarbrücken. Facing serious supply issues, he nevertheless decided to roughly weight each of his attacks equally. This probably assured his failure to break through the German lines on either of his axes when the Germans were at their weakest in early September. Contrary to later reports, Bradley did not stop Patton's advance by "starving" him of supplies, although he did not give him the priority of assets, especially fuel, that he desired.

The failure to capture the Breton ports soon became a matter of major importance to both army groups. The British Second Army captured Antwerp on September 3rd, one year ahead of its projected capture according to the original campaign plans. However, the British had not yet cleared the sixty miles of the Scheldt estuary and river that led to the port. This left Antwerp temporarily unusable since the Germans occupied the shores along the river and had mined the waters. Montgomery's armored units sped eastward to chase the withdrawing Germans but left Dempsey's reduced forces unable to clear the river. Montgomery hoped to seize a bridge across the lower Rhine while the enemy was in disarray and before he formed a full defense behind that formidable barrier. As a result, he failed to place a high priority on ensuring that the port was quickly cleared.

The supply issue increasingly became critical for the entire Allied force. Supply is the most unforgiving need of all armies and active operations required a wide variety of different types of supplies to sustain themselves. Heavy fighting required large amounts of ammunition whereas mobile operations required huge amounts of fuel and maintenance support for vehicles. Air operations used fuel, ammunition, bombs and spare parts in great amounts. Forward airfields built all across the lodgment area required thousands of tons of airfield matting, construction materials, fuel storage facilities, tents, and temporary buildings. Portable hospitals, ammunition dumps and signal facilities needed to be built. Tens of thousands of miles of communications wire of different gauges had to be laid to service headquarters, only later to be picked up when those headquarters

moved. Engineers needed concrete, steel, and other heavy supplies to repair bridges, roads, culverts and rail facilities that had been deliberately damaged or destroyed either by Allied bombers or by the retreating enemy forces.

The OVERLORD plan provided for the establishment of a huge lodgment area to accept up to thirty-six Allied divisions and sufficient ports to provide for their sustenance. The bulk of these ports were to be in Brittany, with Brest and Nantes being the largest. An artificial bay project, code named CHASTITY in Quiberon Bay, was to provide a sheltered entrance for shipping into the Loire towards Nantes. With this expected building of Quiberon Bay's artificial harbor and subsequent port operations in Nantes, the Allies planned on the daily landing of 10,000 tons of supply per day. These newly captured ports would push their supplies to the east after the repair of rail lines which had been destroyed by air forces or the retreating Germans. Most of the main rail lines were repaired by mid-September.

Patton had delayed in assaulting the Brittany ports, content to encircle them and leave forces outside their perimeters thinking they would soon surrender. This was a misplaced hope, and resolute German defenses delayed the fall of the ports. Patton focused his attention on participating in the exploitation to the east, with Bradley's encouragement. This was despite SHAEF directives that the capture of Brittany's ports remained a priority.

The rapid move across France and the necessity of keeping supplies flowing despite the initial lack of major ports produced a major logistical innovation. Using a steady stream of trucks running on highways designated as one-way, the Red Ball Express became legendary for its ability to speedily deliver fuel, ammunition, and basic stores to the front lines from the beaches. The truck drivers, many from African-American units, drove day and night, with few breaks for food or rest. The express ran in a continuous circle to the front and back again over networks of roads chosen for the purpose. This system went on for about two months, until adequate ports, supply dumps and rail connections could replace it. The British ran a similar truck supply route system called Red Lion.

The Red Ball Express and the Red Lion initiatives were not without their drawbacks. Both consumed huge fuel loads, wore out vehicles and drivers, and suffered from an increasing number of accidents due to exhausted drivers and degraded maintenance. Despite the relative success of this expedient, the Allied armies had difficulty sustaining their combat divisions since the necessary intermediate and forward supply dumps had not been created. Their rapid advance forestalled the orderly development of echelons of supply facilities. The Allies were forced to maintain their units by truck directly from their main

supply depots, sometimes 300 or more miles behind the fighting front. The problem grew worse as the Allies were drawn farther from their own supply dumps even as the Germans fell back closer to theirs.

The seizure of ports remained critical to the resolution of Allied supply problems. British forces struggled to capture the northern channel ports throughout September, slowly adding Boulogne, Calais, and Bruges to the list of those taken. A major contribution to the resolution of the Allied supply dilemma would be the capture of the large port of Antwerp. The British needed to clear the Scheldt estuary and the terrain dominating it to make use of Antwerp. This included the capture and reduction of the Island of Walcheren near the estuary's entrance. In addition, the sixty miles of river and harbor needed extensive demining operations. This would take time and, ultimately, would cost lives.

The mission to take the Antwerp approaches fell to the hard pressed Canadian First Army, with II Canadian and I British Corps. They had already cleared the more than two-hundred-mile open flank along the English Channel as the British Second Army pushed through Belgium. They then reduced Le Havre, Pas de Calais, Boulogne, and Bruges. Attacking along a wide front, the Canadians fought long and hard but managed to clear the Scheldt and seize Walcheren island with an amphibious assault. The Canadians also took the ports of Zeebrugge and Ostend, all heavily defended, which required costly house to house fighting. These successes were given little prominence in news reports but were critical to Allied efforts to supply Montgomery's 21st Army Group. However, the port of Antwerp was not fully open for Allied use until November 28th, and only then due to the extraordinary exertions of the Canadian Army.



A 155-mm gun motor carriage hammers enemy positions in Belgium.



Engineers weld a gasoline pipeline into place to meet the demand for fuel by the advancing Allied forces.

Implicit in the original Allied strategy was an operational pause of several months that was considered necessary to consolidate gains before units outran their supplies. This pause was never taken. The original OVERLORD concept assumed a ninety-day campaign just to secure the beaches. By the ninety-day mark, the Allies had already reached a line of advance not expected to be gained until D plus 270 days. Breaking out from Normandy and from southern France, the Allies raced across France with breath-taking speed. The Germans had taken over a half million casualties as the Allies swept on towards the German border. This dramatic success forced the Allies to outrun their supplies as they pursued the rapidly retreating Germans. The Germans were unable to make use of potential successive defense lines because of the rapid lunge of the Allied armies, but the retreating units were ever closer to their own sources of supply. Here they would be joined by units stripped from other theaters or hastily raised in Germany itself.



A Signal Corps soldier uses a switchboard to provide radio communications between units.

The logistical plans for OVERLORD had assumed that each division with its supporting units would need 600 to 700 tons of supply per day. While the rapid exploitation after the COBRA breakout reduced ammunition expenditures to unexpectedly low rates, increased fuel usage and extra wear on equipment balanced the logistical equation. Air force units required more airfield building supplies along with more fuel and bombs. Everything from tires to field wire was subject to destruction, replacement or wear-out during periods of combat, and logistical planners needed to keep up with requirements for such items as these as well.

The lack of good ports also had a snowballing effect on the availability of shipping. The shortage of offloading space at ports to efficiently discharge ships meant that hundreds of ships were supplying Allied forces over the beaches. Ships that otherwise might have been quickly available for return supply runs, were often standing by for some time waiting to offload their cargoes.

Eisenhower's decision to pursue a broad-front strategy logistically and operationally stretched his forces to the limit. A wider front was harder to supply than if he had concentrated on one major avenue of approach. He banked heavily on the advantages to be gained by the approach from the south of the newly formed Sixth Army Group. This new force included the U.S. Seventh Army and French First Army and would come under his command when within acceptable communications range. The arrival of the new army group would allow Allied forces in northern Europe to access supplies and reinforcements brought through the southern ports of Toulon and Marseilles. The Sixth Army Group transferred from the Mediterranean Theater of Operations to Eisenhower's European Theater of Operation on September 15, 1944.

The lack of supplies halted or slowed the Allied drive in many sectors, giving a critical respite to the enemy forces. The Germans used this to advantage to reorganize remnants of shattered units into new divisions. The German ability to create capable formations from cobbled-together remnants continually surprised the Allies. Units would be built around headquarters elements consisting of experienced officer cadres. When these units were filled out with replacements and stragglers and issued new equipment, they were thrown back into combat. When battered veteran units with experienced officers received replacements, either partially trained drafts or returned wounded, they responded with surprising success in defensive missions. The seasoned leadership could use terrain and fortifications to best position them for combat even if their capacity for maneuver was degraded. The resurrection of so many enemy units seemed to belie the enormity of the German defeat in the west and frustrated the combat analysis of Allied intelligence officers. These were often surprised when their orders of battle showed combat-effective German units that had previously been reported as "destroyed."

By mid-September, Montgomery's headquarters estimated that the Allies had inflicted around 240,000 casualties on the Germans and captured 210,000 prisoners. The British estimated that approximately 1,500 enemy tanks had been destroyed and left on the field along with over 3,500 artillery pieces.

The Red Ball Express

Logistics, essential to the art of war, can be defined as the organization and movement of supplies and equipment to support troops. Fuel, ammunition, food, clothing, vehicle parts, and a host of other items are essential to the maintenance of an army. A U.S. division in World War II needed at least 700 tons of supplies a day to sustain itself, although the mix varied based on climate, type of combat, and mobility requirements. Even infantry units, which mostly moved on foot, needed upwards of 4,000 vehicles to carry the necessary equipment, supplies, and artillery.

The supply challenges of the Allied armies in northern France were compounded by delays in capturing usable ports. The Brittany ports were slow to fall, and slower still to be sufficiently cleared of obstacles. The Allied pursuit

in France could not wait. Tons of supplies were loaded on trucks at beaches and artificial harbors and moved over long distances over poor country roads. The original plan was to move 100,000 tons of supplies by September 1st by road and rail to forward staging areas near Chartres-Dreux-La Loupe. Rail transport, still recovering from Allied attacks before the landings, could carry less than twenty five percent of this total. This threw the burden on trucks, and the "Red Ball Express" was created.

The Red Ball Express initiated a nearly non-stop flow of trucks from the beaches, and later ports, to supply the advancing units of U.S. First Army. The workhorse vehicle was the redoubtable 2 ½ ton truck, the "deuce and a half." Trucks loaded with supplies and extra fuel travelled in steady convoys over selected one-way routes. These were marked with road signs featuring a large "Red Ball". In the American sector this was known as the Red Ball and in the British sector it was called the Red Lion. Drivers drove straight through, with occasional stops for food and sleep. They delivered loads directly to the forward supply dumps and then returned to the rear empty.

The first Red Ball express trucks rolled on August 25th from St. Lo. By August 29th, the convoys delivered 12,342 tons in a single day. Traffic control points, maintenance points, and food and fuel stops facilitated the flow. Moving rapidly in pursuit, each of the armies needed a half million gallons of fuel per day. Each truck consumed ever more fuel the farther away the Allied units advanced. Soon trucks consumed almost as much as they carried to reach certain units. Newly constructed pipelines eventually remedied this situation. The Red Ball neared its goal of 75,000 tons by 1 September. Convoys continued to roll until November 16 when the railroads assumed responsibility for the long-distance haul of supplies.

The Red Ball Express grew to 140 truck companies, many of them African-American, and roughly 7,000 trucks. It moved an average of 8,000 tons of supplies per day. Reconditioned rail and improved port operations expanded shipments from 15,000 tons arriving per day in September to 44,000 tons per day by November.

The miracle of delivering "48 Million Tons to Eisenhower", as one book ably summarizes the logistics accomplishment of Allied supply chains in 1944 and 1945, was one of the greatest reasons for victory in the European Theater. The truck drivers of the Red Ball Express helped make this achievement possible.





Northern France: July 24 - September 14, 1944



Three German POWs captured during the German retreat.

First Army's operations following the battle in the Falaise Gap were probably the most critical American operations in the fall of 1944. Hodges' V and VII Corps, which had landed at Normandy, now raced for the German border. They pointed towards the Cologne plain with the XIX Corps keeping pace with the British XXX Corps as it turned northeastward towards

Brussels and entered the edge of Belgium and Holland. Generals Leonard Gerow and Collins scooped up a further 25,000 POWs, almost half as many taken at Falaise. This effectively finished off the German *Seventh Army*. V Corps patrols entered Germany on September 11th and the 28th Division entered Germany shortly later after passing through Luxembourg.



Depiction of a "Normandy Sabbath," by civilian artist correspondent Lawrence Beall Smith, shows an Army field medical station which tended to the many casualties taken during the bocage fighting.

To the south, Third Army linked-up with advance patrols of the U.S. Seventh Army on September 11th, signaling the creation of a solid front from the North Sea to the Mediterranean. However, the strength and depth of that front remained thin in many places for some weeks to come.

The Germans, having been given breathing space by the Clausewitzian culminating point of the victorious Allied forces, were able to hastily man the “West Wall” fortifications. U.S. patrols briefly penetrated the border defenses in some sectors, but the Germans restored their front and the rapid advance across northern France ground to a halt. Victorious in France, the Allies would face further arduous fighting before achieving victory over Germany.

Allied casualties during the OVERLORD and COBRA operations were heavy, most suffered during June and July during the *bocage* fighting and the bitter breakout battles. Closing the Falaise Gap battles and the numerous attacks on and around Caen caused heavy British and Canadian casualties. The Americans took heavy infantry casualties in the *bocage* fighting. The cemeteries and hospital lists are filled with the names of men from all the Allied units involved, mute testimony to the fierceness with which all the participants fought.



Flight crews receive a briefing on targets for a bombing mission.

Air Offensive Europe: September 1944 – May 1945

On September 6, 1944 control of the Strategic Air Forces in Europe returned to the Combined Chiefs of Staff. This removed General Dwight D. Eisenhower and Supreme Headquarters Allied Expeditionary Forces (SHAEF) from the immediate direction of Allied strategic bombers, a subordination that had assisted Operation OVERLORD and the establishment of its lodgment. Bomber Command, under Air Chief Marshal Sir Arthur Harris, and the United States Strategic Air Forces Europe (USSTAF), under Lt. Gen. Carl A Spaatz, resumed a focus on the strategic targets of POINTBLANK as their primary missions. The direct support of ground operations and CROSSBOW (German missile and rocket capability) targets reverted to a secondary importance managed through the regular targeting process.

The portion of the Allied strategic air offensive directed by Lt. Gen. Spaatz straddled the European and Mediterranean Theaters. It fell under the general supervision of the Combined Chiefs, specifically Air Chief Marshal Charles Portal and General H. H. Arnold, Commanding General of the U.S. Army Air Forces. General Spaatz could move units laterally between theaters or strike targets from both theaters in unison, capitalizing on the dual basing of his air elements. He made use of bases inside Russia for “Shuttle Missions,” landing aircraft that flew past their bombing targets into the Soviet Union. Here they could land, refuel, rearm, and then again hit targets on the way home. On at least one occasion the return trip to England was via Italy to confuse German defenses. Given broad guidance, Spaatz reacted to situations as they existed with respect to weather, enemy strength, and enemy countermeasures. He sustained unrelenting pressure to prevent the enemy from rebuilding his capabilities.

The USSTAF target priorities under POINTBLANK were oil and synthetic oil production plants, aircraft plants, and motor production. Additionally, Spaatz would see to it that tactical air forces coordinated their targeting to include transportation leading from the Ruhr and Saar industrial regions. This limited the German ability to distribute their industrial products and increased the strain on fuel utilization as rail lines became unusable.

While still under SHAEF direction, the Fifteenth Air Force based in Italy had conducted much of the oil campaign desired by Spaatz. Many of the missions flown by the Eighth Air Force, on the other hand, were against CROSSBOW targets or transportation targets related to OVERLORD. Now Spaatz and Doolittle intended to increase their pressure on oil and aircraft industry targets. In particular they wanted to forestall the introduction of German jet aircraft, which had made a limited appearance in European airspace. If committed in large numbers, these posed a serious threat to the hard-bought air superiority won by the Allied air forces during their spring 1944 battles.

Having reached peak numbers in planes and crews, the Eighth and Fifteenth Air Forces synchronized massive strikes of up to two thousand bombers and fifteen hundred fighters. These pressed through German defenses from the western and southern flanks on as many days as the weather permitted. There were enough planes to provide a cushion of spares for maintenance, crew rest, and operational losses. With the Fifteenth pioneering and specializing in radar directed bombing, additional bombing days were added to hit clouded over targets in southern Europe. This added to the target selection for USSTAF planners. Given that U.S. daylight bombing was combined with the continuous night bombing of RAF Bomber Command, German defenses were constantly strained, although never quite overwhelmed.

Weather hampered aviation over northwestern Europe on many days in September 1944. This grounded bombers and fighters, although numerous sorties flew over Brest and other ports in Brittany where the harbors were still occupied by the Germans. Aircraft were also grounded in support of pending airborne operations and prepped for the air drops planned in coordination with the British 21st Army Group. Air transport was used to fly supplies to armies that had outstripped their ground transportation by the speed of their advance. The transport bombing plan in support of OVERLORD had destroyed much of the rail assets the Allies now needed to support their advance. The Germans had “plowed” tracks in the wake of their own withdrawal, rendering rail lines even less usable. Bridges dropped by Allied bombing had to be rebuilt. Those remaining were often blown up by the retreating Germans. The success of their earlier interdiction campaign came back to haunt the Allies, and air transportation assets were diverted until ground communications could be restored.

German Defenses against the Combined Bomber Offensive



By September 1944 the Allies had achieved air supremacy in the skies over Germany. The Germans sustained the production of fighters and thus their overall numbers, but the quality of pilots and crews plummeted from heavy and irreplaceable losses. Meanwhile Allied planes and crews continued to multiply in quantity and quality. Allied bombers and fighters ranged virtually at will over Germany. The revolutionary ME-262 jet fighter offered the Germans a glimmer of hope, but these were never numerous enough or well enough used to make a difference.

With the effectiveness of their fighter interceptors spiraling downwards, the Germans relied ever more heavily on flak batteries, air defense shelters, dispersal and concealment. As early as June 1944 the U.S. Eighth Air Force lost two and half times as many bombers to flak as to fighters: 201 to 80. Between December 1943 and August 1944, the number of *Luftwaffe* heavy gun flak batteries in Germany more than doubled from 1,300 to 2,655, and the number of light gun flak batteries from 708 to 1,602. Searchlight batteries rose from 375 to 470. More than 13,500 heavy guns included models such as the 88mm, 105mm and 128mm. More than 30,000 light guns were in use, predominately 20mm and 37mm. Perhaps a million Germans were directly involved in anti-aircraft air defense.

The German anti-aircraft effort was notable for its coordination and integration as well as its scale. Air defense batteries were thoughtfully deployed in bands along likely air avenues of approach. Cities and critical targets were thickly covered. Sturdy towers, some of concrete, some of steel girders, and many massive, were built to elevate clusters of guns into optimal firing positions clear of surrounding buildings and vegetation. Elsewhere, guns in reinforced concrete pits fired from advantageous terrain. Matrices of overlapping radars and ground observers tracked approaching Allied bombers and supplied command posts and operations centers with the latest information. Search light batteries and fire-control radars were thoughtfully and lavishly positioned. Barrage balloons hampered access to targets. Allied bombing streams were always under observation and often under fire.

Formidable fortifications protected guns, crews, ammunition, command posts and support facilities. Such protections extended to the civilian population as well, particularly critical workers. Bullet shaped "Winkel Towers" sprouted in industrial complexes. Bombs deflected off their rounded upper surfaces and exploded harmlessly along their thick pediments while hundreds of workers sheltered inside. Neighborhoods featured thick bunkers of a more conventional shape, often designed to blend into the buildings that surrounded them. Prefabricated circular concrete castings were dropped into trenches to produce sprawling networks of "tube bunkers". These were arranged in a zig-zag fashion to minimize the damage from a single penetration. Even larger numbers of people were protected by ubiquitous basement shelters and temporarily repurposed tunnels and mines.

As Allied bombers hammered away at known industrial sites, the Germans sought to disperse these to smaller more survivable locations. Factories sprang up in erstwhile tunnels and mines, or under camouflage in rural or forest locations. Designs developed for hardened factories extravagantly protected by thick layers of concrete and earth. These expedients did keep German military production up to remarkable levels considering the punishment the country as a whole was undergoing. However, dispersal increased reliance on transportation, aggravating fuel shortages and exposing transportation assets to air attacks. The Anglo-American Combined Bomber Offensive never had it easy. With great effort and huge investments, the Germans fought against it all the way to the end.

The retreating enemy had been greatly hampered by lack of fuel. This caused him to abandon much of his transport and tanks. The interdiction efforts of the Transportation Campaign, recurrent rail and bridge cuttings, and repetitive attacks on road transport and movement had a cumulative effect. Direct attack on German units in the Normandy Campaign and elsewhere further contributed to the breakdown of the mechanized German war machine. While large numbers of enemy soldiers escaped France on foot or horse drawn carts, the bulk of their undestroyed military hardware, large weapons, and armor had to be abandoned due to lack of fuel. This was the result of Allied air strikes and operational maneuver on the ground that cut off motorized routes of egress.

The movement of tactical air fields forward further strained Allied transportation assets endeavoring to support the movement requirements of their ground forces. The Ninth Air Force attempted to move its airfields within fifty or less miles of the front to better provide air support. This required thousands of tons of fuel in addition to the requisite bombs, supplies and parts. Air squadrons leapfrogged forward to captured fields or to those newly built by the IX Aviation Engineer Command with pierced steel planking. Each newly built field required at least five thousand tons of supplies to construct. Here fighter bombers and medium bombers operated under austere conditions to support both the ground and the air offensives.

In September, the Ninth Air Force provided direct support to Operation MARKET GARDEN, the airborne invasion of Holland, while the Eighth Air Force's heavy bombers flew thousands of sorties against flak batteries to clear paths for transports to their drop zones. On subsequent days heavy bombers carried out additional anti-flak missions or provided air supply drops to Allied units on the ground. These aerial commitments to Market Garden lasted until September 30th.

Spaatz refocused on oil targets beginning in September, conducting attacks against chemical plants in Southern Germany that month. Earlier the Fifteenth Air Force, whose Italian based bombers were less involved in OVERLORD, had mounted an offensive against the Romanian oil fields. These destroyed approximately 40% of Germany's oil capacity in a bloody month of repetitive missions. The offensive cost over 220 heavy bombers but ended Ploesti's effective use as an oil producer. Targets in Austria, Hungary, Czechoslovakia, Poland, Germania, and Yugoslavia were hit time and again by both Air Forces in a harmonized program. Targeting was informed by ULTRA information and other material synthesized by the joint targeting cells of British intelligence and the American OSS. The German program to create synthetic fuel from coal in specialized plants received particular targeting and oil distribution and storage facilities throughout both the European and the Mediterranean Theaters were recurrently attacked. By the end of September, German oil production had fallen to one third of its rate the previous January due to bombing.

Brig. Gen. Frederick W. Castle, USAAF



Frederick W. Castle was born into an Army family in Manila, the Philippines, on 14 October 1908. Like his father before him he attended the United States Military Academy and graduated in the Class of 1930. Commissioned an Engineer, he was selected for pilot training, earned his wings, and served with the 17th Pursuit Squadron. After four years of active service he transferred to the Army Reserve and took jobs with Allied Chemical and Die Corporation and then Sperry Gyroscope Company. The latter position familiarized him with electric gun turrets for bombers and the Norden bombsight.

Castle was recalled to active duty shortly after the United States entered World War II, and soon rose to

be Air Chief of Supply for the U.S. Eighth Air Force, based in England. He sought operational command and assumed command of the 94th Bomb Group on 19 June 1943. Castle proved to be a daring and capable leader and was awarded the Silver Star for pressing home an attack on a fighter manufacturing plant near Oschersleben, Germany, despite poor weather and enemy resistance.

Castle was promoted to Brig. Gen. and took command of the 4th Combat Bomb Wing. The Germans launched their 16 December 1944 Ardennes Offensive amidst bad weather, seeking protection from air strikes. When the weather cleared the Eighth Air Force launched over two thousand heavy bombers to disrupt this attack. Castle's wing was selected to lead the mission, and he flew as co-pilot for the lead aircraft in one of his groups. It was his thirtieth mission. Castle's bomber experienced engine problems, got separated, was attacked by German fighters, and spun into a dive. Castle remained at the controls long enough for seven of the nine crewmen to parachute to safety. He and the pilot were killed when a fuel tank exploded. Castle, a courageous up-front leader, was posthumously awarded the Medal of Honor.

Brig. Gen. Frederick Castle is buried in Henri-Chapelle American Cemetery, Plot D, Row 13, Grave 53

Heavy bombing of the rail transport net throughout Germany continued, mainly conducted by the B-24 aircraft of the Eighth Air Force's Second Bomb Division. Many of these attacks were radar directed raids on limited visibility days. These could still hit larger area targets such as rail complexes and maximum precision was not required.

The heavy bomber campaign continued through the winter months of 1944-45, striking heavy industry with due attention to the priorities listed by the Combined Chiefs in the POINTBLANK directives. These were updated based on intelligence concerning the latest economic and military developments. The strikes directly and indirectly supported the land offensives and drew off considerable manpower and equipment to cope with them. Concern over the German development of jet aircraft increased interest in bringing the war to a speedy conclusion. Intelligence reports of other emerging German "wonder weapons" in addition to jet aircraft spurred commanders to increase the pace of their operations. They wanted to end the war before a scientific breakthrough could overturn the advantages they now possessed after such strenuous efforts.

The German Ardennes Offensive beginning on December 16, 1944 again diverted the Strategic Air Forces to interdiction missions. For a month they focused on transportation targets within operational reach of the battle area, in particular those directly involved in supplying the German armies fighting in the Ardennes or Alsace regions. This period of “emergency” redirecting priorities was declared by SHAEF and lasted from December 18th to January 31st. Strategic bomber forces returned to their regular POINTBLANK target priorities after that period.

The bombing damage done during this period of emergency is difficult to separate from the remainder of the overall damage assessed at war’s end, or from the damage done by the 2d Tactical Air Force and Ninth Air Force flying tactical interdiction missions. It is important to note that the generals on the ground no longer asked for carpet bombing of the battle areas. They preferred deep interdiction bombing of German supply lines and marshalling yards, keeping the bombers away from close support missions. This was a far cry from practices in Normandy, when carpet bombing was seen as essential in efforts to break open the front.

The Germans flew a few jet sorties in Alsace against US ground forces using ME 262 fighter-bombers. Hitler insisted on using this aircraft in a ground support role for which it was not suited. The ME 262 was superior in speed and armament to any Allied fighter and excelled as an interceptor. The specter of their use haunted Allied air commanders for the rest of the war and prompted more aggressive efforts at air to ground strafing to catch ME 262s on the ground. This was despite the higher losses to Allied aircraft engaged in this type of attack. The shift in priorities to interdiction missions concerned the strategic airmen, and they hastened to return to industry and oil targets. The best way to keep the *Luftwaffe* suppressed seemed to be to starve it of equipment and supplies. In the end, too few ME 262s made it into the air to achieve significant results.



The crew of the B-17 Flying Fortress “Tagalong”.

On February 22, 1945 Operation CLARION, a direct strike against the *Reichsbahn* (German National Railway) hit more than 200 separate targets in Germany simultaneously. The strikes spanned a quarter million square miles of territory. Bombers and fighter bombers hit rail junctions, roundhouses, bridges, viaducts, and junctions to overwhelm repair and replacement efforts. Fighters strafed rolling stock throughout the areas under attack. Continued attacks over time kept the Germans even further behind in their repair efforts. The results crippled German army mobility and ensured that industry could not supply itself or distribute its products.

Great Britain and the United States decided to support the Russian 1945 winter offensive driving in from the east by striking transportation centers in Eastern Germany. This led to one of the great bombing controversies of the war. Operation THUNDERCLAP was a combined bombing by night bombers of the RAF and day bombers of the Eighth Air Force that struck Dresden on February 13-14, 1945. Heavy concentrations of incendiaries and demolitions, enhanced by atmospheric conditions, created a firestorm that destroyed the center of the city. This was already crowded with refugees fleeing the Red Army. The death toll was estimated to range from 35,000 to 135,000. Dresden was a legitimate target filled with industry and military capacity, but the horrors of war nevertheless stood out in the devastating results. The U.S. Strategic Air Forces never embraced “terror bombing” in Europe or area bombing as a tactic but did use scarcely more accurate pattern bombing to ensure industrial or rail targets were hit. Civilian casualties were virtually impossible to avoid. Dresden made it clear how horrific these could be.

The strategic air forces attacked German military bases and industry throughout the winter, but the targets most frequently hit were marshalling yards. The strategic air forces dropped over 200,000 tons of bombs on rail targets between September 1944 and April 1945. Nonvisual bombing raids put 90% of their ordnance against marshalling yards using H2X radar guided systems. This was an even higher percentage than during the Transportation Plan campaign that preceded Normandy. The earlier plan had taken great care to avoid French civilian losses. No such strictures applied to German targets. Rail targets within major German cities in the Ruhr were hit on high cloud days. Some incendiaries were dropped with the demolition bombs, and rail nodes were preferred targets when visibility was too poor for precision daylight bombing.

The overall effectiveness of Allied strategic bombing remains difficult to assess. Even after the war, the voluminous United States Strategic Bombing Survey which analyzed the American portion of the campaign, listed a number of failures in the effort despite concluding that the campaign was, overall, “decisive.” The Combined Bomber Offensive was a collaborative mutually supporting campaign with “round the clock” operations designed to wear down the enemy. The Germans deployed no less than 800,000 personnel and 20,000 guns in defense of their homeland. Unquestionably, the air campaign drew off German assets that could have proven invaluable in other theaters. The sacrifices made by Allied aircrews were enormous. British Commonwealth airmen, who began the air war much earlier than the Americans, lost 55,573 killed in Bomber Command alone and dropped 988,307 tons of bombs. Their bombers flew 389,809 sorties, mostly at night. The U.S. Army Air Forces lost 30,099 aircrew killed and 51,106 missing, with an additional 13,360 wounded. Heavy bomber losses exceed 4,300, and 5,300 more were “retired” as “war weary”. The Army Air Forces flew a total of 1,034,052 sorties of all types in the European Theater and dropped 971,762 tons of bombs. The effects were devastating and were a major factor in the collapse of the Third *Reich*.

Completing the Liberation: The North Apennines and Po Valley Campaigns

The successful Rome-Arno Campaign (January 22 – September 9 1944) left the Allies ten miles north of the Arno River in the west and twenty miles north of the Metauro River in the east of Italy. Here they stalled because of heavy rains, flooding, German reserves rushed in from elsewhere, the depletion caused by dispatching seven veteran division to France for Operation DRAGOON, and the formidable defenses of the Germans' Gothic Line. In mid-August the Allies had resolved to shift their main attack from west of the Apennines to the Adriatic Coast. This acknowledged the less formidable German defenses along the Adriatic, the greater opportunities for maneuver south of Rimini than in the Apennines, and that the U.S. Fifth Army in the west had been depleted for DRAGOON whereas the British Eighth Army in the east had not. Secretly redeploying from August 15th through the 23rd, the Allies broke through the Gothic Line's outer crust in Operation OLIVE before grinding to a halt in early September. Further advance would require yet another set-piece major offensive.

The "One-Two Punch": September 10 – October 27, 1944

On September 10th Field Marshal Sir Harold R.L.G. Alexander's 15th Army Group was arrayed along and just inside the Gothic Line with Lt. Gen. Mark W. Clark's U.S. Fifth Army in the west and Lt. Gen. Oliver Leese's British Eighth Army in the east. Clark's U.S. IV Corps with two divisions stretched from the Ligurian Sea to about five miles west of Florence, where his U.S. II Corps with four divisions was jammed behind a five-mile front. The British XIII Corps with three divisions was under Clark's operational control and stretched from Florence to about fifteen miles northwest of Arezzo. From there the British X Corps with two divisions stretched to the spine of Italy, and then the British V Corps with six divisions stretched to within about a dozen miles of the Adriatic Sea. The Canadian I Corps and Polish II Corps were wedged into these last dozen miles. Alexander's plan was to use his major concentrations around Florence and along the Adriatic to mount a "one-two punch", twin drives that would support each other, devour German reserves, and maintain unrelenting pressure on the Germans. The Fifth Army would break into the imminently maneuverable Po Valley via Bologna, and the British Eighth Army via Rimini.



The Eighth Army's August drive along the Adriatic Coast was momentarily stalled on the Coriano Ridge but had, as expected, drawn German reserves away from the center. On September 10th the Fifth Army attacked with three corps abreast. The flanking corps were to close to the Gothic Line and fix the defenders while the main attack by U.S. II Corps in the center oriented down Route 65 towards Bologna. The most critical choke point along Highway 65 was the Futa Pass. Rather than assault this formidable position directly, Clark resolved to launch the U.S. 34th Infantry Division on a diversionary attack to the west of it while the U.S. 91st and 85th Infantry Divisions attacked to seize the less prominent Il Giogo Pass to the east. Il Giogo Pass was less developed and the route through it less trafficable, but its seizure would turn the defenses of the Futa Pass and force a German withdrawal.

The American advance pushed through heavily compartmented terrain dominated by broken ridges, steep valleys and rugged spurs. Major movements soon disintegrated into bitter small unit battles as each minor objective or terrain compartment was contested in turn. Visibility could be miles in one direction and meters in another. It proved difficult to mass direct fires, and indirect fires depended upon observation that was too often interrupted by terrain or weather. Individual initiative and courage proved of paramount importance. The diversionary attack of the 34th Infantry Division did draw the lion's share of the German defenders' attention, and the attacks of the 91st and 85th Infantry Divisions achieved initial surprise. Nevertheless, the fighting for Il Giogo Pass was bitter and prolonged. Patrols inched up to discover critical enemy positions, then called for pinpoint artillery fire if they couldn't take them unassisted. Companies and platoons fought fierce local battles, at times even resorting to their bayonets.

By September 18th the 91st Infantry Division was in firm possession of Il Giogo Pass and the nearby Monticelli Ridge. The 85th Infantry Division had captured Monte Altuzzo, another piece of critical terrain. The Germans launched recurrent counterattacks, which were beaten back with hurricanes of small arms and artillery fire. Casualties were heavy on both sides, but a week of savage fighting had opened a hole in the German lines seven miles wide. Sensing inevitable defeat in the battle for the Il Giogo and now outflanked Futa Passes, the Germans retired to yet another set of ridgelines to their rear. There the defenses were less developed than those the Americans had just broken through, but the terrain itself allowed for formidable defenses.



Meanwhile the British Eighth Army again attacked along the Adriatic Coast. Massing air strikes, artillery fire and armor into a relatively narrow sector, the British V Corps and Canadian I Corps battered their way through the German defenses. Despite determined resistance, they pushed on to capture Rimini on September 21st. Rimini was long viewed as the gateway to the Romagna Plain, and thus the Po Valley. The Germans fought fiercely and took heavy losses to defend it. Nevertheless, the Eighth Army's tightly synchronized firepower and maneuver proved too much for them. The Germans withdrew to the next river line north of Rimini, the first of a series they would each defend in turn. This began a three-month long operation the British would call the "Battle of the Rivers". The proximity of the Apennines to the Adriatic Sea in this region generated a sequence of small but imminently defensible parallel rivers. The British would be forced to mount one set piece river crossing after another. Each victory took time, and then required putting together yet another major operation at the next river.

Having secured the Il Gioro and Futa Passes, Clark decided to thrust with his U.S. 88th Infantry Division, then in reserve, from the Il Gioro Pass down Route 6528 towards Imola while the rest of II Corps continued down Highway 65 towards Bologna. Imola was in the Po Valley about a third of the way down the rail line between Bologna and Rimini. Seizing it would open yet another route of egress into the Po Valley and also threaten the seam between the German *Tenth* and *Fourteenth Armies*. Launched on September 21st, the attack of the fresh 88th Infantry Division began auspiciously. It turned the Germans out of formidable defenses on Mount Frena with a well-choreographed flanking maneuver, then went on to seize Mounts Capello and Battaglia in fierce fighting. This put them well forward of the spine of the Apennines and within fifteen miles of Imola. Alarmed, Field Marshal Albert Kesselring gathered four divisions and, beginning September 28th, hurled them against exposed American positions on Mount Battaglia. These were tenuously held by elements of a single battalion, already depleted by combat losses.

Mount Battaglia, "Battle Mountain", became a symbol of GI toughness in the face of adversity. Company G of the 350th Infantry Regiment was the linchpin of the initial defense. Its commander, Captain Robert E. Roeder, inspired his men by personal example in close quarters fighting through six major counterattacks. Wounded, he refused evacuation and fought on until killed by a shell fragment. The rest of the 350th moved in to support the embattled defenders. TSgt Manuel V. Mendoza was badly wounded and scorched by a flamethrower, but held off a company until help could arrive. SSgt Raymond Gregory and Pfc Cleo Peck ran out of grenades and broke up a German attack by rolling down boulders and starting a landslide. The body of BAR gunner Pfc Felix was found amidst twenty-four Germans he had slain. Lt Edmund D. Maher resorted to his bayonet when in extremis, killing four with it. TSgt Beni Mazzarella singlehandedly recaptured the "castle" on the crest of his position by blowing six Germans out of it with hand grenades. Fighting was savage, at close quarters, and often in the dark. After seven days the severely

depleted Germans gave up and backed off. The 350th Infantry Regiment had suffered 50 percent casualties but still held the mountain. Yet another legend had been added to the lore of the “drafted divisions”. The British 1st Guards Brigade assumed responsibility for Mount Battaglia on October 1st.

Meanwhile the 34th, 91st and 85th Infantry Divisions pushed on down Highway 65 towards Bologna. The German reserves diverted to the fighting for Mount Battaglia weakened defenses in this sector, and the American infantrymen advanced through the rough terrain on a broad enough front to further strain the defenders. Advancing abreast, the 34th Infantry Division pushed on to Monte Bastione, the 91st Infantry Division on to Monte Oggioli, and the 85th Infantry Division on to Monte Canda. The loss of this terrain compromised the German defense of the Radicosa Pass, the next major choke point along Highway 65. On September 28th the Germans withdrew to a ridgeline three miles north of the pass, ceding yet another critical piece of terrain to the advancing Americans.

Clark called off the drive on Imola to concentrate his assets on the push up Highway 65. He was only twenty-four miles from Bologna. Again the Germans resisted fiercely, and again the battle devolved into desperate individual and small unit actions. Here, for example, Sgt. Christos H. Karaberis of the 85th Infantry Division earned the Medal of Honor for his courageous actions while under fire. With his platoon pinned down by withering machine gun fire, Karaberis picked his way forward to extinguish five machine guns in succession, killing eight Germans and capturing more than twice as many while doing so. Despite such extraordinary courage the American advance stalled in the face of heavy casualties. The 91st Infantry Division gave up the lead on October 4th after sustaining over 1,730 casualties. The 85th Infantry Division took over the lead for another push that gained three miles at a cost of 1,400 more casualties by October 9th. The next day the 85th Infantry Division secured Monte della Formiche after heavy fighting while the 91st Infantry Division outflanked the Livergnano Escarpment from the west. The Germans withdrew to yet another ridge line, and the Americans were within ten miles of Bologna.

After further grinding attacks, Clark ordered another general assault on October 19th. The German defenses just south of Bologna were anchored on Monte Adone, Monte Belmonte and Monte Grande. The attack began after dark in a driving rain following an intense artillery bombardment. The 88th Infantry Division seized Monte Grande after fierce fighting, but Monte Adone and Monte Belmonte remained in German hands. Kesselring further reinforced his battered units, and further American attacks on October 22nd ground to a halt. Torrential rains tormented the attackers, turned supply routes into quagmires, and rendered steep slopes impassable. On October 26th the rains washed away bridges as well, cutting off supplies to forward units. Major General Geoffrey Keyes, the II Corps commander, ordered his units to fall back to sustainable positions until they could be resupplied.

Artillery Support to a U.S. Infantry Division



Almost from the beginning of American involvement on the battlefield in World War II, American artillery was recognized by friend and foe alike as more numerous, faster, and better coordinated to deliver timely and effective fire support than that of the Germans. Hitler had anticipated that airpower would fulfill many of the traditional functions of artillery, and this prospect disappeared when the Germans lost air superiority. Innovations in the early 1940s resulted in American units comprised of artillery that was either self-propelled or towed by motor vehicles, whereas the German Army still relied heavily upon horse-transport for its artillery. American units fielded large numbers of forward observers on the ground and sent others airborne in small planes to locate the enemy at a distance. Finally, the American system of centralized fire direction control coordinated all the assets assigned or attached to the division to orchestrate overwhelming fire support.

Each American infantry division was assigned three 105-mm howitzer battalions, generally providing direct support to an infantry regiment, and one 155-mm battalion in general support of the entire division. Each battalion consisted of three 4-gun batteries. In addition, each infantry regiment had a cannon company and an anti-tank company to provide local fire support. The infantry division could also rely upon additional artillery and tank destroyer battalions attached to them from corps to give them more artillery tubes for added punch, depending on the mission.

The number, type, and mobility of artillery in an American infantry division, backed by a powerful logistic system that kept the shells coming, was important to its battlefield dominance. Perhaps even more important was the robust American system of forward observers and fire direction centers (FDC). Not only did the division field large numbers of radio-equipped forward observers to front-line units, it also sent observers aloft in light planes to locate enemy troops. If these were moving forward, they could be brought under observed fire before they got close to the front lines. This web of observers reported back to FDCs at the division artillery headquarters which coordinated all the assigned and attached fire support assets.

The FDCs coordinated fire so that all of a division's assets could support a single regiment in its operations. They could also direct the fire of the artillery assets of multiple divisions and attached corps assets in support of one division's operations. During the early days of the Battle of the Bulge, for example, four divisions on the critical northern shoulder brought together the fire of all of their assigned and attached artillery assets on one threatened section to bring over 348 guns to bear against one enemy attack in one division sector. The result was overwhelming. The FDCs could also coordinate TOT, or time-on-target strikes wherein all the tubes fired at appropriate times so that all their shells landed on the target at the same time. This massive, simultaneous, barrage often left the German defenders dazed and confused, easy prey for the advancing American infantry. Mobile, lethal, timely, and well-coordinated, the American infantryman had at his back the best artillery support in the world.

On October 15th the British Eighth Army renewed its attack, driving north from Rimini. It forced the Savia River and captured Cesena. It pushed on to the outskirts of Ravenna, forcing the Germans backwards despite determined resistance. The attack progressed on a thirty-mile front, with numerous thrusts and maneuvers to force the Germans off successive positions. To the east the terrain was waterlogged and to the west it was rugged and hilly. Hard pressed and suffering heavy casualties, the Germans nevertheless kept their front intact and avoided an Allied break through. Exhausted, the British, Canadian, Indian and Polish units of the Eighth Army paused to reorganize and rebuild stockpiles forward across the swollen rivers to their rear.

On October 27th the Supreme Allied Commander in the Mediterranean, General Sir Henry Maitland Wilson, ordered a halt to the twin drives. The progress being made was not worth the price being paid. The deteriorating weather was an important factor. In the mountains swollen streams, slick slopes and mudslides made progress slow and adequate resupply almost impossible. The coastal plains were a morass. Visibility too often rendered air cover unavailable and observed artillery fire was severely restricted as well. Competition with the Allied armies in France for munitions and shipping left the Allies in Italy in short supply, and time would be needed to build stockpiles back up. Casualties had been heavy, and replacements too few. Between September 10th and October 27th the U.S. II Corps suffered over 15,000 casualties, and the British Eighth Army suffered almost 14,000 during about the same period.

The replacement of casualties presented Allied units with qualitative as well as quantitative dilemmas. This proved particularly vexing in American units, supported by an individual replacement system that fed men forward like interchangeable parts. The system did a good job of keeping the numbers up, but the integration of new men into cohesive fighting units was difficult in the face of combat. As the campaign ground on through its eighth week, green replacements added to casualties without particularly adding to accomplishments. The system worked best when combat was episodic, and units trained rigorously during the intervals to integrate the new men. The British Eighth Army was more prone to rotate units out of combat before infusing them with replacements, but this often left units in combat severely depleted. In addition, British, Canadians, Indians, Italians and Poles could not readily provide replacements for each other. Wilson's mandated halt provided Allied units a much-needed opportunity to restore their qualitative edge.

Through the Winter: October 28, 1944 - April 4, 1945

Although Wilson's October 27th order halted the Allied general offensive and abandoned prospects for decisive victory in 1944, Alexander still wanted to keep the initiative, maintain pressure on the Germans, and position himself for decisive results in an upcoming spring offensive. After a respite for rest and reorganization, he planned corps level offensives with several divisions at a time to achieve those purposes. Acknowledging that the U.S. II Corps had taken the most damage in September and October during its drive towards Bologna, he resolved to begin these initiatives in the Eighth Army sector.

From Rimini north the plains leading into the Po Valley from the Adriatic coast widen like one is moving backwards up a funnel. With each mile north further one moves, the greater the distance between the North Apennines and the Adriatic Sea. Alexander aspired to push Eighth Army as far north as he could over the winter while taking minimal losses. The broader and more open the terrain he ended up on, the greater the advantages his heavily mechanized forces would enjoy in the spring. This terrain was in the Eighth Army sector. If the British pushed as far as Imola, Alexander envisioned the Fifth Army joining the advance as well.

Staff Sergeant George D. Keathley, 338th Infantry Regiment, 85th Infantry Division

George Dennis Keathley was born on March 10, 1917 in Olney, Texas. He attended Olney High School, Cameron Junior College, and the Agricultural and Mechanical College of Texas. He joined the U.S. Army from Lamesa, Texas in 1942. By September 14, 1944 he was a Staff Sergeant and serving as guide for the 1st Platoon, B Company, 338th Infantry Regiment.



The 85th Infantry Division had just launched its initial major assaults in the North Apennines Campaign, and the 338th Infantry Regiment had seized critical terrain along the western shoulder of Mount Altuzzo. Desperate to regain this vital position, the Germans launched ferocious counterattacks on the American lead elements. Keathley assumed command of the 2d and 3d Platoons when all of their officers and noncommissioned officers were killed or wounded. Exposing himself to enemy fire, he collected and redistributed precious ammunition, assisted casualties, reorganized the position, and provided inspirational leadership. Supported by mortars, the enemy swept in with further fierce counterattacks. Heavily outnumbered but steadied by Keathley, the embattled Americans held their ground. They forced recurrent enemy attacks back with heavy casualties. Mortally wounded, Keathley continued to lead and inspire his men until friendly artillery fire and reinforcements forced the enemy to withdraw. Keathley was awarded the Medal of Honor for selfless sacrifice and inspirational leadership.

George D. Keathley is buried in the Florence American Cemetery in Plot D, Row 11, Grave 26

Allowing divisions to rotate out of the line for rest and refurbishment, the British V Corps nevertheless sustained a drive up Highway 9 towards Imola. In this it was assisted by the Polish II Corps on its inland flank. By November 9th V Corps had maneuvered the Germans out of Forli, an important crossroads controlling highways towards both Imola and Ravenna. The drive bogged down short of the Lamone River for now customary reasons of weather and determined resistance, coupled with the Allied decision to rotate units and minimize casualties.

After two weeks the Eighth Army resumed the pressure. Attacking behind hurricanes of artillery fire on December 2nd, the Canadian I Corps forced two river lines and battered their way towards Ravenna. An Italian Partisan uprising had liberated the city and driven the Germans out, enabling the Canadians to enter the city on December 4th. The 900-man communist-led Garibaldi Brigade from Ravenna was incorporated into the British force structure. Meanwhile, along Highway 9 the British V Corps pushed on towards Imola. Here it met determined resistance and faced recurrent counterattacks, but successfully maneuvered to outflank the intermediate city of Faenza on both sides. Wary of being surrounded, the Germans withdrew from Faenza. Pushing on from Faenza and Ravenna, the Eighth Army closed to the Senio River, to which the Germans had withdrawn to establish their next defensible line. The frontage the Germans had to defend between the Apennines and the Adriatic had more than doubled as a result of these November and December offensives.

At this point the British Eighth Army added troop diversions to the existing reasons for pulling its punches. The German occupation of Greece collapsed as they withdrew to avoid being trapped by Soviet offensives in the Balkans. Conflict broke out between communist partisans and adherents of the British supported government in exile. Churchill and Stalin had agreed Greece was to remain in the British sphere of influence postwar, but Churchill wanted to hastily dispatch troops to Greece to protect Stalin from temptation. The Eighth Army received orders to dispatch its Greek units and three additional divisions to Greece to assist in restoring order. At about the same time, it was notified the Canadian I Corps was to redeploy to northwest Europe to fight alongside its countrymen there for the rest of the war. These redeployments would take time, temporarily disrupt operations, and degrade offensive capability until reinforcements arrived.

A major reorganization of the Allied command structure on or about December 15th also created momentary disruption. Field Marshall Sir John Dill, chief of the critical British Military Mission in Washington D.C., died unexpectedly. Churchill chose Wilson to replace him, and Alexander to replace Wilson. The Allies chose Clark to replace Alexander in command of the Fifteenth Army Group, giving him responsibility for both the U.S. Fifth and the British Eighth Armies. Maj. Gen. Lucian K. Truscott Jr. returned from France, where he had commanded VI Corps during Operation DRAGOON, to command Fifth Army. Lieutenant General Sir Richard McCreery had taken over command of the Eighth Army from Lieutenant General Sir Oliver Leese when the latter was reassigned to Burma. He remained in command of that organization.

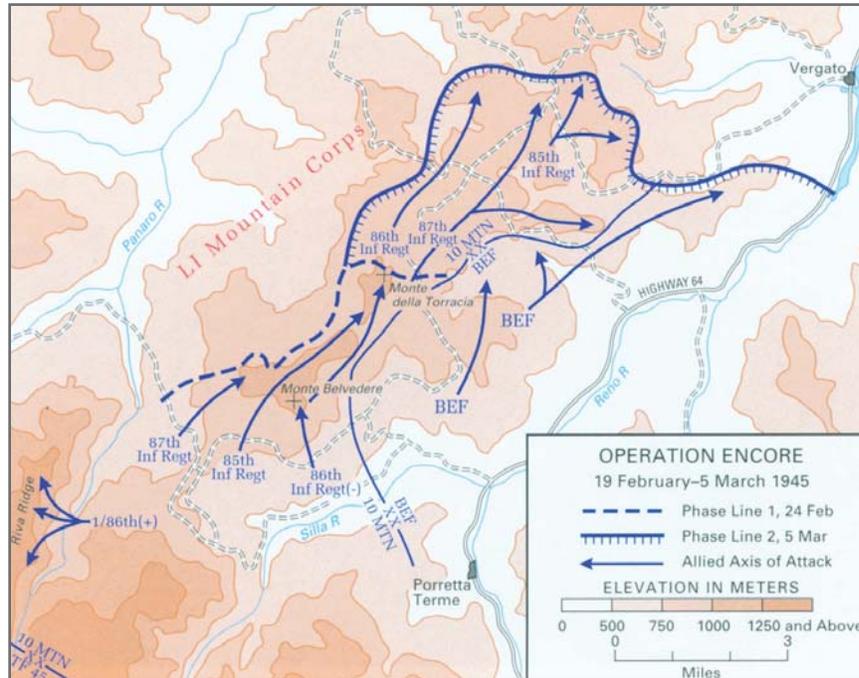
When Truscott arrived in Italy, he was presented with intelligence estimates, including ULTRA intercepts, that suggested a pending attack on his U.S. IV Corps. Since September IV Corps had been in a largely economy of force role while II Corps conducted the main attack towards Bologna. IV Corps occupied an extended frontage with newly arrived and relatively inexperienced units. Along the front it deployed the U.S. 92d Infantry Division, comprised of African Americans serving in a segregated Army; Task Force 45, an *ad hoc* formation built around repurposed anti-aircraft battalions; and the division sized Brazilian Expeditionary Force. The corps reserve, the U.S. 1st Armored Division, was a veteran unit but not particularly adapted to mountainous terrain. Noting an Axis buildup of four divisions with three more in route, Truscott shifted two regiments from the veteran U.S. 85th Infantry Division and the 8th Indian Division into the IV Corps sector to backstop his endangered units.

On December 26th the Germans launched Operation WINTERGEWITTER against the 92d Division defending between the Ligurian Sea and the Serchio River Valley. Their purpose was to cripple the division, relieve Allied pressure elsewhere, and gain a morale-enhancing offensive victory after so many grinding defensive losses of position. The Germans did penetrate the American lines in the vicinity of Barga, but Allied reinforcements quickly contained them. Their drive sputtered out a little south of Barga on December 27th. The 8th Indian Division then counterattacked and regained the ground that had been lost within four days' time.

Sustaining the Allied forces in the North Apennines through the winter of 1944-1945 proved to be in arduous undertaking. In this the Germans had considerable advantages. Backed up against the Po Valley, they were also perched on the edge of reliable supply lines. The road and rail network of the Po Valley sped supplies forward, despite Allied efforts at air interception. The only choke points were bridges, and these could be readily repaired or even replaced when damaged. Good lateral routes, particularly Highway 9 running along the north face of the North Apennines, allowed them to speed supplies and reinforcements from one sector to another.

The Allies, on the other hand, were too often at the end of difficult and circuitous routes when in the mountains. Only a few good roads ran perpendicular to the Allied front, and one had to drop all the way back to the line described by Lucca, Florence and Arezzo to find a good one running parallel to it. The terrain off the roads was formidable, dominated by steep slopes and treacherous defiles. Winter snow, mud and rain made it appreciably worse. Vehicles could not reach most of the advanced and many of the supporting positions. Indeed, the Allies had long come to rely upon mules to support their units. The Fifth Army alone employed fifteen Italian mule pack companies and almost 4,000 mules. Where mules couldn't go there were porters, most temporarily repurposed soldiers. Along the Adriatic coast the Eighth Army had more trafficable terrain in some of its sector, but this was a narrow belt with frequent river crossings.

A major fraction of the Allied effort during the winter pause was given over to improving their logistical posture prior to the spring offensive. Engineers labored to improve existing routes and construct new ones. Obstacles were eliminated and gaps bridged. Quartermasters and transporters brought supplies forward and built up stockpiles. The troops themselves tended to creature comforts to get them through the winter. Behind the austere crust of the front lines, troops winterized their quarters, medical facilities and recreation centers to make them more livable. They needed to come through the winter in good health to succeed in the spring.



Florence American Cemetery



The Florence American Cemetery and Memorial site in Italy covers 70 acres. The wooded hills that frame its western perimeter rise several hundred feet. Between the two entrance buildings, a bridge leads to the burial area where the headstones of 4,393 of our military dead are arrayed in symmetrical curved rows upon the hillside. They represent 39 percent of the U.S. Fifth Army burials originally made between Rome and the Alps. Most died in the fighting that occurred after the capture of Rome in June 1944. Included among them are casualties of the heavy fighting in the Apennines Mountains shortly before the war's end. On May 2, 1945 the enemy troops in northern Italy surrendered.

Above the graves, on the topmost of three broad terraces, stands the memorial marked by a tall pylon surmounted by a large sculptured figure. The memorial has two open atria, or courts, joined by the Tablets of the Missing upon which are inscribed 1,409 names. Rosettes mark the names of those since recovered and identified. The atrium at the south end of the Tablets of the Missing serves as a forecourt to the chapel, which is decorated with marble and mosaic. The north atrium contains the marble operations maps recording the achievements of the American armed forces in this region.

As the pages on the calendar turned, Clark committed to a few small offensives to further improve his posture for the spring. Limited objective attacks eliminated two small German bridgeheads along the Senio River. An attack up the Serchio River Valley drove off and embarrassed the defending Italian Fascist forces before itself being turned back by arriving German reinforcements. Most notably, the newly arrived U.S. 10th Mountain Division conducted Operation ENCORE to secure an additional access route into the Po Valley. Determined to avoid again being confined to slug out along Highway 65 towards Bologna, Clark instructed the 10th Mountain Division to seize Riva Ridge, Monte Belvedere, Monte della Toraccia, and other prominent terrain along Highway 64 towards Vergato.

The 10th Mountain Division had attracted large numbers of skiing, climbing and winter sports enthusiasts through an unusual recruitment campaign conducted by the National Ski Patrol System. It was purposefully light and specialized for mountain warfare, relying on 75-mm. pack howitzers rather than conventional artillery. Shortly after dark on February 18, 1945 picked climbing teams from the 86th Mountain Infantry Regiment scaled the steep face of Riva Ridge. They drove steel pitons into the rock, hooked snap links to them, and then fastened ropes to the snap lengths. Once the ropes were set, a battalion of infantrymen scrambled up behind the leading climbers. With daylight the Germans were astonished to find this force within their defenses. The mountain infantrymen easily repulsed several counterattacks, and soon took custody of the entire ridge.

Meanwhile two other regiments of the 10th Mountain Division advanced on Monte Belvedere, eschewing artillery preparations in the hope of achieving surprise. They did. The attacking mountain infantrymen were virtually on top of the enemy positions before they encountered resistance. They secured Monte Belvedere in a few hours' time. Resistance stiffened in the continued drive towards Monte della Torraccia. Here the highly mobile pack artillery came into play, as did conventional artillery directed by intrepid forward observers in L-5 spotter aircraft. These spotter aircraft also brought in over four hundred fighter-bomber strikes. Fighting was fierce and counterattacks recurrent, but by the evening of February 23rd the Americans secured the entire massif. A second 10th Mountain Division attack in early March, assisted by the Brazilian Expeditionary Force, gained further ground dominating the approaches to Vergato. The Allies were well positioned for an offensive in the spring.

Preparing for a Spring Offensive

Both sides anticipated that the winter lull in Italy would be followed by an Allied spring offensive, and both sides feverishly prepared for one. Axis forces were short vehicles and equipment due to losses in earlier fighting, but still mustered twenty-four German and five Italian Fascist divisions to defend the fraction of Italy they still held. The majority of these units were tough, experienced and well led, although generally understrength. The German *Fourteenth Army* stretched from a little south of Massa on the Ligurian Sea to the vicinity of Bologna, and the German *Tenth Army* from the vicinity of Bologna to a little north of Ravenna on the Adriatic Sea. Their forward positions from the Ligurian Sea as far as Highway 64 running towards Vergato benefitted from a considerable depth of rugged mountainous terrain with numerous successive positions. The coastal plain near Massa was narrow and confined. Near Vergato and Bologna the U.S Fifth Army had pushed far enough up Highways 64 and 65 to be on the cusp of entering the Po Valley. On the Adriatic Coast the British Eighth Army had cleared the Apennines and pushed on to a forty-mile front along the Senio River. Here further river lines rather than mountains offered the Germans their best prospects for defense.

General Heinrich von Vietinghoff now commanded *Army Group C* in Italy after Kesselring was reassigned to replace von Rundstedt on the western front. He and his commanders had recommended withdrawing from their now exposed and circuitous front lines threading through the North Apennines to shorter and more defensible lines along the Po and perhaps Ticino Rivers. This made even more sense now that the liberation of France had left him with the Franco-Italian border to protect as well. Hitler would not have it, and demanded that Vietinghoff defend as far forward as possible for as long as possible. Vietinghoff complied, but laid out two formidable defensive lines to his rear in case he was forced to withdraw. The first was the Po River, varying in width from 130 to 500 yards. Levees, robustly built towns and villages, and hasty field works made it even more formidable. A second line was in the Alpine foothills, and incorporated Lake Garda, the Adige River, and rugged Alpine terrain. These successive positions were formidable but unmanned. A critical question would be whether or not the Germans would be able to retire to them in time if forced to do so.

As spring approached Clark methodically prepared his Fifteenth Army Group for the final offensive. Units rotated out of the front lines for rest, rehabilitation and retraining. The retraining included rehearsals of assaults on specific positions and due attention to the “marching power” of the infantry. Replacements were purposefully integrated into the veteran units. Worn equipment was replaced or refurbished. Logisticians massed stockpiles forward, particularly artillery ammunition. Engineers repaired roads and railroads, built new ones, and extended pipelines forward to just behind the planned attack positions. Bridging equipment received particular attention, given the number

The Breakthrough: April 5-20 1945

Clark began his spring offensive with a diversionary attack by the 92d Infantry Division and 442d Regimental Combat Team along the coast of the Ligurian Sea towards Massa. While the 92d Division attacked along the coastal highway the 442d scaled and maneuvered through the Apuan Alps to outflank Massa from the east. Fighting was fierce. Here, for example, Pfc. Sadao S. Munemori earned the Medal of Honor for knocking out two enemy machine guns and then sacrificing his own life to save his fellow soldiers from a grenade. Massa fell to the attacking Americans, and they pushed on to reach Carrara by April 11th.

On April 9th the British Eighth Army launched its major offensive behind recurrent air strikes and a massive artillery barrage. Commando raids and a naval demonstration had already drawn German attention to the Adriatic Coast. Instead the British V Corps attacked up Highway 16 towards Argenta and the Polish II Corps up Highway 9 towards Imola. The V Corps attack was considerably assisted by an amphibious envelopment by elements of the British 56th Division across nearby Lake Comacchio. By April 18th, V Corps had secured the so-called Argenta Gap, a key piece of relatively high and trafficable terrain between Lake Comacchio and the Reno River. Meanwhile the Polish II Corps, assisted by the British X Corps to its left flank, had forced the Senio and Santerio Rivers and seized Imola. The losses of the Argenta Gap and Imola compromised the German left flank, bringing the British Eighth Army to more open terrain and the end of its prolonged “battle of the rivers”.

Clark launched his main attack on April 14th. In the U.S. IV Corps sector the U.S. 10th Mountain Division crossed the Pra del Bianco valley in the wake of a brief but intense artillery and air preparation. Overcoming minefields, numerous strong points and determined resistance, it scaled and captured the heights beyond by the evening of the first day. Meanwhile the U.S. 1st Armored Division forced its way into Vergato and ultimately seized the town in fierce house-to-house fighting, while the Brazilian Expeditionary Force captured Montese to the IV Corps left flank. Further intense fighting pushed the enemy off one ridgeline after another. The fighting often disintegrated into desperate small unit actions as IV Corps ground its way forward. Casualties were heavy on both sides. By April 19th the Americans had advanced only six miles, but the punishment they inflicted on the German brought the enemy to the breaking point.

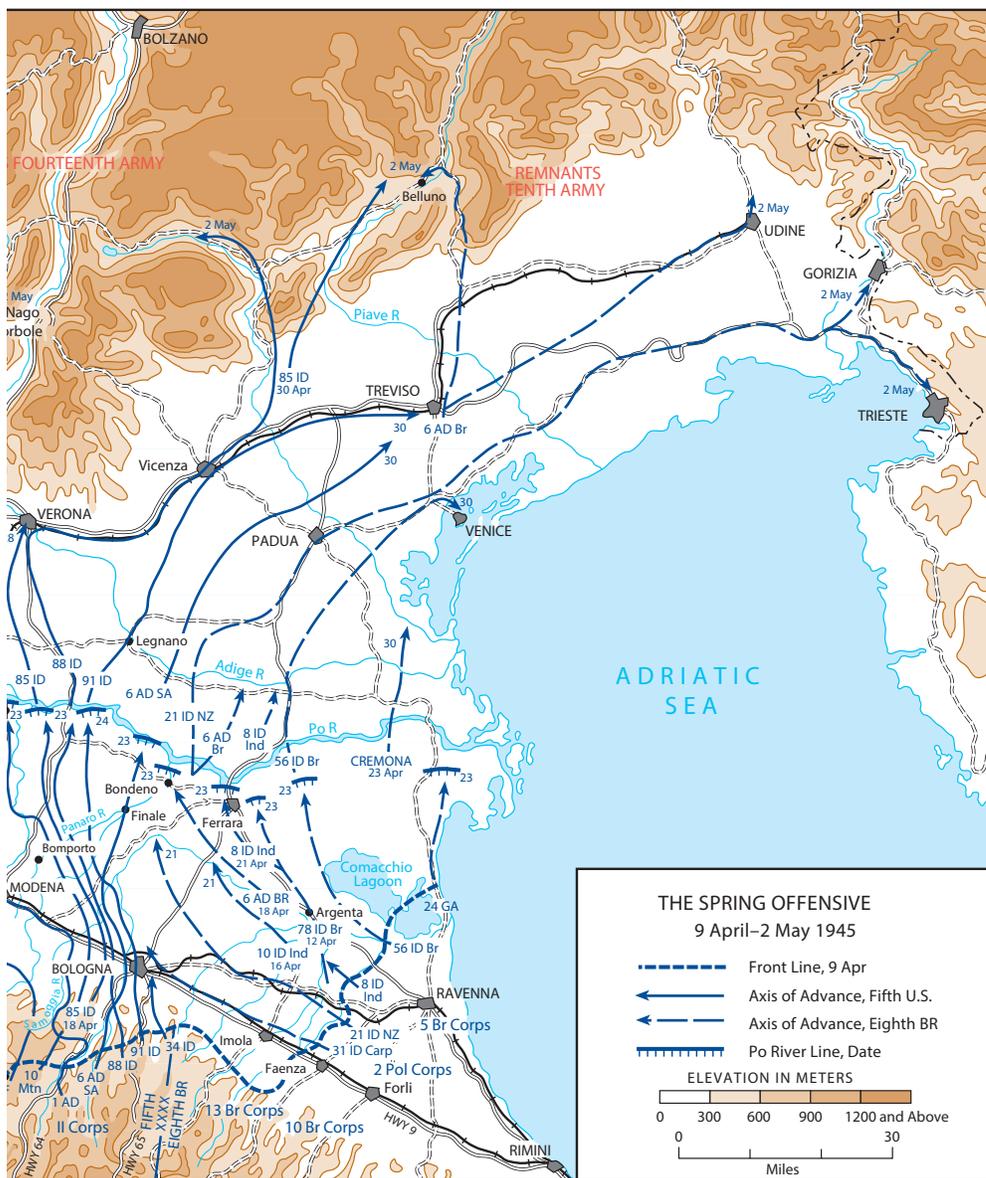
U.S. II Corps attacked a day after IV Corps, ensuring that it would have the priority of air and artillery support it needed. In the wake of over 1,000 bombers the South African 6th Armored and U.S. 88th, 91st and 34th Infantry Division pushed through the terrain astride Highways 64 and 65 towards Bologna. This was the attack the Germans had most anticipated, and they resisted fiercely from formidable positions. Nevertheless, the Allies ground their way through them. The South Africans captured Monte Sole, the 88th Infantry Division overran the

Monterumici hill mass, and the 91st Infantry Division conspicuously planted the American flag on the top of Monte Adone. The loss of this critical and highly visible peak symbolized that the German defenses south of Bologna had cracked, and the liberation of the city was imminent.

Meanwhile the U.S. IV Corps had repositioned the 1st Armored Division from the right to the left of the 10th Mountain Division, replacing it in its original sector with the U.S. 85th Infantry Division recently released from Fifth Army reserve. Further advance by the 10th Mountain and 85th Infantry Divisions unmasked maneuverable terrain in the Samoggia River valley, and the 1st Armored Division poured into it. Free at last of the mountains, the armored division drove down the river valley, destroying the few German tanks that were able to intercept it in a series of sharp engagements. With the enemy unhinged, the 10th Mountain Division pushed on another six miles to seize Monte san Michele, capturing 2,900 dispirited prisoners of war as it did so. All across the front German forces sought to disengage before they could be surrounded.

By April 20th the operational situation in Italy had fundamentally changed. The Fifth and Eighth Armies were both clear of the difficult terrain that had bedeviled them for so many months. The Fifth Army was at last out of the North Apennines and the Eighth Army out of the relentless series of rivers running parallel to its front. Since entering Italy in September 1943, Allied armies had never been presented such expanses of open terrain across which to maneuver. At last the mechanization of their forces and the marching power they had inculcated into their infantry could come into play. German units, forced to withdraw in daylight as well as darkness, would become easy prey for Allied air strikes. Clark ordered Truscott's II Corps to encircle Bologna and link up with the Eighth Army at Bondeno, twenty miles to the north. He wanted to trap as many of the retreating Germans as he could before they reached the Po River. Meanwhile Truscott's IV Corps was to drive past Modena and on to the Po, crossing it themselves.





The Pursuit: April 21 – May 4, 1945

The U.S. 34th Infantry Division captured Bologna on the morning of April 21st, but Truscott had it turn the city over to his Italian troops immediately and speed west towards Modena. Meanwhile the South African 6th Armored Division and U.S. 88th Infantry Divisions enveloped Bologna to the west and drove towards Bondeno. The South African tankers served as the spearhead while the American infantrymen cleared the terrain left in their wake. Soon long columns of prisoners were streaming to the rear. The U.S. 91st Infantry Division hooked around Bologna on a shorter arc, capturing the airport as it did so. Further west the U.S. V Corps advanced into the Po Valley on a broad front, with the U.S. 1st Armored Division on the left, the U.S. 10th Mountain Division in the center, and the U.S. 85th Infantry Division on the right. The Panaro River, a tributary of the Po, could have been an obstacle, but the 10th Mountain Division reached it quickly enough to capture a bridge intact.

By April 23rd Allied units were strung out along the south bank of the Po River from west of San Benedetto to the Adriatic Sea. The South African 6th Armored Division leading the U.S. II Corps and the British 6th Armored Division leading the British V Corps linked up at Bondeno, isolating German units that had not yet escaped from east of Bologna. Meanwhile the U.S. IV Corps pushed the Brazilian Expeditionary Force and U.S. 34th Infantry Division west along Highway 9 towards Piacenza to isolate Germans trying to escape from the western portions of the North Apennines. The pace and vigor of the Allied advance ultimately captured over 100,000 enemy prisoners of war south of the Po River. This hopelessly compromised German efforts to reach and man their second line of defenses. On the downside, Allied air strikes and German sabotage had demolished the bridges across the Po River. Everywhere the Allies were presented with a water obstacle over a hundred yards wide.

Clark and his commanders had anticipated the requirement for assault boats and bridging equipment. Fifty M-2 assault boats arrived behind the 10th Mountain Division shortly after it reached the Po River. These enabled it to ferry two regiments across the river during the day of the 24th, and another one that night. The 88th Infantry Division pushed two bridgeheads across the Po on that same day, and the 91st Infantry and South African 6th Armored Divisions had forces across it the next day. The hasty crossings reflected a combination of forethought and improvisation. Assault boats and combat bridging came forward in the wake of the advancing units, but ferries, local ships and boats and whatever else seemed likely to float was pressed into use as well. Within two days Army engineers spanned the Po River with proper pontoon and treadway bridges, enabling tanks, other vehicles, heavy equipment and reinforcements to pour across in support of the expanding bridgeheads.

With the Po River line breached, Clark next set his sights on Verona and the Adige line. The prospect of some sort of “Alpine Redoubt” as a last-ditch stronghold haunted Allied leaders, and Clark wanted a quick thrust into the Alps to preclude one. The 10th Mountain and 85th and 88th Infantry Divisions surged towards Verona, commandeering captured vehicles and even bicycles as they did so. The three divisions converged on the city, and the 88th Infantry Division captured it on the morning of April 26th after a fierce night battle. This thrust compromised the Adige line, split the Po Valley east and west, and separated the German *Fourteenth* and *Tenth Armies* from each other.

The 88th Infantry Division pushed northeast toward Vicenza, capturing it on April 28th. Meanwhile the 91st Infantry Division crossed the Adige River at Legnano. The South African 6th Armored Division tied the Fifth Army’s right flank into the British Eighth Army, which in turn advanced towards Padua and Venice. The 10th Mountain Division pushed up the east shore of Lake Garda, pinching out the 85th Infantry Division. The 85th went into army reserve. Further west the 1st Armored Division spread out to secure the ground between Lakes Garda and Como, and the 34th Infantry Division captured Parma, Fidenza and Piacenza. Even further west the 92d Infantry Division and 442d Regimental Combat Team continued their advance up the Italian Riviera through La Spezia and Genoa. As they approached Genoa the 4,000-man Axis garrison surrendered to Italian partisans, and the Americans entered the city uncontested on April 27th.

With resistance collapsing everywhere, German emissaries arrived at the 15th Army Group Headquarters at Caserta on April 28th to negotiate a surrender. They signed surrender documents the next day, with the ceasefire to go into effect at noon on May 2nd. The reason for the three-day delay was the time that would be necessary for the Germans to overcome their shattered communications and notify their scattered units. Between April 29th and May 2nd the Allies overran what remained of the Po Valley, taking most of the *Ligurian Army* along the Franco-Italian border as well as the German *Tenth* and *Fourteenth Armies* into captivity. Partisans captured and executed Italian dictator Benito Mussolini and strung his body up by the heels in the streets of Milan. On the afternoon of May 3rd Clark officially accepted the German surrender in a ceremony at his Caserta headquarters.

There were still lingering concerns about an Alpine Redoubt, and the possibility that the SS Headquarters at Bolzano might not accept the verdict agreed to on April 2nd. Accordingly, the U.S. 88th Infantry Division was directed to push into the Brenner Pass, seize Bolzano, and link up with American forces operating in Germany. Bolzano fell after modest resistance. Pushing on through the Brenner Pass, the 88th Infantry Division met the U.S. Seventh Army’s 103d

Italian Mule-Pack Companies

Operations in the rugged terrain of Italy often carried U.S. forces onto terrain where trucks could not follow. Porters were an option for resupply, but this was manpower intensive, inefficient, and too often diverted troops from other vital missions. American artillerymen of a certain age had had ample experience with animal transportation, as had others in selected branches. They sought similar support in Italy, and soon found it in Italian mule-pack companies.



Italy became an ally with the Salerno landings, and its army had long experience operating in difficult terrain. Mule-pack companies were part of the Italian Army's force structure, and their muleteers came under military administration, discipline and supply. American divisions were eager to acquire operational control of such valuable assets. When the 88th Infantry Division arrived in Italy in early 1944, for example, it was assigned four Italian mule-pack companies with 450 muleteers and 1400 mules. These were under the command of a major in the Italian Army.

Close liaison between American front-line units and the mule-pack companies moving through dangerous terrain was vital. American soldiers were attached to mule pack companies at a ratio of one to ten. Knowledge of two things was critical: mules and the Italian language. The draftee divisions had numerous soldiers experienced with mules drawn from such states as Missouri or those of the South. These knew little Italian. They also had ample numbers of bilingual Italian-Americans from major eastern cities. These knew little about mules. The field expedient was to pair a mule-wise "country boy" with a bilingual "city slicker" and assign them together to a mule-pack company. The combination worked well, and often resulted in life-long friendships. It also yielded a family of ribald sung doggerel that generally began with "Hey, Paesano ..." before moving on to topics of young male interest in a hybrid tongue.

Mule trains could be dangerous. They proved a preferred target for bypassed German forces who still had fight left in them. The muleteers were soldiers and had a limited capacity for self-defense, and the reserve companies of forward units were mindful of the supplies coming up behind them and the wounded being withdrawn. More than once an engagement that began with the attempted ambush of a mule train evolved into a spectacular shoot-out. Tracking the units they were to resupply was a critical task for the mule trains. Advancing units got into the habit of trailing C ration debris behind them like Hansel and Gretel's pebbles, since only Americans ate C rations. In relatively stable situations rendezvous points were established or unit representatives visited the mule train staging areas daily.

Mule operations presented recurrent dilemmas with respect to the supply of mules and boots. A centralized system developed to purchase mules en masse, reconciling competing demands, assuring adequate veterinary support, reducing prices, and assigning the mules where needed. Muleteers wore out boots quickly with all their travels to and fro, and were constantly in need of replenishment. Technically the muleteers were in the Italian Army, and unauthorized resupply through U.S. channels. Enterprising supply sergeants soon figured out ways around this bureaucratic myopia. The Italian Mule-Pack Companies remained well supplied with mules and boots, and went on to provide invaluable service in the liberation of their country.

Infantry Division coming the other way. The Allied Northwest European and Mediterranean Theaters had at last linked up. It is somehow fitting that both of the units involved in the link up were American draftee divisions.

Epilogue

The North Apennines and Po Valley Campaigns completed the liberation of Italy. Valuable cities, bases and infrastructure came under Allied control, including the heart of Italy's industrial production. Units the Germans could ill-afford to divert were drawn from France, Russia and the Balkans to contest the Allied advance. The cost was high, if episodic. Recurrent major offenses in the North Apennines and along the Adriatic Sea battered their way forward in difficult terrain and awful weather. The Germans lost considerably more than they could afford, but their skillful defenses greatly delayed the Allied advance. Nevertheless, the Allies repeatedly reorganized, absorbed reinforcements and replacements, and chewed their way forward through the Gothic Line. By the spring of 1945 hard fighting brought the Allies to the edge of the imminently maneuverable Po Valley. The subsequent triumphant Po Valley Campaign was a masterpiece of mass, mobility, momentum and maneuver. Hard fighting and careful preparation had brought the Allied armies in Italy to a peak of effectiveness. This made the final offensive look easy; it need not have been. At a cost of over 300,000 casualties to themselves, Allied armies in Italy ultimately killed or captured over a half a million Germans and allied Italians during 602 days of continuous warfare since September 1943. This was manpower the Germans desperately needed in other theaters. The brutal statistics were that the Allies could afford the losses and the Germans could not. In addition to supporting fighting on the ground, Allied air forces operating from Italian air bases carried the war into the German heartland in the strategic bombing campaign. Allied naval forces swept the Mediterranean to maintain it as an Allied lake and assured that the Allied enterprises in both Italy and Northwestern Europe remained in supply. Working together, Allied forces in Italy contributed heavily to the ultimate Allied victory in World War II.

Rhineland Campaign, Part I

September 15 to December 15, 1944

The new Allied command arrangements on the Western Front went into effect on September 15, 1944 as the Mediterranean Theater forces that landed in southern France in August transferred to Eisenhower's Allied Expeditionary Force. The naval units in adjoining waters and air forces on the continent were also assigned to appropriate commands under SHAEF. The strategic bomber forces of the United States Strategic Air Forces, Europe and RAF, Bomber Command, remained under national command, but were available to SHAEF through coordination with the Combined Chiefs of Staff. Eisenhower's force totaled approximately 2.5 million men, including forty-six divisions and about 13,000 planes. Three Allied Army Groups, the 21st, 12th, and 6th, were now arrayed roughly on line from north to south. Only Bradley's centrally located 12th Army Group was a purely national organization, exclusively composed of American units.

Eisenhower arrayed this force to execute his broad-front strategy. Every division was to be engaged in the fight, stretching enemy defenses and forcing him to commit his reserves to keep his line from breaking in any one sector. Thinned out, he would be vulnerable to attacks at locations chosen by the Allies. However, this dispersion of Allied forces inhibited concentration on any major avenue. It dispersed limited supplies, precluded sustained offensive operations on any given axis, and diluted air support. Commanders faced hard choices deciding which attacks would be main attacks and which would provide support. Recognizing the importance of the Ruhr industrial area to sustaining the German army, Eisenhower tended to give priority to Montgomery's northern front in his directives and messages to the Combined Chiefs.

Opposing the Allies was a German military machine still formidable despite recent losses in both eastern and western theaters. The total German strength in all services was ten million men and women. It was hardpressed on all fronts. The western Allies had over sixty divisions on hand, with an additional thirty divisions on the way to Europe. In the east, the Soviet Red Army had created more than 600 divisions of varying size during the war. Many of these had been destroyed, but not without exacting a heavy toll on the Germans. The Soviets maintained approximately 300 divisions at any given time. Hitler's paper strength on all fronts was 252 divisions. Many of these were understrength and some mere shells. They suffered from severe shortages of equipment and supplies of all types, especially fuel.

The enemy's strategic situation, although critical, was not hopeless. However, Adolf Hitler seemed determined to squander military and economic resources pursuing ethnic policies pertaining to occupation and genocide that disregarded decency and humanity. Vast numbers of personnel, trains, and infrastructure committed to National Socialism's calculated barbarism drained his war capacity. Hitler's war economy encompassed the mobilized industries of conquered and occupied nations such as Poland, Czechoslovakia, the Balkans, Hungary, Norway, the Baltic States, and northern Italy. These enslaved states provided foodstuffs, supplies, and manpower. Their ill-will and unreliability posed yet another threat to *Das Reich*. "Neutral" Sweden provided nickel and iron ore that helped keep German war industries supplied. Control of the Baltic Sea was vital to sustaining this supply.

By the fall of 1944, nearly all of Hitler's heavy industry was exposed to sustained aerial bombardment. Factories were hit in daylight by the precision bombing raids of the U.S. Strategic Air Forces (USSTAF) based in England, France, and the Mediterranean. At night, the RAF Bomber Command, based in the United Kingdom, conducted area bombing raids hitting factories, railyards, and cities. The Red Air Force focused on attacking tactical targets in direct support of ground operations, along with some transportation interdiction missions.

The Germans suffered heavily from oil and petroleum shortages caused by American bombing. The Fifteenth Air Force based in southern Italy hit the Ploesti oil fields in Rumania repeatedly beginning in July. They struck other oil targets and synthetic fuel production plants in concert with the Eighth Air Force, drastically reducing German fuel supplies. Despite dramatic growth in the production of some items made possible by the transfer of production to scattered plants and underground facilities, the lack of fuels made sustained mechanized operations highly difficult. Fuel shortages curtailed pilot training so much that German pilots became ever less effective. German motorized movements and armor operations were often severely limited, and sometimes simply impossible. German military planning became highly contingent on fuel availability, which varied widely. Concentrating for large operations required theater level decision authority, often leaving local units relatively immobile.



American soldiers inspect a captured German *Sturmgeschuetz*

German forces on the Western Front, again commanded by Field Marshal Gerd von Rundstedt, included forty-eight infantry and fifteen *panzer* divisions and approximately 700,000 German soldiers. These units were severely understrength, however. Even as late as the second week of October, SHAEF's intelligence rated these divisions to be equivalent to about twenty infantry and six *panzer* divisions in strength. Hitler ordered that no ground must be given by any soldier for any reason. He believed that this would allow his forces to protect the vital Ruhr and Saar industries, hold the strategic airpower of the Allies at its farthest range, and force the enemy into direct battle for each inch of ground. This strategy, however, surrendered tactical flexibility, inhibited the ability of commanders at all levels to maneuver, and prohibited tactical withdrawals, even when the move might preserve at-risk manpower and occupy more defensible terrain. This prevented moves to economize forces by shortening lines or giving up ground even when it was impossible to hold.

General Eisenhower's new campaign guidance was that Montgomery's army group, supported by the U.S. Ninth Army, was to concentrate on securing Antwerp, conduct operations to breach their sector of the Siegfried Line, and then move to seize the Ruhr industrial complex. To Montgomery's south, in the 12th Army Group sector, he directed Bradley to free the Third Army to attack eastwards to seize the portion of the Siegfried Line that covered the Saar and then seize Frankfurt. In Bradley's eyes, this equated the Saar with the Ruhr, which was the main Allied objective given to SHAEF by the Combined Chiefs.

Eisenhower continued to believe that the main Allied effort should remain in the north, emphasizing the need to open the Channel Ports and Antwerp. To do this Allied forces had to maintain pressure on the enemy forces along the north coast. This would potentially open an avenue to cross the northern Rhine and allow a direct thrust into the Ruhr. He agreed that Montgomery could make the best use of the First Allied Airborne Army due to the reach of aircraft that remained based in the UK, fuel shortages on the continent, and strong flak concentrations over possible airborne targets in the central front.

The planners of the First Allied Airborne Army had studied a number of possible objectives after airborne units were withdrawn to England following their use in Normandy. Before planning could be completed for the airborne assaults, many of the potential objectives were overrun by the fast-moving Allied armies. The most lucrative potential targets seemed to be bridges over three rivers and canals across Holland that skirted the Siegfried Line to the north and would place the invaders on the deep flank of the Ruhr. Success in such an operation would place a force in a position to cut-off the remaining Germans in western Holland, accelerate the capture of Rotterdam, the second largest port in the north, and support the liberation of the rest of Holland. This was precisely the type of strategic turn Eisenhower was looking for. Montgomery's ground forces, however, were severely stretched holding the longest front of the three army groups. The north coast absorbed his Canadian Army, which had one of its corps grounded in Normandy since its transportation assets had been taken to support the other two corps. Of those two corps, one full strength corps remained at the Dutch border and the other was scattered widely as it moved up.

Montgomery's directive in September rolled up several previous directives which had come out in rapid succession, all designed to set up his advance along the coast and keep his main force advancing eastward to seize a Rhine bridgehead before the Germans could establish a solid defense. Eisenhower encouraged this. The capture of Antwerp intact had been a limited success since Montgomery had not yet cleared the sixty-mile long Scheldt Estuary needed to make it operational. Montgomery needed to bring supplies through the still un-opened Channel ports. Bradley's forces were also still dependent on supplies coming over the beaches. Patton had invested the major Brittany ports but had so far failed to capture them. The ports in southern France, Marseilles and Toulon, were barely functioning at this point and provided little support to the 12th Army Group.

Eisenhower decided on a major change to the logistical system and ordered that Bradley get more of his supplies through Antwerp, once secured, in addition to what he could bring up from Marseilles and Toulon. This left the 6th Army Group more capable of ensuring that their own supply needs would be met while tying 12th Army Group closer to the northern posts. Desirous of maintaining Allied momentum and hoping to use airborne units for a major strategic gain, Eisenhower accepted the 21st Army Group's plan to capture the Channel Ports and fully open Antwerp. This would open up a chance for Montgomery to use the airborne forces to seize Dutch bridges over the lower Rhine in an operation initially named COMET. Bad weather delayed the launching of COMET. During the delay, Allied intelligence noted a buildup of enemy forces in the target area. This, added to a reconsideration of his own readiness levels, caused Montgomery to recast the plan into a new operation called MARKET-GARDEN.



The port at Antwerp supplies vital materiel for the attacking American 6th Army.

Operation MARKET-GARDEN

The plan called for the British and Americans to use all available airborne forces to seize a sequence of bridges along a single narrow road leading up to and over the Rhine. This part of the operation was named MARKET. The airborne drops would take the bridges behind enemy lines and would then facilitate the movement of a large ground force to move up the road and race across the Rhine. The ground link-up operation would be called GARDEN. GARDEN would eventually use all three corps of Lt. Gen. Dempsey's Second Army, but initially featured a narrow thrust by Lt. Gen. Brian G. Horrocks' XXX Corps up a single road. The First Allied Airborne Army produced the air plan and the Second Army the ground attack plan to link-up with the airborne drop zones.

Montgomery, newly promoted to Field Marshal, kept his eye focused on the Ruhr as the main objective of his armies, intending to pick up the ports along the way as he pushed Dempsey's Second Army east across the lower Rhine. He understood from his conversations with Eisenhower that Hodges' U.S. First Army would cooperate by encircling the Ruhr from the south. Montgomery believed he could maintain forward movement and clear the ports at the same time. Stopping to clear the ports first would only guarantee that his forces would face tougher defenses manned by reformed German units when he resumed his attack east. His directive M525 confirmed the Army missions. The Canadians, having recently seized Le Havre, would use their I Corps to seize Boulogne and then Calais, bypassing Dunkirk for later capture. Antwerp would then be opened by British I Corps after moving from Le Havre. Further operations would be oriented on taking Amsterdam. Dempsey's task was to seize the crossings at Nijmegen and Grave with the airborne corps, and then advance on a line to Osnabruck-Hamm-Munster.



Paratroopers of the 82d Airborne Division being dropped near Grave in the Netherlands during Operation MARKET-GARDEN.

The U.S.-U.K. plan for MARKET-GARDEN originally called for smaller airborne drops to seize the bridges at Nijmegen and Arnhem, but when German defenses increased in the target areas, the plan was increased to a full three division drop. Paratroopers from the U.S. 101st Airborne would land near Son, the 82d Airborne near Nijmegen, and the British 1st Airborne, reinforced by the Polish 1st Independent Parachute Brigade, outside of Arnhem on the north bank of the Rhine. Planners anticipated light resistance. As it turned out, the unexpected concentration of German reserve units, including an *SS Panzer* corps, in the Arnhem area would prove fatal to the plan.

The operation was launched on September 17th with waves of planes and gliders flying from British airfields into Holland. The bridge at Son, near Eindhoven in the U.S. 101st area, was blown by the Germans before the “Screaming Eagles” could reach it. It had to be rebuilt, delaying the ground link-up force. This southern stretch of road saw so many attacks by German troops attempting to cut off British XXX Corps that it became famous as “Hell’s Highway.” The critical Nijmegen bridge, the main target of the 82d “All American” Division, was not destroyed but the German defense was so stiff that it had to be taken by an assault from the other side of the river. A battalion of the 504th Parachute Infantry of the 82d conducted an unexpected daylight river crossing in boats over the Waal River while under fire. At Arnhem, the British airborne forces had been forced to drop over six miles from the main bridge over the Rhine. They managed to get only a single battalion close enough to attack the bridge and failed to secure it. By the time the XXX Corps came within ten miles of Arnhem, the British force clinging to the northern part of the Arnhem bridge had been overrun. The bulk of the dropped force never got within six miles of the main bridge due to German armor reinforcements from *II SS Panzer Corps*. These converged on Arnhem from their assembly areas a mere fifteen miles away.

An abortive assault by reinforcing Polish troops across the Rhine failed to gain its objectives, and lack of ammunition convinced the British to withdraw the collapsing airborne perimeter before it was overwhelmed. During the night of September 25-26, British survivors stealthily withdrew across the Rhine using boats and cables. MARKET-GARDEN cost over 17,000 Allied casualties along with those of some 500 Dutch civilians.

The plan had been too ambitious: it was literally a “bridge too far.” Tactical intelligence had been hampered by the lack of photo intelligence of unexpectedly strong enemy positions, there were serious communications problems, and command of the operation was complicated by national differences and procedures. Weather delayed supporting air lifts with reinforcements and supplies. The new Airborne Army was still learning its craft and suffered during the process. It was to perform more effectively in its next battle, but damage to Allied momentum had been done.

MARKET-GARDEN was a bold operation that achieved many of its initial objectives but failed to “jump the Rhine.” A sixty-mile corridor had been driven into German lines and most of Holland south of the Lower Rhine fell into Allied hands. Montgomery’s British forces prepared to drive southeast to clear the rest of the Rhineland while his Canadian units finished clearing Antwerp’s approaches. The bitter fighting in Holland, although not primarily an American fight, did draw in two more U.S. divisions, the 7th Armored and 104th Infantry, in October and November. The recently arrived Ninth U.S. Army, commanded by Lt. Gen. William H. Simpson, would fight here as well, alternately under Montgomery’s and Bradley’s operational command at various times.

Montgomery tasked the northern-most Allied army, the Canadian First Army, with clearing the Channel ports and opening the Scheldt Estuary at Antwerp. This challenge stretched General Crerar’s resources as he was laying siege to Boulogne, had forces outside Le Havre, and had other units stretched rearward along nearly two hundred miles of coastline clearing pockets of German resistance. His use of most of his available transport to keep one corps focused on Antwerp left two of his corps nearly stationary. With priority going to MARKET-GARDEN, Montgomery settled for one major port being cleared with two put on hold. By the last week of September, Crerar’s Canadian First Army was clearing the area between Bruges and the western Scheldt. The operations to seize Walcheren and Beveland Islands (Operations INFATUATE and VITALITY, respectively) were on track. These began in late October and finished in November. An amphibious attack captured Walcheren Island after half the island was flooded to ease its seizure. While the sixty-mile long waterway was swept of mines, the harbor remained unusable till the end of November. Then it became the major harbor to supply the Allies in the west. Montgomery’s and Bradley’s supply problems were for the most part eased.

12th Army Group Drives East

Bradley's 12th Army Group held the approaches to two of the major avenues into Germany. He chose to put an army against each, favoring neither with respect to supply or air support. This defied the standard practice of weighting the main attack with the priority of forces, reinforcements, and supplies. Lt. Gen. Hodges's First Army was designated the main attack with Lt. Gen. Patton's Third Army as the secondary attack, although Patton's out-sized personality at times overwhelmed his designated role. Patton faced the strongest German concentration of divisions but continued to believe with sufficient supplies he "would break through the Nancy Gap easily and race to the Rhine."

General Bradley expressed his intent to seize bridgeheads over the Rhine in the sector between Mannheim and Cologone. First Army was to advance in sector to seize crossings in the vicinity of Koblenz, Bonn, and Koln. Third Army would attempt crossings near Mannheim and Mainz. He planned for Lt. Gen. Simpson's Ninth Army, still holding Brittany but shortly to move up, to occupy the front between First and Third Armies. However, when it finally completed its move forward, Ninth Army shifted to the north of First Army to occupy the sector just south of the British 21st Army Group.

Lt. Gens. Hodges and Patton launched limited attacks in mid-September to the extent allowed by their straitened logistical means. Hodges held up his First Army until sufficient artillery and fuel could be gathered for a VII Corps attack into the Stolberg Corridor. Collins was assigned a 35-mile front and concentrated most of his power in the north of his sector. The 1st Infantry Division, the "Big Red One", and 3d Armored Division, "Spearhead", moved side by side to clear a nine-mile wide corridor south of Aachen while the 9th Infantry Division spread itself thinly on a wide encircling movement. The "Old Reliables" of the 9th covered the inner and outer flanks of woods to the east and south of Aachen leading to the town of Huertgen. The 4th Cavalry Group screened the open flank towards Lammersdorf.

Hodges planned to encircle Aachen with Collins' VII Corps to the south and east and Maj. Gen. Corlett's XIX Corps to the north. Aachen was the first major city of Germany reached by the Allies and was the former seat of the Holy Roman Empire. Hitler was aware of the symbolism of the city in which Charlemagne had established the first great Germanic Empire: the First Reich. When the local commandant initially intended to surrender the city to prevent its destruction, Hitler had him arrested and ordered the city defended. Civilians who had not been able flee the city were condemned to be caught up in the battle.



Third Armored Division tanks assemble outside Breining, Germany.

V Corps, south of VII Corps, stretched across Luxembourg while attempting to link-up with Patton. Patton's Third Army was moving towards Nancy on the Meuse River. The intention of the Allies was to close on the Rhine after destroying enemy forces defending at the German border. Due to stretched Allied logistics and surprisingly strong defenses, this led to a series of battles of attrition against dug-in German forces. These were much like the initial battles in Normandy where movement was only possible after the main enemy forces were brought to battle and defeated.

Maj. Gen. Leonard Gerow's V Corps pulled up on the German border, husbanding supplies for a concerted First Army attack into Germany. The switch from exploitation to deliberate attack forced units to stockpile ammunition, especially for their artillery and mortars, in sufficient tonnage for a sustained fight. Gerow needed time to test the enemy's defenses, draw his forces on line, and coordinate attacks in conjunction with Third Army. Gerow concentrated his 28th and 4th Infantry Divisions in the northern third of his sector and stretched the 5th Armored Division along his remaining frontage. In many ways, the terrain and the mission for the corps were a poor match. To provide more infantry support, the armored division received a regimental combat team (RCT) from the 28th Division. This left five regiments in the north. With the additional RCT, General Gerow stressed that the armored division would have to exert itself and keep up with Patton's attack.



An M10 tank destroyer of the Third Armored Division in Metz.

The 12th Army Group intended to conduct two simultaneous attacks, permitting each army to develop its own avenue of attack. First Army maintained its main effort in its northern avenue toward Aachen and the Huertgen Forest. Third Army attempted, even with fuel shortages, to maintain their movement across the Meuse to encircle Nancy and lay siege to Metz. Having two main efforts was not a doctrinal solution and it stretched the 12th Army Group's logistical support to its limit. However, it was in the spirit of maintaining the broad-front strategy and pressing the attack everywhere possible.

Bradley viewed his army group as essentially separate from the other two groups, leaving Eisenhower to harmonize his operations with those of the others. Allied forces steadily moved east throughout the fall, clearing the ground of German soldiers up to the Rhine. General Eisenhower believed that the bulk of the German army in the west could be destroyed west of the Rhine, making the actual crossing of that final obstacle much easier and ending the work much quicker.

Eisenhower recognized that the ultimate objective, political, military, and economical, lay in the northern plain of Germany. First, his forces had to overrun the all-important Ruhr basin where the largest concentration of German industry lay. This would irredeemably cripple the German war machine. Secondly, Germany's political heart, Berlin, was in the north and on a direct line across the relatively open northern European plain from the Ruhr. In dry weather the plain was an excellent maneuver zone for armor. This was offset by the fact that in wet weather its bogs and complex lattice work of creeks and canals were problematic for rapid movement. Nevertheless, it lacked the hills, valleys, and complex terrain of central and southern Germany which could be more easily defended and was less advantageous for the Allied armor.

Hodges' First Army was now centered on perhaps the best highway to the center of the Reich, if not to its industrial heartland to the north. At the beginning of September, he commanded the two veteran D-Day assault corps, the V and VII, as well as the less-experienced XIX Corps. The army had moved circuitously for four hundred fifty miles from the beaches, with three attempts at encircling the Germans: at Falaise, near Elbeuf, and finally outside Mons. Each had netted large numbers of German prisoners. In the ten days following the encirclement at Mons, his army had liberated the Grand Duchy of Luxembourg, skirted Belgium while supporting the British liberation of Brussels, and seized Maastricht. On the eleventh of September First Army patrols entered Germany, the first U.S. troops to do so. The U.S. Army that had been first into Europe now had troops in five countries: France, Holland, Belgium, Luxembourg and Germany. From south to north, its V, VII and XIX Corps with eight divisions were on the border of Germany. Six divisions had even sent a few small patrols inside Germany.

Hitting the West Wall

During September, Hodges' divisions moved to develop the situation along the German border, both to penetrate German defenses where possible and to discover enemy preparations for defense or counterattacks. Supply shortages mandated that full-scale attacks would be severely limited as artillery ammunition and fuel was in short supply. Small gaps discovered in the German defenses were soon filled by hastily gathered enemy units before the Americans could follow up and widen the gaps into large breaches. Bradley's practice of stopping no one to favor an army or even a corps left everyone short of fuel and ammunition. The Germans rapidly identified American thrusts and filled holes with hastily rearmed reserves. They mustered enough forces to man the partially constructed West Wall defenses, called by the Allies the "Siegfried Line." By mid-September First Army had a new fight on its hands.

General Gerow's V Corps hit the West Wall first. What the Allies termed the "Siegfried Line" was less an actual line than a continuous band of interlocked emplacements and pillboxes extending from Kleve in the north to the Swiss border along the German frontier. Its depth and careful placement of fortifications reflected the perceived nature of the threat both geographically and militarily. Each potential avenue of approach into Germany was blocked by fortifications, pillboxes, tank traps, and minefields carefully sited to take advantage of the terrain. V Corps' sector stretched from south of Echternach on the Luxembourg border to north of Losheim in the northern part of the Losheim Gap. The Gap was behind the Schnee Eifel ridge, a large seven-kilometer hogback ridgeline that would feature heavily in the campaign's history.

The Siegfried Line



The Siegfried Line defenses on the border between France and Germany, or the West Wall, had their origins in fortifications prepared to defend the German states from French attacks in the 18th and 19th centuries. This changed after the rise of the German Empire, when they proved better suited as a springboard of invasion from Germany into France. As late as World War I, most of the German fortifications called the “Hindenburg Line” by the Allies were little more than an elaborate system of trenches and dugouts. The Hindenburg Line was not attacked until late in the war during the final offensives of October and November 1918.

After World War I, a defeated Germany faced crippling reparations and then a global depression. It had little appetite to invest in fortifications. However, with the rise of Adolf Hitler and the subsequent rearming of Germany in violation of the Versailles Treaty, Germany began to invest again in the Westwall. Although advertised as defensive in nature, the forts and bunkers of this new line were part of Hitler's overall aggressive plans. The line of forts and bunkers was thickest along possible French approaches into the industrial regions of the Ruhr and the Saarland. Lightly manned, it was essentially an economy of force measure to deter the French from attacking into Germany long enough for the planned German attacks in the east, especially against Poland, to succeed. Hitler planned to then turn and attack the French. The West Wall was meant to solve the German strategic problem of fighting a two-front war.

After Hitler sent in his troops to reoccupy the Rhineland in 1936, in defiance of the Versailles Treaty, he began to build up the Westwall in earnest. Using the Army, drafted civilians, and civilian contractors, the Germans used a series of *regelbau*, or standard designs, to streamline the building process for bunkers, tunnels, and anti-tank obstacles. However, Hitler did not establish clear priorities in the use of scarce resources, especially concrete, sand, timber, and steel rods. Progress was slow. By the spring of 1938, only 640 bunkers and pillboxes had been built. Infuriated, Hitler changed priorities and by October thousands more of each were hurriedly constructed, many of them shoddy and half-completed.

The coming of war in 1939 led to early German victories and work on the Limesprogram (border program) halted. Many of the fortifications were stripped of their guns and left without garrisons. It was not until the late summer of 1944, as the Allies moved towards Germany, that Hitler hurriedly tried to restart construction. He sent troops, often reservists or *Volksgranadiers*, to man the partially completed line. Rapidly the American soldier learned to defeat the often poorly situated bunkers using heavy tank and tank destroyer fires, satchel charges, flamethrowers, and shaped charges. The G.I.s would burst through a portion of the line and then attack the bunker complexes from the rear. The Siegfried Line, as with most fixed fortifications, slowed the attacking forces but could not stop them.

Upon reaching the border in early September, V Corps rapidly sent the first American patrols into Germany. Following up on these successful patrols, Hodges then ordered a reconnaissance in force while planning a major offensive on the 14th, when he would have enough supplies on hand to support a full attack. Capitalizing on temporary weaknesses found in German lines, Gerow's units developed penetrations in both the north and south in narrow columns, pushing the frontlines forward into a bulge. V Corps placed most of its combat power in the north with two infantry divisions but also ensured enough forces in the south that it could maintain contact with and support Patton's northern flank heading towards Koblenz.

With the 4th and 28th Infantry Divisions moving abreast in the north and the 5th Armored in the south, the corps moved against the West Wall and attempted to seize ground before the Germans could fully man positions in the Siegfried Line or move up reserves to counter the American attack. The 5th Armored Division, commanded by Maj. Gen. Lunsford E. Oliver, used its tanks to head up the road towards Bitburg, a major road center in the German rear.

The 5th Armored patrols had the distinction of sending the first recorded patrols into Germany on the 11th of September. The 5th Armored was to maintain contact with the Third Army attack towards Koblenz, while the remainder of V Corps divisions pushed towards the north. Losing one of its combat commands to give the corps a reserve, the 5th Armored gained an infantry regiment, the 112th, from the 28th Division. The early penetrations into Germany were immediately met with counterattacks. Grevenmacher was captured but division crossings at Wallendorf were lost as the Germans fiercely reacted to attacks on German soil. In the north, the corps fought to support the VII Corps move towards Aachen. It penetrated into the Losheim Gap, seizing a tenuous hold on the Schnee Eifel ridge. The north face of this ridge remained a no-man's land and its open south flank swung towards a high ridge held by the Germans near the Belgian city of St. Vith. Though the region was nominally part of Belgium since it had been taken from Germany as a post World War I reparation, the local populace spoke German and had strong German leanings.

It took twelve days from the first penetrations of the German line until First Army units were able to stockpile sufficient artillery ammunition and fuel for its supporting tanks and tank destroyers to attempt a major attack. This critical interval saw the Germans firm-up their defenses well enough to stymie further Allied penetrations. Von Rundstedt, Model and the best of the German generals inspired soldiers at every level to give more than could be expected of such *ad hoc* forces. Normandy had been characterized as a "Western Front"-like experience paralleling World War I battles in the trenches. The "Battle for Germany", fought at the borders, would soon match it in ferocity, casualties, and meager ground gains.

Netherlands American Cemetery

Here, in the only American military cemetery in the Netherlands lie 8,291 American military war dead. Most died late in 1944 and in 1945, in the airborne and ground operations in eastern Netherlands, during the advances into Germany over the Roer River, across the Rhine River, and in air operations over these regions. These war dead came from every state in the union and the District of Columbia and include forty-



one sets of brothers. From the cemetery entrance, the visitor is led to the court of honor with its pool reflecting the memorial tower. To the right and left, are the visitor building and the museum containing three large, engraved maps with texts depicting the military operations of the American armed forces in the region. Stretching along the sides of the court are two Walls of the Missing on which are recorded the names of 1,722 listed as missing in action.

VII Corps commander Maj. Gen. J. Lawton Collins, having set the pace from COBRA through the Mons Gap, stalled in the Stolberg Corridor by September 13th. Lacking the fuel and artillery ammunition needed for a major attack to break the West Wall on the run, he was forced to wait for supplies to catch up to him. Meanwhile, the Germans built-up their forces. The *12th Volksgrenadier Division*, a new organization with fewer infantry but more automatic weapons to maximize firepower, was deployed from the German Home Army. The *116th Panzer Division* also moved into the area.

The German defense stabilized in the entire First Army sector by late September and Hodges's front lost its momentum. The race to beat the Germans to Germany's outlying defenses had been lost. The belief that the German army in the west was finished due to its massive defeats at Normandy and France was misplaced optimism. The German Home Army retained sufficient strength and ability to man the Siegfried Line defenses while rearming and reconstituting formerly "destroyed" divisions at a rate unforeseen by the Allies. German tanks and weapons were still being produced in sufficient numbers to equip these divisions and create new reserves for future offensive action. Soon Hitler would be planning a new offensive to counterattack the Allies and regain the initiative in the west. He would devise a bold plan that would escape the notice of Allied intelligence until the blow fell on a weak part of the American line in mid-December.

October saw Patton's army shaking off its gasoline famine and resuming the offensive in Lorraine in all three of his corps sectors. Late September had caused a temporary shift of gasoline priorities to sustain Montgomery's attacks in the north. Patton was told to hold at the Moselle River until supplies could catch up. Transportation, not supplies, was the crux of the problem. Third Army's detachments of the 7th Armored Division to the northern army group and the XV Corps to the 6th Army Group to his south did much to alleviate Third Army's supply problems, although it also reduced Patton's striking power. Transportation for the delivery of fuel and ammunition from the ports remained an issue.

The addition of Maj. Gen. Robert W. Grow's 6th Armored Division from Brittany to Patton's XII Corps, commanded by Maj. Gen. Manton S. Eddy, permitted the corps to clear the vital Gremecey Woods ten miles northeast of Nancy. The corps continued to clear the Germans from the Nancy Gap, considered essential by Patton, by deploying its 35th Infantry Division, commanded by Maj. Gen. Paul W. Baade, in this vital sector. The corps pushed east, defeating all German offensive moves and encircling the German forts at Metz. Several of the minor fortifications were quickly reduced. These preliminary attacks established better starting positions for the major offensives against Metz and elsewhere along the Third Army front planned for November. Patton anticipated that the supply drought would end and that he would gain new divisions from the United States, along with replacement soldiers to fill out his current divisions.



An American machine-gun team man their M1917A1 Browning .30-caliber gun on the outskirts of Metz.

Major contacts with the enemy resulted from the XII Corps extending its bridgeheads at the Moselle and Meurthe Rivers. Additionally, a build-up of seven German divisions by the end of September in the Third Army sector led to repeated German attempts to reduce the XX Corps gains near Metz. This set the parameters of combat for the next month as XII and XX Corps slowly moved closer towards that important city and the German border. Operations across the Moselle in the south of the Third Army sector proceeded to catch up to the bridgeheads already made by the northern divisions of the Army. The 80th Division was among the last to cross.

With continued fighting in the British sector in October, First Army was forced to push some its forces northward. Eisenhower ordered additional cleaning up along the northern coast and recognized that First Army must help its neighboring army group north of the Aachen corridor. This affected the entire army front. German forces thickened to defend the crucial Ruhr basin and the Allies added additional divisions in the north as they became available to maintain forward momentum.

First Army's October offensive began in the north of its sector with its XIX Corps, composed of the 2d and 7th Armored Divisions and the 29th Infantry Division, moving to the north half of the Aachen Corridor. It sent its 30th Infantry Division east to seize Wuerselen north of Aachen. The corps planned to make contact with the encircling VII Corps east of the city on the Aachen-Cologne road and "pinch out" the city. Once across the Roer River, Julich and Linnich to the northeast would be the corps objectives.

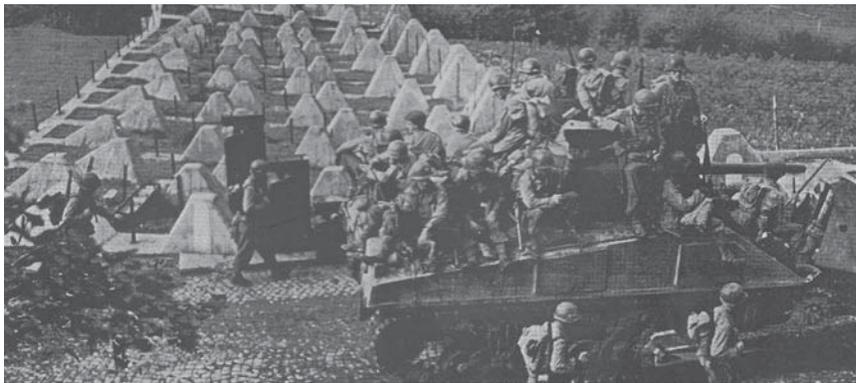
Intelligence estimated that about 230,000 German replacements had arrived by then to fill the new West Wall defenses. First Army faced some of these men in the regenerated *Seventh Army* divisions it met near Aachen and around the Huertgen Forest. The Germans had withdrawn several *panzer* divisions from the front lines which, unknown to the Americans, were being refitted for later use in a major counterattack in the Ardennes. These were replaced, in part, by new reinforced *panzer* brigades with powerful "Panther" Mark V tanks. These new brigades, although smaller than divisions, had firepower equal to that of a *panzer* division.

The Battle for Aachen

Hodges' deep objectives were Cologne (Koln) and crossing over the Rhine River. First, he had to take Aachen. His XIX Corps' northern encircling moves against Aachen began with the 30th Infantry Division and 2d Armored Division on October 2, 1944. On the 8th, they were joined from the south by elements of VII Corps attacking north of Verlautenheide south of the main road. The VII Corps' 1st Infantry Division was assigned the mission of being first into the city. The rest of VII Corps would circle to the south and east of the city. Maj. Gen. Corlett's XIX Corps, when it caught up with Collins, formed the northern prong of the encirclement. It also protected the northern flank of the army group and coordinated with Dempsey's Second Army as it pushed towards the north end of the Siegfried Line. The "broad-front" strategy was already stretching every Allied attack too thin. The battle for Aachen, a key city in the center of the primary avenue into the Reich, proved to be no exception.

The approaches to Aachen were heavily fortified and the defenses of the city were well integrated into the Siegfried Line. At this point along the border, the Siegfried Line consisted of the Scharnhorst Line and the Schill Line, each separated by about 5 kilometers. The outer line had concrete dragon's teeth to channel tank movements toward pillboxes with antitank guns. Other concreted positions with machine guns were clustered to protect the antitank positions. Field positions and mines between a second similar line strengthened the German defenses.

The battle for Aachen lasted from the 2nd until the 21st of October and left the city in ruins. The XIX Corps' 30th Infantry Division moved towards the city from the north while the 1st Infantry Division captured the hills and defenses south of the city. At one of those hills, Hill 239 or Crucifix Hill, one of the 1st Division's company commanders, Capt. Bobby E. Brown, was wounded three times but continued to lead his company in clearing the hill. He personally destroyed three pillboxes. For his heroism he was awarded the Medal of Honor.



An M4 medium tank dozer ferries infantryman across the "Siegfried Line" en route to Aachen.

The fight around the ring of Aachen would continue throughout the first half of the month of October. German troops, including elements of the *1 SS Panzer Corps*, defended the city fiercely. Elements of the 30th and 1st Divisions finished their encirclement of the city when they linked up on October 16th, but it took them five more days to take the city. Finally using dozens of artillery pieces in direct fire roles, American soldiers blasted their way through house walls to avoid having to attack directly up streets. Reduced to fighting in the ruins, the commandant of the city, Col. Gerhard Wilck of the *246th Volksgrenadier Division*, surrendered despite being ordered by von Rundstedt to be “buried under its ruins” before capitulating. Aachen, the capital of Charlemagne, was the first major German city to fall to the Allies.

Assisting the 1st Infantry Division’s attacks from its southern flank, the 9th Infantry Division stalled at the outer line of the city’s defenses. In an unsettling portent for the future, its troops were held up by German counterattacks from the nearby Huertgen Forest. Attempting to outflank the city by moving through the woods, one of its regiments was stopped cold when it ran into German pillboxes and counterattacks. The true strength of the Germans in the Huertgen Forest area, and their ability to hold their positions against Allied attacks, had been severely underestimated along with the ability of the Germans to move up reserves. They were able to bring up the *12th Volksgrenadier Division* and move it through the woods into Aachen to plug a gap in the center of the American approach to the city. The Allies were learning the hard lesson that Germans were now fighting on their own soil. The border marked a totally different war for them. It was no longer a matter of belief or disbelief in the tenets of Nazism. It was now a matter of the survival of the Fatherland. VII Corps was effectively blocked from any further movement to the east. It was a fate to visit many other Allied corps that fall.

At the end of October, Eisenhower clarified his campaign vision, recognizing the phenomenal successes of the breakout from Normandy and pursuit across northern France along with the failure of MARKET-GARDEN. The successes and failures had brought unforeseen challenges requiring a new harmony in the air and ground operations of his three disparate army groups’ sectors. As a result, Eisenhower outlined a three phased plan, first to the Combined Chiefs and then to his commanders, based on his reading of the new situation. The new circumstances included the resurgence of German strength, the failure to solve long-term supply and transport problems caused by the rapid advance, the need to bring forward more of certain classes of supply than others, the need to rest his weary troops and bring up reinforcements, and the continuing plague of bad weather.

Unstated in his plan were the pressures put on national commanders by their own governments. The British government wanted Montgomery to press forward and gain victory by the year's end. General Crerar of the First Canadian Army was pressured to minimize casualties and preserve his army while still holding up Canada's part of the battle. General de Lattre's French First Army and the other French forces were being pressured by DeGaulle to ensure France's total liberation as quickly as possible, set the conditions for the restoration of a French provisional government, and help restore France's role in European leadership. As an American, Marshall viewed Eisenhower more as his representative and less as the Allied Chief and thus wanted him to respect the growing U.S. predominance on the battlefield. This pressure made Eisenhower's role more difficult as he believed that he had to represent a unified Allied position in decisions while at the same time keeping Marshall's confidence.

Eisenhower's three phased plan directed a battle west of the Rhine to attrit the German army while "taking any opportunity to seize bridgeheads" over the Rhine. The second phase would concentrate on the actual seizure of those bridgeheads against weakening Germany opposition. The third phase would be to move out from the Rhine bridgeheads to destroy all German resistance. He gave separate missions to each of the army groups, established group boundaries, and ensured that the Ruhr industrial area remained the primary Allied objective, followed by the Saar region in Bradley's area. This gave 12th Army Group avenues that could approach both major target areas and sufficient priority to the 21st Army Group for Montgomery's attacks. However, it failed to address issues of command once the far side of the Rhine was reached.



A pair of M10, 3-inch motor gun carriages traverses the muddy roads of the Huertgen Forest.

The Battles in the Huertgen Forest

To the south of the 21st Army Group, VII Corps had taken Aachen, but the Huertgen Forest remained uncleared to its southern flank. Fears of leaving substantial German forces intact on the flank or behind Allied lines pushed the Allies to clear them out. Attempts to clear the woods in September failed miserably. The forest blocked the path to the Roer River and included parts of the double-linked pillbox line of the Monschau Corridor running across the corps' rear. Collins' objective of Dueren was blocked by the villages of Kleinau-Huertgen on one ridge and Schmidt on the next ridge. Other perpendicular ridges and draws created several steep valleys approaching these objectives, one topped by the town of Vossenack which was overlooked by Schmidt.

Collins assigned the 9th Division to take the key town of Schmidt. Schmidt overlooked the dams controlling the headwaters of the Roer River, a fact not fully understood when the first attacks began. The Germans defended viciously, understanding that the crossing of the Roer depended on controlling the dams and the water levels of the river. This fact, as well as the dominant ridgelines, made the Simmerath to Huertgen road, the Kleinau-Brandenburg-Bergstein, and the Kommerscheidt-Schmidt ridgelines crucial to the battle south of Aachen. This dense, almost impenetrable terrain dominated the battle for nearly five months.

The principal dams of the Urf and Schwammenauel, down the hill from Schmidt, were important objectives to control the Roer. Five lesser dams added to the importance of the area. Still, with a nine-mile front, and the need to leave battalions to hold its flank, the 9th Division mustered only two regiments for its mid-September attack towards the dams with one additional battalion as a flank guard. These regiments barely broke into the woods beyond the road at Richelskaul when they were attacked both from the north and south by German battle groups. One battalion proceeded north along the ridge outside Vossenack but was also stopped.

After the capture of Aachen, the 28th Infantry Division moved to seize Schmidt and the dams on November 2nd. Its attack jumped off in bad weather with the 109th Infantry leading. It reached the crossroads near the town of Huertgen by noon. The advance halted for the day behind an extensive minefield covered by automatic weapons fire and mortars. The next morning, as the Americans attempted to outflank this field, they were unexpectedly met with two company-sized German counterattacks. The counterattacks held up both the lead battalion and the follow-on battalion that attempted to encircle the blocking forces.

At the same time, the 112th Infantry Regiment with attached tanks attacked from Germeter through Vossenack Ridge as planned. By early afternoon, the battalion was dug in on the nose of the ridge under the observation of the enemy on Bergstein Ridge only a few hundred yards away. Their position was slightly higher than the Americans' foxholes. At noon, the regiment's other two rifle battalions began the main attack south of Vossenack, advancing through the woods into the Kall River gorge. The lead battalion was stopped almost immediately by small arms fire. This halted the 112th for the remainder of the day. Early the next morning, they planned to advance from the tip of the Vossenack ridge down the Kall trail toward the objective, bypassing the block in the Kall gorge.

Farther south, the 110th Infantry Regiment's attack through the woods on the 28th Infantry Division's south flank had the objective of seizing the pillboxes on the Siegfried Line at Raffelsbrand with one battalion while another moved eastward to Simonskaul alongside the Kall River. This would establish a dual axis for the regiment to attack south along the two roads into the Monschau Corridor.

This southern attack plunged into the deepest, thickest woods of the Huertgen Forest in the division's sector. It immediately hit ground level concertina wire, booby traps, and log-covered defensive emplacements dug flush with the ground. Both battalions of the 110th met only partial success against heavy resistance and were thrown back. They were unable to hold their gains in the woods. A second attack on November 3rd produced similarly disappointing results. This prompted the division commander to move the regiment's remaining battalion to the center of the division to follow the 112th Infantry's axis of advance and move north towards Simonskaul.

In the interim, the 112th Infantry had registered the only real gains for the 28th Division. By the evening of November 3rd, the 112th took Schmidt after passing two battalions through Vossenack, southeast along the Kall Trail, up the eastern face of the opposite ridge, and then towards the German held objective. Tanks supporting the attack with fires neutralized the German defenses in the outskirts of Kommerscheidt. By mid-afternoon, the lead elements had stormed through Kommerscheidt and into Schmidt with a battalion out-posting the town for an all-around defense, expecting a German counterthrust from any direction.

By dark on the November 3rd, the 2d Battalion, 112th Infantry was well dug-in at Schmidt. The 1st Battalion had two companies and its weapons company in Kommerscheidt and another rifle company in the Richelskaul area holding the regiment's supply route. Attempts to move additional armor on the unimproved dirt trail down the treacherous slope of the Vossenack Ridge proved unsuccessful, blocking the trail. Task Force Ripple, a mix of tanks and infantry ordered to reinforce Schmidt, had to wait for combat engineers to improve the trail.

Taking Schmidt proved to be a temporary victory. Coincident with the American maneuver, the German *89th Division* moved up to the line. Nearby, German Field Marshal Walter Model had assembled his commanders for a map exercise gaming an American attack along the boundary of the German *Fifth Panzer* and *Seventh Armies*. Fortuitously for them, this was the exact operation which was unfolding. With all the relevant corps and division commanders present, Model issued appropriate orders so that his commanders were "playing the battle" in real time. This coincidence was an unfortunate turn for the beleaguered 28th Division, suddenly faced by an enemy with seemingly inspired responses to their moves. To make matters worse, the rest of the western front was temporarily quiet, and the Germans were able to throw their reserves at this sole attacking division.

At corps and division level, Schmidt appeared to be secure, but it needed to be reinforced to be held. The Germans counterattacked every American attack with their local reserves, but the German attacks had been fended off so far. Two reinforcing groups from the *116th Panzer Division*, sent in together, attacked the 109th Infantry Regiment's position unsuccessfully, and then moved into Huertgen to create a strongpoint and anchor the German line. The *89th Division* was to move toward the Monschau corridor and be ready to re-take Schmidt while the remainder of the *116th Panzer Division* moved to the sector. A regiment of this division was ordered to seize Harscheidt and Kommerscheidt, cutting the garrison off on the ridge. By the morning of the 4th, as the effect of the German reinforcements were being felt, only three U.S. tanks had managed to make the hazardous trip along the Kall Trail to reach the Kommerscheidt position.



4.5-inch multiple rocket launchers T27 are fired in the Huertgen Forest area.

The first German tank-infantry attack began about 0730 on the Harscheidt road from the northeast towards Schmidt. Defensive artillery concentrations fired on the attack while another, heavier attack, materialized at the same time on the Hasenfeld road. The German tanks penetrated into the town, bypassing the mines and causing the defenders to abandon their positions. The American withdrawal devolved into a rout as the troops fled into the woods near Kommerscheidt. The 3d Battalion intermingled with the 1st in the woods and in the town of Kommerschiedt on the slope of the ridge. This left the Germans in control of Schmidt by 1100. By 1230, division headquarters ordered the bombing of the town by a P-47 squadron immediately after hearing of its loss.

The 1st Battalion, 112th Infantry continued to hold Kommerscheidt throughout the 4th. The Germans attacked the town, attempting to use the same tactics that had been successful at Schmidt. An attack developing from the east in the early afternoon using tanks and infantry attempted to cut the town off from its line of supply on the Kall trail. A single tank from Company A, 707th Tank Battalion that had braved the Kall trail earlier had been joined by two more and figured prominently in the defense of the village. They helped drive off the German armor using only high explosive rounds since they were out of armor piercing ammunition. Airstrikes and artillery also supported the defense in driving off the attack, which lasted over two hours. The division ordered the successful defenders to follow up with an attack on Schmidt, but the exhausted troops could not comply. The Germans still outnumbered them.

While the fighting for Kommerscheidt was going on, the accurate shelling of the American forward positions on the nose of the Vossenack ridge, aided by the German observation posts on the nearby Brandenburg ridge, caused a cumulative desperation to rise in the troops manning the forward positions. Despite the shelling, the men held under fire even as their foxholes were being systematically destroyed. The new German plan was to pit the *116th Panzer Division* against the 109th and 112th Infantry Regiments at Vossenack while the *89th Division* cleared the east bank of the Kall River at Kommerscheidt. This preponderance of force was a surprise to the 28th Infantry Division, which remained unsupported even though it seemed to be the only unit fighting on the First Army front.

Maj. Gen. Norman Cota, the 28th Infantry Division commander, focused on holding Kommerscheidt while moving on to the division objective of retaking Schmidt. The Kall Trail, although the responsibility of the division engineer group, was not really secured against attack. The vulnerable yet important trail was not cleared for use by armor until the early morning of November 5th, when nine tanks and nine tank destroyers moved across the Kall River and reinforced the beleaguered Americans holding Kommerscheidt on the face of the Schmidt Ridge. Prior to their arrival, another German attack had been driven off thanks to the three tanks still functioning in the town. Then, as the weather cleared, American air cover provided critical support during the daytime hours. Meanwhile additional tanks reinforced the shaky garrison at Vossenack. The enemy shelling of their exposed forward positions had threatened their hold on the entire ridge. While the 109th held against persistent enemy probes, the 110th to the south hunkered down, inert and exhausted in the woods. Its earlier attacks against German pillboxes and log-covered positions had proven to be futile and expensive. The 28th Division was totally engaged on three fronts with no unit uncommitted. Each regiment's battle was connected, but the units were not in a position where they could mutually support each other.

Cota created Task Force Ripple around the Headquarters of the 707th Tank Battalion to cross the Kall and reinforce the attack on Schmidt. With the reserve battalion of the 110th Infantry, a medium and light tank company, and a platoon of self-propelled tank destroyers, the force was a significant, if understrength, reinforcement. In addition, the Kall Trail was again under attack. The 300-strong TF Ripple therefore bypassed it to take another trail but bumped into the reconnaissance battalion of the *116th Panzer*. The Germans threw back the American force, but it still managed to reinforce the Kommercheidt position by late in the day. By the 6th, only six tanks and three tank destroyers were left operational on that position. The weakness of the unit in place and the loss of key leaders in the infantry battalion caused the Schmidt attack to be canceled. The VII Corps attack planned for November 5, which would have brought relief to the troops near Brandenburg Ridge, was also postponed until November 10th.

Four days and three nights of accurate shelling had frayed the nerves of the men holding the forward division perimeter on the Vossenack Ridge. Enemy observation posts and artillery positions on the Brandenburg-Bergstein Ridge brought effective fire onto the American positions. Fears that the shelling would be followed-up by a general German assault prompted a few soldiers with shattered nerves to leave their positions. The few became a rush as imaginations ran wild. Soon the forward edge of the ridge was bereft of defenders, and the town was full of panicking infantrymen convinced they were being pursued by masses of Germans, masses that did not materialize. The tanks in the town of Vossenack anchored that position. The few officers left in the battalion, accompanied by the assistant division commander, began reconstructing the defense by bringing up additional tanks and tank destroyers while also pushing in an engineer company to act as infantry. The slow follow-up by the Germans to the apparent break in the American defense helped stabilize the situation. While some enemy soldiers infiltrated into the eastern edge of town, the German attack was uncoordinated and failed to fully materialize. Meanwhile, the engineers managed to defend the Kall Trail and the armor and infantry at Kommerscheidt held their positions.

Task Force Ripple had bypassed Vossenack during its crisis, unaware of the problems there. After losing most of his command group in the approach march, the battalion commander at Kommerscheidt decided to forestall the plan to move on Schmidt in favor of reinforcing the defense. Despite the expert use of artillery and air cover, the defenders at Kommerscheidt failed to receive sufficient reinforcements to attack or to establish a permanent defense on the nearby ridge line. The division seemed unaware that the regiment simply did not have the strength to accomplish these missions. Nor did this information reach the corps, who could have reinforced the division. The First Army, meanwhile, waited on improved weather for the major VII Corps attack. The 28th Division had been relegated to a “minor” ongoing action that seemed to army planners to be “almost completed.” The reality was, the division teetered on the edge of exhaustion with most of its fighting strength spent. To make matters worse for the 28th Division, a new division, the *272d Volksgrenadier Division*, relieved the fought-out *89th Infantry*. Now facing fresh enemy forces, the 28th was in far worse shape yet remained fighting.

The 4th Infantry Division's 12th Infantry Regiment replaced the 28th's 109th Infantry in place, causing General Cota to plan to use it for a new attack on Schmidt. Task Force Davis, under the command of the assistant division commander, would use it plus the remaining forces at Kommerscheidt and Vossenach to seize Schmidt. Before the attack could start, a preemptive attack by fifteen German tanks and two battalions of infantry on the 7th was barely beaten off. With the concurrence of the corps commander, Cota ordered the withdrawal of the remaining force across the Kall to prevent its annihilation. Hodges was

“disappointed.” Because Schmidt had been taken early on in the battle for the Huertgen, it was always seen by First Army as a relatively easy target to be recaptured. This ignored the reality that it was beyond the weakened division’s means. The 28th was finally withdrawn from the front and sent to the Ardennes area for rest and rebuilding. The division had suffered 6,184 casualties, one of the highest casualty rates for a single division action in the campaign. The Huertgen remained in enemy hands.

In mid and late October, the Supreme Commander and his Army Group Commanders finalized their plans to drive to the Rhine. The 21st Army Group finished clearing the Scheldt Estuary near Antwerp and then planned to turn south to clear the Rhine approaches and link-up with the elements of the U.S. Ninth Army pushing east. Both the 12th and 6th Army Groups would continue to press east to close on the Rhine. General Spaatz offered his aircraft to carpet-bomb enemy positions and provide openings for the ground offensives, a rare offering of strategic bombers in support of ground operations. When Air Marshal Leigh-Mallory had made a similar offer in Normandy, the bomber airmen had nearly revolted. Eisenhower’s commanders, fearing a stalemate in the Rhine approaches like that faced at Normandy, saw heavy aerial bombardment as a possible solution to achieve a breakthrough.

Bradley had shifted the Ninth Army headquarters from Brittany to Luxembourg, and then moved it again to his north to serve as a buffer between his army group and Montgomery’s. He may have done this to forestall a possible operational transfer of his First Army to the 21st Army Group to assist in Montgomery’s ambitious plans. Realizing that the British army group would probably need to be reinforced by an American army, Bradley decided his newest should go, not his oldest. The Ninth Army would prove as able as any, although it was often short its “rightful” share of divisions. Ninth Army, upon activation, initially had only one corps assigned to it, the VIII in Brittany and Belgium. Later the XIX and XIII Corps were added in Belgium and Holland, but it was always small despite its significant missions. It teamed with the XXIX Tactical Air Command, assigned to the Ninth Air Force.

October had demonstrated a resurgence of enemy strength, highlighted recurring supply issues, and reflected the role of bad weather that halved the number of tactical air missions compared with those flown in the previous month. Transportation to make the long haul for supplies and maintenance of trucks available plagued every army. It was not until the end of October that rail to Paris from the coast was repaired so that an additional quantity of supplies flowed. This freed up more trucks for shorter hauls. Despite this improvement in the logistical situation, restrictions on the tonnage of supplies were still made for each army based on size and mission.



A 105-mm M7 Howitzer motor carriage shells German positions in the Rhine Valley.

By this point in the struggle for the northern approaches to Germany, the worst shortage was not gasoline. Although this item regularly featured in the generals' complaints on movement capabilities, ammunition was more of a problem. Supplies of artillery and mortar ammunition, fired prodigiously in the set piece Rhineland battles, grew so short that they had to be rationed. The tempo of battle required huge amounts of artillery shells, more so than small arms. October saw few artillery rounds fired except on priority targets. In November, the battles around Schmidt made extensive use of artillery. This was only possible because of the end of rationing and the fact that no other division in the corps was fighting at that time. This allowed more artillery ammunition to be transferred from corps stocks to the division and then down to the regiments in contact.

Eisenhower's armies now totaled forty-seven divisions and these divisions had enormous supply needs. Each unit needed winter gear for its soldiers and winter oil and petroleum products for vehicles and equipment. The divisions needed additional lumber, canvas, and tents for troops when they were pulled out of the line. Overshoes to cope with the wet weather, mud, and snow were suddenly a priority. All these needs strained the transport and supply system at a time when fighting had intensified and required more ammunition and spares of every kind. Moreover, replacements, now called "reinforcements" at the Supreme Commander's personal order so as not to lower morale, were in shorter supply. Manpower deficits were made up by converting headquarters soldiers, anti-aircraft artillerymen, and men from other support units into riflemen, sometimes with conversion training but often without. General Patton makes frequent mention of this desperate practice throughout his wartime diary and posthumously published book, *War As I Knew It*.

Seven inches of rain fell in November, causing rivers and streams to overflow their banks and turning fields into morasses. Large areas were impassable to wheeled vehicles and often even mired tanks, confining movement to hard roads. Dirt roads soon were churned into deep mud by heavy vehicular movement. This slowed or severely restricted artillery movement and supply. Air missions were curtailed by limited visibility and rain. Tanks were given locally manufactured “duck bill” track extenders to give them better floatation capability in mud.

The planned Third Army offensive in November also faced challenges of weather along with renewed enemy resistance. Patton issued his final directive for his offensive on November 3rd, stating his intention to be the first of the Allied armies to launch a major attack. His concept was to envelop the Metz defenses using the XX Corps and then to proceed northeast with its divisions. To the south, his XII Corps would also attack northeast from its bridgehead on the Moselle. Patton’s final objectives were Darmstadt and Frankfurt on the far side of the Rhine River. A heavy bomber attack to kick-off his offensive was coordinated through his air element at XIX Tactical Air Command.

Third Army in Lorraine

Weather delayed Third Army’s attack, leaving the 28th Infantry Division in the Huertgen Forest for a time as the only unit heavily engaged on the American front. Despite continuing rainfall, Patton finally started his attack on November 8th, foregoing any attempt to use the promised air support. Maj. Gen. Eddy’s XII Corps had five divisions for this operation, three infantry and two armored. He would attack from positions forward of the Moselle at Nancy in a sector north of Luneville to an area about ten miles south of Metz on about a twenty-five-mile-wide front. Eddy’s long-range objective across the Rhine was Darmstadt, via the crossings at Oppenheim (south of Mainz) and Mannheim. He arrayed his corps with the divisions on line. The division line-up was the new 26th Infantry Division on the corps’ right flank, and the veteran 35th and 80th Infantry Divisions, respectively, to its left. The 4th and 6th Armored Divisions were behind them waiting to pass through the lines after the penetration. The 2d Cavalry Group was to screen the flanks. To assist the operation, a second punch was to be delivered by a XX Corps attack scheduled for the next day.

XII Corps was faced by two full German divisions and portions of another: the *559th* and *361st Volksgrenadier Divisions*, and part of the *48th Infantry Division* supported by perhaps twenty tanks. The strong counterattacks faced by Third Army in September were no longer seen as likely. However, the prominent defensive terrain in sector was traced by avenues created by valleys following the Petite Seille River between plateaus. The defense held the dominant terrain, and rains and the clay endemic to Lorraine favored the defense. The Germans could count on U.S. tanks and tank destroyers being road bound and thus easier to ambush or delay.

Lorraine American Cemetery



The Lorraine American Cemetery and Memorial in France covers 113.5 acres and contains the largest number of graves of our military dead of World War II in Europe, a total of 10,482. Their headstones are arranged in nine plots in a generally elliptical design extending over the beautiful rolling terrain of eastern Lorraine and culminating in a prominent overlook feature. Most of the dead here were killed while driving the German forces from the fortress city of Metz, France toward the Siegfried Line and the Rhine River. Initially, there were over 16,000 Americans interred in the St. Avold region in France, mostly from the U.S. Seventh Army's Infantry and Armored Divisions and its cavalry groups. St. Avold served as a vital communications center for the vast network of enemy defenses guarding the western border of the Third Reich.

The memorial, which stands on a plateau to the west of the burial area, contains ceramic operations maps with narratives and service flags. High on its exterior front wall is the large figure of St. Nabor, the martyred Roman soldier overlooking the silent host. On each side of the memorial, and parallel to its front, stretch the Tablets of the Missing on which are inscribed 444 names. Rosettes mark the names of those since recovered and identified. The entire area is framed in woodland.

General Eddy's attack began at 0600 in the morning on November 8th following a three-and-a-half-hour artillery preparation fired by all of the divisions' artillery battalions and additional guns from the corps. The 26th Division, commanded by Maj. Gen. Williard S. Paul, attacked on the right flank screened by the 2d Cavalry Group along the Rhine-Marne Canal. The division faced its first major action with the mission to seize the crossings and road net on the corps right. Successfully breaching the enemy defenses, division units bypassed a strongpoint on Hill 310 overlooking the Seille River to allow further movement towards Dreuze. The attack also opened up a route to the north for Combat Command A of the 4th Armored Division, which passed through their lines to Hampont while the division's infantry reduced the German position on Hill 310. General Paul shifted his center regiment to maneuver with the armor to clear the Koecking Woods on their southern flank. The heavy fighting in bad weather against a determined enemy, with tanks constrained by mud and treacherous terrain, soon brought operations to a halt. The wet weather caused numerous casualties due to sickness and trench foot in addition to battle casualties. The division faced a new German defensive line thrown up with the commitment of the *11th Panzer Division*. The attack had gained about ten miles.

The 35th Division's attack in the corps center was supported by five additional artillery battalions as well as fighter bombers. With two regiments abreast and a third in reserve, the division forced a crossing of the swollen Osson Creek whose banks had overflowed due to the rain. It was now over fifty yards wide. The flooded creek made mobility for supply vehicles nearly impossible and required bridging to pass a combat command of 4th Armored Division through to exploit the attack towards Morhange. While the two infantry regiments secured the woods of Chateau Salins, the tanks of the 4th Armored moved forward and were engaged by elements of the *11th Panzer Division* and the *559th Volksgrenadier Division*. This costly eight-day drive had gained twelve miles and seized the crucial Chateau Salin woods, the vital Morhange plateau, and roads opening the approaches from the Seille basin.

The 80th Division on the northern flank of XII Corps jumped off from behind the Seille River. In the south of its sector, the river looped northward giving the enemy dry ground to defend with no water barrier except at its back. The division attacked with three regiments abreast with the mission of passing Maj. Gen. Grow's 6th Armored Division forward once it broke the enemy defenses. The tanks would then use the captured roads to rush towards the distant objective of Falquemont. The road network forced the infantry following it

Staff Sgt. Ruben Rivers, Company A, 761st Tank Battalion

Ruben Rivers was born to Willie and Lillian Rivers in Tecumseh, Oklahoma in 1921. He worked on the family farm through his graduation from high school, and then on a railroad after that. He joined the U.S. Army in 1942 and was assigned to the 761st Tank Battalion, the "Black Panthers".

On November 8, 1944 Rivers was a tank commander supporting an attack by the 26th Infantry Division near Vic-sur-Seille, France. He encountered an obstacle covered by heavy enemy fire consisting of a felled tree laced with mines. Exposing himself to the enemy fire, Rivers dismounted his tank, attached a cable to the obstacle, and used his tank to move the obstacle off the road. He then led an assault through the breach to capture the town.

Several days later, on November 16th, Rivers was again leading an assault when his tank hit a mine. He was badly injured but refused evacuation. Rivers led his men and fought on for three more days, despite considerable pain and a mounting infection. On 19 November Rivers was maneuvering against German anti-tank positions near Bougaltroff when his tank was hit twice with high explosive shells. He died instantly. SSG Ruben Williams was awarded the Medal of Honor for his courage, dedication, and exemplary leadership under fire.

Staff Sgt. Ruben Rivers is buried in the Lorraine American Cemetery, Plot C, Row 5, Grave 53.



towards the north, but the bypassed heavy terrain and woods still had to be cleared of enemy soldiers. This mission included taking the Delme Ridge, which blocked the center sector of the division's attack.

When the division hit the German defensive line on the Delme Ridge, it attacked around the north end after heavy artillery and air attacks. It was assisted by a battalion-sized supporting attack at the southern tip of the ridge. The ridge fell on the 9th, after which Eddy ordered forward the 6th Armored Division. The division was restricted in its movement by the existence of only a few roads in its sector through the confining terrain. Nevertheless, it deployed its combat commands across the river in multiple columns, bypassed the initial German defenses, and drove for the main communications center and road junctions at Faulquemont. The two combat commands advanced towards the objective, concentrating their thrust in the northern sector. Over 1,000 prisoners were taken in the first two days of the 80th's and 6th's attacks. While mud and rain slowed operations, the advance proceeded southwest of the major object clearing a number of towns and opening an extensive network of secondary roads for the corps' use.

A *kampfgruppe* of the 11th Panzer Division began a delaying action in front of the northern armored attack, allowing the Germans to fall back gradually towards Faulquemont. The Germans were suffering from the steady attrition of their forces due to having to fight for every village to gain time. The northern tank attack of the 6th Armored Division brought it within range of German artillery in the Metz forts and further from its objective at the Falquemont road junction. After fighting-off German self-propelled guns, the northern tank column swung back southwards.

The Battles Around Metz

The task of taking Metz was given to Maj. Gen. Walton H. Walker's XX "Ghost Corps". He was to attack and reduce the Metz fortifications and then move northeast to the Rhine. In his corps, Walker had three infantry divisions, the 5th, 90th and 95th, along with the 10th Armored Division and the 3d Cavalry Group. His task organization initially had the 83d Infantry Division, but that was pulled away from him. He retained the use of its artillery units, giving him 19 battalions of field artillery with some 700 guns for his offensive.

Walker planned to encircle the Metz complex using three divisions. The 95th Division, commanded by Maj. Gen. Harry L. Twaddle, would make a demonstration just before the main attack. Then the 90th Division, now commanded by Brig. Gen. James A. Van Fleet, would attack over the Moselle as the northern arm of a double envelopment. After the 90th Division launched its assault, the 5th Division, assisted by the left wing of XII Corps to its south, would encircle the German works from the south. It would then move towards Saarburg, find suitable crossing points, cross the river, and move to the northeast.

As the time for the attack grew closer, plans changed. The 95th Division, was now assigned an actual river crossing in the corps' center rather than just conducting a demonstration. It also developed contingency plans for crossing the Moselle at Thionville. This would provide an additional crossing site since the northern crossing site appeared threatened by the rising waters of the river. The rising waters threatened problems for the crossing of the 10th Armored Division, the exploitation force of Walker's double envelopment plan. Maj. Gen. Twaddle sent a battalion of the 378th Infantry Regiment to cross under the guns of Fort Yutz in the 95th's center sector, where the river's high banks had contained the flooding.



American soldiers fire a captured German 88-mm. gun outside of Metz.

The XX Corps attack began with a massive artillery barrage on the morning of November 8th. After dark that evening, the 95th Division's 377th Infantry Regiment crossed the Moselle south of Uckange and established a small bridgehead. They held a small pocket of reinforced battalion size against artillery and German patrols until the major operation began. Their mission was to draw German reserves away from the major crossing to the north by the 90th Division. This began at 0330 on the 9th as the first waves of boats moved across near Cattenom, northeast of Thionville.

Two regiments of the 90th crossed the flooded Moselle with the assistance of boats provided by an attached combat engineer battalion. German defenses in the town of Koenigsmacker were neutralized by artillery and smoke during the crossing. The river was overlooked by a long, angular ridge running from northwest to southeast from the town. This was dotted with old Maginot Line positions and forts from the 1870s. The largest, Fort Koenigsmacker, posed a threat with its four heavy 100-mm turret guns. Although facing towards Germany, the concrete positions were still dangerous and had to be reduced by assault. Capture of this ridge would give control over the road network east of Metz. Twenty-eight forts ringed the Metz complex of fortresses. The northern group of positions centered around Fort Konigsmacker. Thirteen more forts were included in an inner ring of fortresses. All of these forts had to be neutralized by assault teams using satchel charges.

By nightfall of November 9th, eight battalions of the 90th Division had crossed the Moselle and were moving rapidly abreast to clear the sector. With the river over a mile and a half wide and still rising, anchoring the crossing bridges proved difficult. Causeways were flooded and movement was slowed. However, the deluge also covered many of the prepared German positions and minefields with water. Assault boats were able to float over these obstacles, although they later proved a danger to follow-on forces when the water subsided.

The Germans managed a limited counterattack on the 12th against the elements of the 90th Division attacking Metz. Reinforced by ten armored vehicles and with twenty-two artillery battalions firing in support, the Americans drove the Germans back with heavy losses near the town of Kerling. The German attack ended at the crossroads at Petite-Hettange. During the fighting, Sgt. Forrest E. Everhart assumed command of his platoon after the death of his platoon leader. He personally killed or wounded fifty enemy soldiers while leading his men in the action, demonstrating such bravery that he was later awarded the Medal of Honor.

The Fortress of Metz



When soldiers of Patton's Third Army approached the German fortress complex at Metz in September 1944, after a headlong pursuit of the German Army across northern France, it is unlikely that they realized the formidable nature of the defenses. Metz was the site of a mass surrender of French forces in the Franco-Prussian War. It had been built up as a constellation of forts and strongpoints since that time by the Germans and French as Lorraine shifted in and out of their respective controls and was a major obstacle that would hold up Patton's XX Corps for months.

The city and fortress of Metz fell to the Germans during the Franco-Prussian War (1870-1871) along with the provinces of Alsace and Lorraine. They spent the next 20 years constructing a series of new fortifications linking the older French fort with 11 huge Festen, or fortress groups, and 16 reinforced concrete infantry strongpoints along with hundreds of smaller bunkers. This was called the Moselstellung or Moselle Position. The entire complex stretched from the city of Metz to Thionville to the north, a 40-kilometer-long series of interlaced defenses anchored by the Moselle River.

The fortress complex saw no action in World War I, although it was instrumental in holding the far-left pivot of the German "wheel" through Belgium as they implemented their modified Schlieffen plan. During the war, the fortress faced no French attacks and was used primarily as a storage facility with only a small garrison. The end of the war in 1918 saw Alsace and Lorraine return to French control and Metz was soon integrated into the French defensive network along its eastern border.

The French Army thoroughly examined the defenses of the Metz fortress complex and were impressed by the formidable nature of the forts, the artillery bastions, the underground living quarters and the multiple tunnels that allowed the defenders multiple sally ports. These hidden exits would allow the defenders mobility to pop-up behind their attackers from unexpected locations. The French adopted many of the German innovations in their Maginot Line defenses along their border with Germany and integrated many of the outlying forts and strongpoints of Metz into that line.

The fortress fell into German hands in 1940 without a fight, and Alsace and Lorraine reverted to Germany with the fall of France. The Metz forts had been evacuated when Metz was declared an open city to avoid destruction, even though some nearby forts on the Maginot Line remained occupied until the surrender in June. The Germans, facing no threat from the French at the time, stripped the forts of most of their artillery and equipment and used the bunkers and storerooms as storage depots for war materiel. The fortress itself faced no major attacks until September 1944. At that point, Patton's Army ran into its defenses and found that its fortifications, even though many were built in the 19th and early 20th century, were not to be penetrated without a fight. It took them over two months to take Metz.

It was not until November 14th that a bridge was completed over the flooded Moselle River sufficiently strong to pass over the artillery and supplies needed for the division. Meanwhile, the 90th Division attack proceeded towards the Sarre, supported by the 10th Armored Division commanded by Maj. Gen. William H. H. Morris. The tanks of the 10th had been committed at Thionville with its Combat Command B turning northward towards the 90th Division sector and assembling behind Kerling. Its Combat Command A crossed the river to the south at the bridge at Malling. The division fanned out, reaching the Nied River after pushing aside intervening German forces and taking hundreds of prisoners. Combat Command A initially pushed across the Nied River, but it was ordered to return. It blew the bridge and then moved northward through the 90th Division to return to the Sarre axis of advance. The 90th Division's bridgehead had now reached a depth of seven miles with a width of eleven miles.

The Germans reacted to the American attacks with a violent three battalion counterattack supported by artillery and armor at Distroff. In a vicious four-hour, house to house defense, the American 2d Battalion, 358th Infantry, with two platoons of tank destroyers and supported by mortars and artillery, prevented a German infantry battalion from reinforcing and broke the back of the attack. Both sides suffered numerous casualties. The Germans withdrew, leaving behind four tanks, four assault guns, sixteen halftracks, and over one hundred fifty dead.

The 90th soon left terrain objectives behind and moved rapidly to close the northern pincers on Metz. Their movement was halted by the corps commander and reoriented toward the Sarre. The first seven days of the Moselle operation had been the hardest fighting the division had seen since Normandy and it had demonstrated its prowess as one of the best divisions in the theater. The division suffered 2,300 casualties during this period in some of the heaviest fighting it would see in World War II.

The 95th Division effectively contained the German garrison of Metz during the double envelopment by the 90th and 5th Divisions. It now moved to assault the city from the west, forming the centerpiece of the fortress battle. The 95th's attack on November 14 used two battalions each from the 377th and 378th Infantry Regiments to penetrate between the forts and into the city. The 379th had preceded this attack by a day, clearing the flood plain to the Moselle River on the 13th. A newly created unit, Task Force Bacon, composed of cavalry, engineers, and tank destroyers and named for its commander, moved across the river and proceeded to reduce the northern part of Metz.



American infantrymen patrol the streets of Metz.

To its south, on the corps's right flank, the 5th Infantry Division, the "Red Diamond" division, formed the southern pincer of General Walker's envelopment. Maj. Gen. Stanford L. Irwin's division had distinguished itself in the assault crossings at Dornot and Arnaville on the Moselle in September and had captured and cleared a number of the Vauban forts in Metz's outer ring of fortifications. The 5th Division crossed the Moselle south of Metz and marched north to begin its swing northeastwards as the corps main effort to neutralize the city and its forts. Its final objective lay astride the Nied Francaise River in the vicinity of Sanry-sur-Nied and Nancerville. Taking this patch of high ground would put it in a favorable position to cut all the four major roads coming from Metz as well as the double tracked Metz-Strasbourg railway. The outer forts were in the path of the division but none of the major works would be reached until the division turned inwards towards the city itself.

Facing the division was a nearly full-strength unit, the *17th SS Panzergrenadier Division*, and a garrison of second-rate troops. Air support from the Eighth and Ninth Air Forces accompanied the attack which began on November 9th, hitting the rail yards at Saarbrueken and the Metz forts. With the exception of sorties flown by medium bombers against the forts, the bombers achieved poor results due to bad visibility. The XIX Tactical Air Force did manage to delay the arrival of some German reserves into the area.

The 5th Infantry Division assault along the Seille River began at six in the morning on the 9th, led by two battalions of the 2d and 10th Infantry Regiments. Closely paralleling the move of the 6th Armored Division along the northern boundary of the XII Corps, the 5th Division's 10th Infantry moved to the north following its bow-wave. The 5th turned sharply northward to link up with the 90th Division and complete the envelopment. After days of hard fighting, they linked up with the 90th Division on November 19th, sealing the pocket of Metz. At the same time, final resistance within the city ended as elements of the 95th division, 5th Division, and 90th Division mopped up resistance in various parts of the city, its outskirts, and outlying fortifications. To the southwest, on the river, the southernmost unit of the 95th Division, the 379th Infantry Regiment, contained the seven forts on the ridges east of Gravelotte referred to as the "Seven Dwarves". These included the Jussy Nord and Sud forts, the Vaux Nord and Sud forts, and Fort Marival. These all eventually surrendered to the 5th Division in late November and December after a period of siege.

Patton still lay one hundred miles from the Rhine after the capture of Metz. He charged his corps commanders to drive hard to the northeast, but the broken resistance he had encountered in late August had stiffened. Many German divisions had been reconstituted with regenerated units. New units were created and filled with classes of conscripts of older or younger men previously untouched by military callups. Factories continued to produce the tanks and automatic weapons in sufficient numbers for these units to constitute a strong defense against the Allied armies all along the front. The so-called "German Miracle in the West" had become a reality.

Battles in Alsace

On the southern flank of the Allied armies was the 6th Army Group, by now fully integrated into SHAEF plans. Lt. Gen. Jacob Devers had activated 6th Army Group on September 15th and assumed command of the U.S. Seventh Army and French First Army on that date. The Seventh Army was on the group's left, on the northern boundary. The French were placed on the group's right, the southernmost position. More American divisions and corps would flow to Lt. Gen. Patch's Seventh Army as soon as the port at Marseilles was fully operational, but until then his VI Corps remained the sole U.S. force in his army.

At the far right of Dever's 6th Army Group sector, General Jean de Lattre's Free French First Army had grown in size since landing in France in August. It recruited new soldiers from the French Forces of the Interior, the French Resistance, and found other volunteers ready to fight for France. Thousands of eager young recruits were added to the colonial forces that had been battling with de Lattre since North Africa. General Devers gave de Lattre the mission of penetrating the Belfort Gap in upper Alsace and entering Germany at its southernmost gateway near the Swiss border.

At the end of September, the French II Corps realigned itself with the French I Corps alongside the army group's flank as the US VI Corps wheeled northeastward into the Alsace region. This gave each army of the 6th Army Group a consolidated national sector and simplified command and supply. De Lattre intended to invest Belfort with a pincer move using both his corps. This was despite the fact that he would lose some troops to assist in the siege of Bordeaux far to the Allied rear. In addition, he was required to hold the line in the maritime Alps on the Italian border after the withdrawal of the First Airborne Task Force from that sector.

Devers had six infantry divisions when he assumed command in September, and he immediately sought to bypass the obstacle of the Vosges Mountains by using the gaps north and south of the mountains as a way of entering the Alsace plain. The Saverne Gap in the north was a narrow avenue separating the High Vosges and the Low. The avenue then turned east into Germany and the Hardt Mountains. The wider Belfort Gap in the south separated the High Vosges from the Jura Mountains and the Swiss Alps. Patton's XV Corps lay in part of the Saverne Gap, but his force was held up short of Metz and the Sarre River at the time. The continuing logistical problems of the northern army groups led Eisenhower to give Devers the XV Corps from Patton's army along with the promise of three more divisions in the upcoming month. All these were to be supplied from the southern ports of Marseilles and Toulon. This would speed Devers campaign and assist his support of the southern flank of Bradley's army group. It would also clear the way for a move toward the Saverne Gap. It did not, however, prevent the VI Corps from moving into the Vosges.

SHAEF's broad-front strategy had included few particulars concerning the operations of the southern army group. Planning for it seemingly came as an afterthought to SHAEF's staff when it became apparent that Devers' command would soon link up with Patton's Third Army. SHAEF considered the southern army group as a secondary contributor to the attack into Germany, and Eisenhower visited Devers' command post but once. Despite the value of its ports, the southern front remained eclipsed on Eisenhower's priority list.

Devers' command had only one avenue into Germany completely in its sector, the Belfort Gap. The best avenue in its vicinity was to its north along the line from Nancy to Strasbourg. This approach fell mostly in Bradley's 12th Army Group area. Even had Devers' been allowed to use this approach, once across the Rhine he would face the major obstacle of the Black Forest. Avenues from his sector into Germany and Italy faced mountainous terrain unsuitable for rapid exploitation. For the time being, 6th Army Group's main contribution to the battles in central Europe was to fix German divisions in place that might better be employed elsewhere.

However, a significant portion of the still-contested French regions of Alsace and Lorraine lay in Devers' sector. This was an emotional issue for the French. There were several potential crossing sites over the Rhine in his sector that could be developed for northward moves to support major operations into Germany. Neither Devers nor Patch were confidants of Eisenhower or his close advisors, and both struggled to make their strategic concerns heard. They retained the smallest air contingent of any army group in support of their operations. The battles in the south did pin down and attrit their share of German units, as well as guaranteeing a wealth of logistical support for all the army groups through the southern ports.

The Germans tended to consider the southern sector of the front as a secondary area of operations as well. The German high command used their units in the south as a "bank" to draw upon to help cope with the threat of Bradley's and Montgomery's army groups. German strategy in the south had been to hold the Moselle region. The *Army Group G* commander, General Johannes Blaskowitz, was a Catholic and thus unpopular with Hitler. He had nevertheless survived for months in his command based on military talent. He was handicapped by being assigned low grade divisions more suitable for static defense than the active defense desired by Hitler. With the exception of the remarkable *11th Panzer Division*, which had sprung many of his forces from traps in the past, his army group's combat effectiveness was based on the tactical prowess of its commanders more so than the quality of his troops. After Manteuffel's *Fifth Panzer Army* launched a weak counterthrust easily parried by XV Corps, Blaskowitz was relieved and replaced by *General der Panzertruppen* Hermann Balck. Balck was an exceptional commander and one of Hitler's "firemen" known for plugging holes in the line and stopping Russian attacks in the east.

Patch's Army wheeled eastward from its northern orientation, aligning its advance with Bradley's Army Group to its north as it linked up with Patton's troops on its left. The VI Corps led the way. Regrouped by September 20th, Truscott oriented his corps to seize the major communications centers in the Vosges region and open a passage to the Alsatian Plain and the Rhine. The Vosges was divided at its mid-point by the Saverne Gap, with the northern part halved by a chain of mountains known as the Low Vosges. This northern part was assigned to XV Corps, then in Third Army. In the VI Corps sector south of the Saverne Gap were the High Vosges Mountains, a mountain range running from northeast to southwest and forming an obstacle to reaching the plain of Alsace and the Rhine. Epinal, on the Moselle, was a major communications center. With a population of 27,000, it was the largest city in the area. Two roads radiated out from Epinal, one to St. Die and the Saales Pass and then on to Strasbourg on the Rhine, and the second to the Schluct Pass and then to Colmar on the Alsatian Plain. Both would figure in the Seventh Army's campaign.

The Vosges Mountains were considered a major obstacle, integrated into the Siegfried Line as part of the West Wall defenses of Germany. This sector had two delineated defensive lines. Intelligence estimated that it was defended by four infantry divisions and one or two armored divisions. These defenses were formidable. Even when the Allied attack was underway, German combat engineers continued constructing additional defenses in depth and adding more blocking positions. The Germans exploited every topographical advantage.

The Moselle River was wide in this sector with steep banks, making it a natural defensive line. VI Corps' immediate objective was to cross the river to seize the communications centers in the Vosges and open passages to the Alsatian Plain and the Rhine River crossing sites. Phase I of VI Corps' attack began on September 20th about ten miles west of the Moselle River as the American forces made their approaches to the river. The crossings themselves were Phase II of Truscott's plan. Phase III would be a turn to the northeast, and Phase IV the capture of Gerardmer and Rambervillers. Phase V would see the corps center and left push across the Meurthe river between Baccarat and St. Die. As befitting a plan devised by an old cavalryman, it was a long-distance plan with a wide operational sweep.

VI Corps' three veteran divisions held a large patch of Moselle River frontage, well over twenty miles, with the 3d, 36th, and 45th Infantry Divisions arrayed from right to left. Truscott had been denied a shot at the Belfort Gap in favor of General. de Lattre. As Devers reoriented his corps, he faced a well-dug in enemy. Truscott expected that the Germans had four prepared defense lines. These lines started at the Moselle and took full advantage of the terrain. From the Moselle, the lines were formed on the approaches to the western Vosges, the reverse slopes of the Vosges, and then the east bank of the Rhine river. VI Corps girded itself for a tough campaign.

The VI Corps' three divisions attacked northeastwards, meeting an entrenched, prepared foe for the first time since their August landings on the Riviera. The German defenders, reinforced and with their homeland to their backs, dug in on the Moselle River to blunt the American drive towards the Vosges Mountains, the last great natural barrier before the Rhine and the German border.

Truscott assigned the 45th Division, in the north of the corps' sector, the missions to seize Epinal and the crossings in that vicinity, advance northeast to seize Rambervillers and Baccarat, and force the Saverne Gap. The 36th Division in the center would cross the Moselle in the vicinity of Eloyes and seize St. Die near the Saales Pass. On the right of the corps, to the south, the 3d Division, would seize crossings near Rupt and take Gerardmer near the Schlucht Pass. This plan carried the corps twenty-five miles into the German rear. Its long-range objective, Strasbourg on the Rhine, was a further forty miles beyond.

The 45th Division reached the Moselle on September 21st, where it encountered stiff resistance while probing for fords. Moving north into the XV Corps sector, the 157th Infantry Regiment crossed a bridge that had been emplaced by Third Army and then maneuvered south to clear the far bank from north to south while its sister regiment, the 180th Infantry Regiment, probed for a crossing. A two-day fight ensued through the 23rd during which the 157th suffered over 100 casualties.

The Germans abandoned the area after delaying the 45th's advance with roadblocks, wire entanglements, and obstacles. Patrols reached the Moselle north of Epinal late on the 23rd. Using darkness and heavy covering fire, they crossed the river at a ford that night. With the German defense in the Bois de Foresterie collapsing, the division had troops within four miles of Epinal. Late on the afternoon of the 24th, a Bailey bridge was completed, and vehicles and men began pouring across the Moselle. Farther south, the 179th Infantry Regiment advanced to take Archette. It put another bridge in place the next afternoon, securing a bridgehead at Epinal.

By the 25th, VI Corps had two divisions across the Moselle with battalions moving up to the foothills. The 3d Division had yet to move up. The German response was to attack the American center, southwest of Le Tholy, using a tank unit from the *11th Panzer* and two understrength infantry regiments from the *198th Infantry Division*. Although the first attack hit the rear of the 36th Division squarely, the Americans were able to regroup and slow the German advance. When the *Nineteenth Army* realized that the 45th Division was breaking out of its bridgehead at Epinal and the 3d Division had now begun its crossing to the south, it ordered its exposed troops to withdraw.

Maj. Gen. Dahlquist's 36th Division in the center reached the Moselle and crossed on the 20th. It forded the river with a battalion assisted by local civilians, crossing in fog and darkness to seize high ground on the opposite shore. Several battalions made it across before an alerted enemy attacked the Americans and resisted further attempts to move troops over the river. On the 21st, the 36th Division pushed across its reserve regiment through spotty German defenses at the original crossing site and attacked the town of Eloyes near Hill 605. After occupying the high ground overlooking Remiremont on the morning of the 23rd and with bridges firmly established, the 36th had two regiments across and firmly held the corps center east of the river while the 45th battled southward.

The 45th Division moved on Epinal and arrived after the 36th had begun its fording operations the night of the 21st. They faced formidable defenses. For a month the Germans had been preparing field fortifications, digging trenches, siting guns, establishing sectors of fire, and coordinating their defensive plan. Three battalions of German infantry, reinforced by antiaircraft guns, mortars and field artillery, protected the sector. Mines, booby traps, automatic weapons, and road blocks covered the logical road approaches and avenues. The river banks near the town were mined and railroad embankments and overpasses near the communications center were destroyed. The city's internal bridges were all blown with the exception of the largest bridge in the town and one to the south. These became key objectives of the 180th Infantry Regiment's assault on the city.

After two unsuccessful attempts, the 180th Infantry forced a crossing of the river near Epinal. It erected a bridge for vehicles and established a firm bridgehead. German resistance was finally overcome after four days of fighting off counterattacks and stiff resistance to capture the city on September 24. The 45th Division had suffered over 250 casualties in the assault on this valuable objective.

The 3d Division crossed in the southern part of the corps zone on the 23rd. It moved toward the Moselle with two regiments abreast, the 7th Infantry on the left, and the 30th Infantry on the right, with the 15th Infantry held in divisional reserve. The division assault over the river began on the 20th, five miles south from the town of Melay. The 7th's crossing point was south of Remiremont. The 30th picked Rupt for their river crossing. Their boundary, Route D-6, fortuitously was also the unit boundary between the *LXIV Corps* and the *IV Luftwaffe Field Corps*, creating a weak spot in the German defenses. The 7th Infantry in the north labored through rough terrain and against heavy opposition but managed to achieve surprise with a night assault on the 23rd, capturing a German bridge over the river at Rupt. Reinforced by a battalion from the division reserve, they held off counterattacks and seized a second bridge on the Moselle at Maxonchamp, two miles northwest of their original bridgehead. This permitted the "Marne Division" to push its bridgeheads abreast of the 36th Division on the Moselle at Remiremont.

In its southern sector, the 30th Infantry met stubborn resistance, making little headway for the first two days. The French II Corps to their south also were held up. Both the VI Corps' and II French Corps' cavalry squadrons deployed to cover the increasingly open flank as the rest of the 3d Division pressed northward. Increasing Allied success in the north caused the Germans to withdraw to more defensible ground. VI Corps was firmly across the Moselle with bridging in place and moving northward towards its deep objectives.

Epinal American Cemetery



The Epinal American Cemetery and Memorial in France, 48 acres in extent, is sited on a plateau 100 feet above the Moselle River in the foothills of the Vosges Mountains. It contains the graves of 5,251 of our military dead, most of whom lost their lives in the campaigns across northeastern France to the Rhine River and beyond into Germany. The cemetery was established in October 1944 by the 46th Quartermaster Graves Registration Company of the U.S. Seventh Army as it drove northward from southern France through the Rhone Valley into Germany. The cemetery became the repository for the fatalities in the bitter fighting through the Saverne Gap, and in defense of Allied positions in the Vosges region, during the winter of 1944-1945.

The memorial, a rectangular structure with two large bas-relief panels, consists of a chapel, portico, and map room with a mosaic operations map. On the walls of the Court of Honor, which surround the memorial, are inscribed the names of 424 of the missing. Rosettes mark the names of those since recovered and identified. Stretching northward is a wide, tree-lined mall that separates the two large burial plots. At the northern end of the mall, the circular flagpole plaza forms an overlook affording a view of a wide sweep of the Moselle Valley.

On May 12, 1958, 13 caskets draped with American flags were placed side by side at the memorial. Each casket contained the remains of one World War II unknown American, each from one of the thirteen permanent American military cemeteries in the European theater of operations. In a solemn ceremony, Gen. Edward J. O'Neill, commanding general of the U.S. Army Communication Zone, Europe, selected the unknown to represent the European theater. It was flown to Naples, Italy and placed with unknowns from the Atlantic and Pacific Theaters of Operation aboard the USS Blandy for transportation to Washington, D.C. for final selection of the unknown from World War II. On Memorial Day, 1958 the remains were buried alongside the unknown from World War I at the Tomb of the Unknown Soldier at Arlington National Cemetery.



With Epinal in hand, the corps began moving more supplies and troops across the river and into the Vosges Mountains. These mountains were again to sound with guns fired by American soldiers. The Vosges had been a training ground for many of the AEF divisions serving under General John J. Pershing in 1917 and 1918. Here they had their first tastes of combat before moving on to launch major offensives at St. Mihiel and in the Meuse-Argonne.

Seventh Army's attacks had been aided by its northern neighboring corps, the XV Corps. XV Corps, commanded by Maj. Gen. Wade H. Haislip, anchored the southern flank of Third Army. It had covered that army's wide-open flank in the race to linkup with Seventh Army, and then had been tasked to seize the vital communications center of Luneville. General Haislip's command had two divisions assigned, the 79th Division, a veteran of the Cotentin fighting, and the 2d French Armored Division, which had led the Allied liberation of Paris under Maj. Gen. Jacques Leclerc.

Haislip's corps made its run to the German border beginning in September from behind the Marne River. The French armor was in the south near Chaumont, Pershing's headquarters during WW I. The 79th Infantry Division was north of them near Joinville. Haislip planned to loop around the *German 16th Infantry Division*, first by breaking the defenses holding the river, and then passing the infantry north and the armor south to hit the German division in their rear. Using two infantry regiments in the northern movement and a French combat command as the southern prong of his attack, Haislip maneuvered around the bulk of the German defenses, seizing strongpoints as needed, and keeping his main columns headed towards their final objective, Luneville. It was a cavalry move fitting of Patton's Army, though carried out by infantrymen. Thus, indirectly, Haislip had become part of the Seventh Army's battle by supporting its northern flank.

On October 1, 1944, the advanced command post of "CADET FORWARD", Seventh Army's Tactical Command Post, opened at Epinal, in the foothills of the Vosges. At this time, XV Corps was detached from the Third Army and attached to the Seventh by a simple boundary change. This added some 50,000 soldiers to the Seventh Army. It now had both Maj. Gen. Ira Wyche's veteran 79th Division and Maj. Gen. Jacques Leclerc's Free French 2d Armored Division. The 106th Cavalry Group and assorted attachments were also assigned.

Three more U.S. divisions soon arrived by ship in the southern ports for assignment to Seventh Army. Devers' 6th Army Group picked up more frontage along with these new units, which also increased the challenges to keep them supplied. The long rail haul from the ports to forward supply depots was still undergoing rehabilitation and this tenuous supply line barely kept the divisions

operational. Seventh Army referred to the month of October as “Black October” due to these continuing supply shortages, a grim reminder of the importance of logistics to sustaining success.

Having moved farther north than supply could comfortably support them, Devers’ units placed grave restrictions on artillery ammunition, the key munition needed for infantry operations against troops in prepared positions in rough terrain. Daily “units of fire,” allocations of scarce artillery ammunition, were roughly cut to 20 percent of their normal levels. Moreover, the French Army had to be supplied from U.S. stocks, further straining Seventh Army operations. The port facilities in Marseilles and Toulon were still being repaired from German demolitions. Rail, bridge and road repair was also still underway. Compounding the problems with infrastructure was the fact that the battlefields were now over 175 miles from the beaches and the distance grew every day.

The St. Parroy Forest was the next major obstacle in the Seventh Army’s path. The forest defied easy bypass as the front had now stabilized. Clearing out resistance methodically was necessary to avoid leaving major German formations in the rear of the Allied advance. Two German Armies, the *First*, and *Nineteenth*, had elements in the region behind extensive defensive works. A line of fire trenches blocked the axis of advance towards the key town of Baccarat. These trenches were backed by a concentration of armor drawn from the *11th* and *15th Panzer Divisions*. With Maj. Gen. Eddy’s XII Corps to their left, the XV Corps faced these veteran units as it fought through a thirty square mile tangle of brush and timber between the Rhine-Marne Canal and the Vezouse River.

The XV’s divisions were exhausted from over one hundred days of battle but gamely pushed forward. The 79th Infantry Division led the way into the forest. Moving about three miles in the first nine days of October, the 79th’s attack may have appeared reminiscent of the battles in the Argonne Forest in late 1918. The enemy was well-protected by the cover of the woods, which defied Allied air attacks. Tanks were able to use the many fire breaks and the occasional open rolling patch of ground to add some fluidity to the fights, but the Germans contested every yard. Tank hulls were piled high with supplies for the infantry, too tired to carry their loads. Near constant rain turned vehicle trails into a muddy slurry. Tanks were able to get through the mud, but trucks bogged down. The Parroy Forest’s fifth and last strongpoint fell on October 9th, bringing the XVth Corps free of the woods. Meanwhile VI Corps, having crossed the Moselle, moved alongside them to their south.

While Haislip continued his attacks to the northeast, VI Corps executed a new plan called DOGFACE named for a tagline in the 3d's divisional song. Truscott's objective was the ten-mile stretch of high ground overlooking the Meurthe River Valley and National Route 59 between St. Die and Raon-l'Etape. This would become the line of departure for Devers next planned offensive in November to leave the Vosges behind and to enter the Belfort Gap.

VI Corps had continued its move from the Moselle crossings into the Vosges Mountains without stopping. XV Corps' movement covered Truscott's northern flank, but its painfully slow advance through the St. Parroy Forest tied the VI Corps to a measured pace beyond Rambervillers. Truscott relied upon his neighboring corps to clear a path for his own advance northeastward. The methodical use of terrain by the Germans and their skill in passing troops through gaps between units called for carefully coordinated Allied attacks. To the south, the French II Corps sector had similar tactical problems dealing with terrain and enemy resistance.

Patch and Truscott favored risking a VI Corps attack towards St. Die as a limited objective to open the Vosges sector and prevent the front from becoming static. It was necessary to take St. Die and Bruyeres before making any major attack on Strasbourg. Its road and rail network linked the Saales Pass and Strasbourg and radiated throughout the Vosges mountains. Jamenil was the start point for the VI Corps attack. Following the small Valogne River valley through rolling hills and, after ten miles, the hub city of Bruyeres, the planned attack would close in on St. Die over steep hills to the west, north, and east. Route N-420, a main avenue of approach, twisted northward in heavy terrain to St. Die, the intermediate objective.

Truscott's VI Corps had cleared the foothills of the Vosges with, from right to left, the 3d, 36th, and 45th Infantry Divisions on line. The 45th and 36th were to break through the German lines and capture Bruyeres. Then, the 3d was to be committed. VI Corps had been fighting the Vosges for some weeks, and the constant fighting and bad weather weighed heavily on its soldiers. Combat exhaustion, heavy leader casualties, wet weather casualties, and stragglers from combat units now became endemic problems as leaders grappled with the rigors of extended combat in the mountains. To assist with his supply issues, Truscott obtained a mule company for bringing in supplies over the rough terrain. He also developed a plan to rotate out of the line those troops who had been in action longest or were showing signs of strain. Snow was common in the higher elevations, leading to cold injuries and incidences of trench foot. The high attrition of near-constant battle could not be avoided as veteran units bled out their experienced men and absorbed new replacements.

Operation DOGFACE

Corps Operations Plan No. 1, Operation DOGFACE, was published on October 11. The plan was Truscott's last action in the corps, as he was alerted that he would give up command of VI Corps and move to Italy to command Fifth Army. He was replaced halfway through the offensive, on October 25, by Maj. Gen. Edward H. Brooks, former commander of the 2d Armored Division, "Hell on Wheels," and briefly acting commander of V Corps.

Before the launch of DOGFACE on October 15th, two regiments of the 45th Infantry Division were to seize Brouvelieures, both to keep touch with the XV Corps to the north and to take the high ground in the northeast of the sector. This would open an avenue for the 3d Division's stealthy thrust towards their objective as the final attack culminated. The control of the Magdeleine Woods would be crucial in this attack. Eight days were allotted for the first phase of the attack to clear the area up to Brouvelieures and Bruyeres before the 3d Infantry Division would pass through in its attack. The weather, as always, was seen as problematic.

In the first phase of DOGFACE, the 45th Division was assigned to take the high ground to their front, seizing Brouvelieures and then pushing to the Mortagne River east and west of National Route N-420. They would clear the Hill 385 position dominating the west of the town. This would support the 36th Division's capture of Bruyeres, clearing the woods between the towns. The 442d RCT would move on the 36th Division left, anchoring their flank with the 45th Division and taking Bruyeres from the north. They were also assigned to clear the high ground beyond. The 36th Division's 143d Infantry would move in the center of the division sector, seize crossings on the Vologne River, and move northeast four miles to high ground south of Biffontaine. They were then to relieve the 30th Infantry near Le Tholy. This would give the 36th Division a ten-mile frontage, a calculated risk balanced by operations elsewhere. The 7th Infantry of the 3d Division would attack in conjunction with the French II Corps from Le Tholy towards Gerardmer.

The three divisions of VI Corps moved into the attack on October 15th, kicking off Operation DOGFACE. The 45th Division was in the north sector. To their south was the 36th Division, reinforced with the American *Nisei* (second generation Japanese-Americans) of the 442d Regimental Combat Team arriving into theater from Italy. The 3d Division was assigned the southern flank of the attack with one regiment forward, the 30th Infantry, while two rested for a week out of the line.

The 45th Division's attack on the 15th cleared Brouvelieures and the 36th Division moved with some ease on its southern flank. The 442d RCT took its objective after heavy fighting and secured both the heights north and east of Bruyeres, while probing towards Belmont and the Dominale de Champ Forest. While heavy fighting appeared to slow the 45th Division, Truscott was confident enough of the outcome to modify his plan to commit 3d Division early on October 20th, five days before he left command.

Maj. Gen. O'Daniel's 3d Division was flexible enough to be ready for the modified attack. Its 7th Infantry attacked between Bruyeres and Bouvelieures, followed by the 15th Infantry which attacked up Route N-420 the morning of October 21st. Following a demonstration to the right, the surprise assault on the left went in early and made moderate progress, cracking the enemy line after about 24 hours. By the 26th, the 7th Infantry on the right flank had captured Rouges Eaux halfway to St. Die. Within four days it had seized the high ground overlooking St. Die to the northeast. To its left, the 15th Infantry moved to the northeast toward Etival, gaining ground and opening an avenue for the 30th Infantry to advance on the main objective, St. Die. More than 5,000 prisoners were taken during late October as it gained control of the high ground.

Rescuing the "Lost Battalion"

While DOGFACE ground forward, a unit of the 36th Infantry Division was cut-off behind enemy lines. The resulting battle to rescue them typified the ferocity of battle in this mountain war. Just as the Argonne's terrain made the "pocketing" of troops possible in World War I, an element of 1st Battalion, 141st Infantry, 36th Division became isolated from its regiment near Hill 645, southeast of Biffontaine during an artillery supported counterattack against overextended troops in the *Forêt Dominale de Champ*. Approximately 275 men were cut off on a ridge north of La Houssiere. Trapped in an area about 300 by 350 yards, the soldiers beat off attacks by two enemy companies for two days. Attempts by the 3d Battalion, 141st Infantry, to break through to their sister battalion failed. Finally, the 442d RCT, a Japanese-American unit, was pulled out of reserve and committed on the 26th to relieve this "lost battalion." In a bitter two-day fight, the two battalions of *Nisei* fought on line to gain a mile of ground against tree bursts, machine guns, and heavy resistance, suffering severe casualties. Two companies, I and K, launched a bayonet attack down a ridge after seizing dominant ground to break through from behind the enemy positions. The 211 survivors were rescued. The 3d and 100th Infantry Battalions of the 442d RCT were awarded Presidential Unit Citations for their roles in this action. For the Battle of "Banzai Hill", as the Japanese-Americans called it, four Medals of Honor were earned by Barney Hajiro, George Sukato, James Okubo, and Joe Nishimoto. More than 800 casualties were suffered by the 442d in its brief fight during DOGFACE, more than 20 percent of the regiment.

Devers now believed that DOGFACE had nearly run its course. The German *Nineteenth Army* had reinforced its front to block the VI Corps' advance, and their exposed flanks now needed help. The VI Corps was assisted by diversionary attacks by the French II Corps to their south. In addition, new divisions arriving in theater for Seventh Army reinforced the corps. The 103d and 100th Infantry Divisions were sent to the exhausted VI Corps to replace some of its tired divisions in the line.

The German *Army Group G* Commander, General Hermann Balck, had ceased his counterattacks both north and south of the sector to focus his defense on stopping Allied attacks in the Parroy Forest and the Rabervillers sectors leading to the Saverne Gap. He shifted boundaries to focus one corps on each of the two sectors. Additionally, Balck began a massive reordering of his units to regenerate combat power from the battered remnants of his remaining forces after the fall battles. Balck intended to cede no ground in the Parroy Forest or any area in front of the Vosges defense line.

Lt. Gen. Patch's Seventh Army was assigned by General Eisenhower to attack on the axis St Die-Strasbourg to the south of the 12th Army Group. *Seventh Army* was to clear this sector all the way to the Rhine including the capture of Strasbourg. With the addition of three divisions from the United States, the 100th Infantry, 103d Infantry, and 14th Armored Divisions, Patch's two corps now mustered six infantry and two armored divisions, including the French 2d Armored Division. These units were primed to attack towards Strasbourg which was considered the key to the Alsace plains.

The November Offensive in the South

SHAEF's mission for Seventh Army laid the foundation for Devers' planning for the 6th Army Group's November offensive. Devers intended to finish the drive begun by DOGFACE using both his armies, with Strasbourg as his main objective. The French First Army in the south of the army group sector was ordered to attack through the Belfort Gap, even though SHAEF planned to weaken the French forces by diverting two of its divisions to rear security missions in Bordeaux. Concerned about his offensive power, de Lattre managed to postpone the detachment of these divisions. He was thus able to plan on using these divisions along with his amalgamated FFI reinforced divisions in his attack. This allowed him to avoid using some of his less "winter-capable" African colonial units.

The 6th Army Group attack faced elements of the *21st Panzer*, *16th Infantry*, *716th Infantry*, *198th Infantry*, *338th Infantry*, and the *198th Infantry Reserve Divisions*. These troops had fortified their positions and prepared roadblocks along roads or avenues of approach that might favor an Allied attack. Allied soldiers and commanders recognized that their opposite numbers intended to contest every piece of ground to prevent any penetration of German territory. Determined resistance was to be expected everywhere.



Seventh Army infantrymen advance to join the November offensive.

The XV Corps, as the Seventh's Army's main attack, jumped off at 0700 on November 14th with its three divisions. Its objective was the Saverne Gap. The 45th Division attacked east to Sarrebourg. The 79th Division, with the 314th and 315th Infantry, attacked on the axis Montigny-Blamont to open a passage for the French 2d Armored to exploit the breakthrough. Moving through the town of Ancerville, the 79th Division units captured Barbas and Nohigny and moved on to cross the Vezouse River under fire between Blamont and Cirey. There, the French 2d Armored moved through the 79th and drove forward on November 19th in a two-pronged advance. They attacked northwards through the German strong point at the Saverne Pass and looped around and through Saverne. The other prong attacked from the south through the Wolfsberg Pass and joined them at Saverne. The French then moved to take the town of Cirey. The 2d Armored deployed its four combat elements along its planned routes of attack on the 19th with one of its task forces, Task Force Massu, breaking out onto the Alsatian plain by midday on November 21st.

Strasbourg, the capital of Alsace, was entered from four directions by General Leclerc's 2d Armored Division. Originally it was the objective of VI Corps, but that corps met heavy resistance. Patch rewrote his orders to leave the objective to whichever corps was within striking range. Leclerc, who had led the way into Paris, needed no encouragement. At 0715 on the 23rd of November his division entered the town by crashing through the German defenses and pushing aside all resistance. One task force pushed up to the Rhine and then northwards, sweeping the north bank of the Rhine-Marne canal. Although Strasbourg fell into French hands relatively intact, its bridge over the Rhine did not and it was not possible to cross the river. For the second time, French soldiers had reached the Rhine, though XV Corps soldiers were also able to claim that honor. For two days the French mopped up resistance in the city as other elements of the Seventh Army continued to clear their sectors.

On the southern flank of the army group, the French First Army was eager to liberate the rest of Alsace with Gallic "*L'Audace*." As de Lattre was wont to do, he planned a massive pincer operation, using his I Corps to approach from the southeast paralleling the Swiss border. Two divisions from the corps would skirt the border to the east towards Basel. The northernmost division would then turn at the border towards Mulhouse along the Rhine River valley. Meanwhile, two divisions of his II Corps would invest the enemy in Belfort. Without entering the city, they would encircle the city to the north and drive a wedge into the German lines to meet the pincer from Mulhouse at the town of Burnhaupt. This would trap the Germans in a pocket. De Lattre began executing the plan on November 14th while French irregulars provided a demonstration in the hills overlooking Gerardmer to cover the left flank of the U.S. 36th Division. This was beginning its drive towards the Saverne Gap.

De Lattre's complex plan materialized less by intent than by opportunity, as the French took advantage of German weakness and withdrawals and executed a modified operation. French units encircled and trapped the enemy around Belfort. The northern elements found a weakness in the German defenses and pressed their advantage to drive eastwards. By November 28th, the French had liberated Mulhouse and Belfort and now had substantial forces holding the shoulders of a German salient soon to be known as the Colmar Pocket. However, they were not able to drive further north to liberate the rest of France west of the Rhine.

Only a lack of boats and bridges prevented de Lattre from attempting to throw a bridge across the Rhine when his forces reached it. Even then, his spread out I Corps probably could not have maintained a bridgehead. Devers' congratulations were somewhat muted since the mission assigned to the French was to clear the Rhine of all Germans on the west side, which they had not yet accomplished. Devers told Patch to plan for a crossing, even though Patch only had enough assets to put a mere six battalions across. SHAEF was quick to dampen this plan. Neither terrain, nor available forces, nor mission supported it. As events would later show, Seventh Army's Rhine crossing would have to wait.

At November's end, Eisenhower reexamined the strategic and logistical situation for his army groups and found them resupplied and ready for Phase 2 of his plan. He called a conference of the senior commanders to be held at Maastricht, in the Netherlands, to decide how the Phase 2 operation would play out. This was the only real discussion of his ground strategy that Eisenhower had afforded his army group commanders since he had decided upon it in May, even before OVERLORD had been launched. The final OVERLORD plan, both in its basic logistical support requirements and the overall campaign forecast had theorized a one-year campaign, ending not far inside the German border. This had proven an adequate planning framework for the time but did not reflect changes over the past six months, nor did it offer updated future guidance. The southern France landings



and the problems with establishing open and reliable northern European ports had a major effect on Allied plans. One unchanging element of his plan, however, was the priority the Ruhr industrial area held as the key to Germany's defeat.

Bradley sought to coordinate the Third Army's attack into the Saar region with 6th Army Group to his south. Together, the 12th and 6th Army Groups would launch a simultaneous offensive west of the Pfalzerwald to breach the Siegfried Line. This plan recognized the reality that Patch's Seventh Army was tied closely to Patton's Saar offensive and that 6th Army Group would perform an important role of covering the 12th Army Group's main thrust. At least, this is how the situation appeared as December began.

The Third Army plan pitted three corps against the Germans. Patton replaced the XV Corps, lost to the 6th Army Group, with the newly operational III Corps sandwiched between the veteran XII and the XX Corps. A new division, the 87th Infantry, entered the line and another new division, the 42d Infantry, was enroute. Patton's objective remained the Rhine.

Field Marshal Montgomery believed that more strength had to be applied north of the Ardennes region. This included reinforcing the U.S. Ninth Army south of his army group and north of the Aachen corridor. He also asked that the Ninth Army be placed under his operational control to assure its harmonized operations with his own operations. Bradley resisted the long-term assignment of United States troops to a foreign headquarters and wanted to retain the army in his army group. Eisenhower felt compelled to support the logic of strengthening the forces across from the Ruhr, the main military objective, but tried not to weaken his secondary offensive led by Bradley. For the moment, the Ninth Army remained under Bradley's command. The broad-front strategy was reaffirmed.

While ground forces slowly pushed their way towards the Rhine, the air war continued. The constant bombing of oil and transportation targets during the OVERLORD period had prevented the Normandy front from being adequately reinforced by the Germans and preempted any number of large German counterattacks against the bridgehead. It had also placed an invisible brake on German supply and reinforcement by restricting daylight use of road and rail west of the Rhine during much of the 1944 campaign. As more airfields in France for fighter bombers and medium bombers became available, the Allied Tactical Air Forces supporting each of the army groups were able to stay closer behind the front. This decreased their turn around time for refueling and rearming. They could then strafe and bomb even more German supply and transport targets with increasing numbers of sorties. These near constant attacks strained the ability of the enemy to conduct their operations.

The strategic bombing deep within Germany, particularly of oil and synthetic fuel production facilities, placed a major burden on Germany's ability to retain mobile forces for defense or counterattack. The fuel shortages became harder to compensate for, while the necessity of maintaining a credible defense against aerial attacks inhibited the German's ability to use their fighters to support ground missions. Fighter assets were increasingly tied to city defense or to point defense of numerous scattered industries and economic production areas. This defense used upwards of a million souls and perhaps as many as 20,000 heavy guns, the barrels of which could have been used as antitank guns or artillery. The millions of shells sent skyward almost certainly claimed fewer American and British lives than would have been taken on a crowded ground battlefield.

Despite improved fighter escort, longer ranging offensive sweeps, and superior trained pilots who easily beat younger and less well-trained German pilots; heavy flak, air accidents caused by bad weather, tired crews, and sheer bad luck, contributed to the strain on the bomber combat. Losses remained tragically high, especially among low level precision attack missions. The appearance of a new German jet, the Messerschmitt Me-262, and even of a few rocket propelled aircraft, though deployed in small numbers, made losses higher still when they attacked bomber formations. They were so much faster than propeller aircraft that they were very difficult to shoot down.

Ninth Air Force had moved most of its aircraft and organizations onto the continent and acted in direct support of the armies. However, its IX Troop Carrier Command still had many of its transport groups in the United Kingdom, due both to basing issues and to the lack of training infrastructure for paratroopers on the continent. The newly formed U.S. 17th Airborne Division was still in England in a training status. Another division, the 13th Airborne Division, was soon to follow. All of these special units were more easily trained outside the combat zone while remaining capable of rapid deployment forward when necessary.

By December 1944, virtually every aspect of the German economy had been hit by Allied airpower. In the second half of 1944, the strategic air forces dropped more than 220,000 tons of bombs on area targets, nearly 120,000 tons on oil targets, more than 12,000 tons on selected armament targets, 8,000 tons on aircraft production, nearly 50,000 tons on airfields, and more than 150,000 tons on miscellaneous targets. The strategic bomber assets of the Allies dropped over 750,000 tons of bombs in just six months. This total does not include the bombs dropped by the Tactical Air Forces supporting the armies fighting on the ground. Their close interdiction missions repeatedly hit rail yards, bridges, rolling stock, and vehicle convoys moving to the front.



Americans capture a Messerschmitt Me-262 jet fighter.

Even so, Germany was not defenseless. Fighter production continued at a high level for much of 1944. German anti-aircraft guns continued to be a great killer of bombers and crews, and technology existed that could have made the situation worse. One of Lt. Gen. Spaatz's greatest fears was that the Germans would capture the American "posit" or proximity fuze, which would make their flak shells even more destructive. The Allies did their best to restrict its use to targets over the water or for firing antiaircraft missions over friendly lines. If captured and copied by the Germans, the proximity fuse might have made American bomber formations suffer unsustainable losses. This fuse had already proven itself deadly against Japanese suicide attacks over the Pacific waters where duds could not be captured.

The German missile and rocket threats, another Allied priority, were mostly contained by the end of 1944 by attacks on launcher and production sites. Thousands of German V-1 or V-2 rockets and missiles had been fired at England in the "mini-Blitz" of 1944. The more numerous V-1, while dangerous and unnerving to the civilian population, never became a decisive threat. With the destruction of their launcher sites in northern France and Belgium, these short-range missiles were neutralized. The more revolutionary and dramatic V-2 guided missile was hard to produce and thus too few in number to be more than a temporary, if terrifying, threat. The rocket factories at the Penemunde test site were soon destroyed in air raids and the underground facilities to build them produced relatively few.



US Infantrymen climb over anti-vehicle defenses along the West Wall defenses.

The war in northern Europe from late September until December 1944 became a battle of attrition. Allied forces, often slowed by logistical problems, found their attacks grinding to a halt as they closed on the border with Germany. German reserves, with many units built on the shells of burnt out divisions, began appearing and the Home Army restored a number of Eastern Front divisions for re-use. Many of these understrength but still dangerous units were used effectively to man the West Wall defenses. Best described as “tactics dug into the ground,” the Siegfried Line, though considered out of date, was a heavily bunkered series of in-depth positions blocking the major avenues into Germany. The lines were carefully sited to channel potential attackers towards more deadly prepared defenses and minefields. These interlocked series of pillboxes, obstacles, and tank traps were nearly impossible to bypass except at the very north of the line, target of the unsuccessful MARKET-GARDEN operation. Major, deliberate attacks would have to breach the Siegfried Line before the final assault into the German heartland.

The Allies planned to continue their deliberate attacks in December against the West Wall and up to the Rhine River in order to clear the western bank of that last major defensive barrier into Germany. However, all of their plans would soon be disrupted by a well-planned and audacious German counter-attack through the Ardennes Forest, the site of Germany's surprise penetration into France in May 1940. Considered by the Allies as unsuitable for major armored operations, the Ardennes front was lightly manned by new or exhausted American units. Some new units, such as the inexperienced 106th Infantry Division, were sent to the area for training and given a wide frontage to defend since any attack was considered unlikely. More experienced units were sent to the Ardennes front to rest up from the exhausting battles of October and November.

The surprise German assault, called by Hitler Operation *Wacht Am Rhein* and commonly called the "Battle of the Bulge" by the Americans, began on December 16th and involved an attack by thirteen infantry and seven *panzer* divisions with over 200,000 men and 1,000 tanks. The massive assault made major gains in the first few weeks but soon ground to a halt against renewed Allied defenses. The attack severely disrupted Allied plans to clear the western Rhine bank and postponed all plans to cross that river to continue the attack. The "Bulge" in the Allied lines would have to be eliminated before the campaign to take the Rhineland could continue.

Ardennes-Alsace Campaign December 16 – January 25, 1945

The Allies continued to pursue a broad-front strategy through the fall and early winter of 1944. General Dwight D. Eisenhower reaffirmed this strategy in a meeting at Maastricht on December 8th with his primary ground commanders. This addressed Field Marshal Bernard Montgomery's call for an increase in his forces arrayed against the northern approaches to the Ruhr. Eisenhower asserted that the *Wehrmacht* must be destroyed west of the Rhine River with all Allied armies playing a role in liberating what remained occupied of Holland and France. As the campaign continued, Allied strategic air forces steadily bombed key oil production and transportation targets along with other important industries designated by the Combined Chiefs. A plan to clear the Rhineland of German forces was proposed for early in the New Year. Spring crossings of the Rhine itself were envisioned. To assist in the main effort, the U.S. Ninth Army was to be attached to the British 21st Army Group.

Eisenhower's force now totaled seven armies spread from the Scheldt Estuary on the Belgian-Dutch border to Switzerland. The Canadian First Army was in the far north of the Allied line, with the British Second Army in Belgium and the American Ninth Army northeast of Aachen. The American First Army was to its south, spread along the Belgium-Luxembourg border with Germany. The American Third Army was centered around Trier and Saarlautern up to the Saar region near Saarbrücken. The American Seventh Army was poised at the Saverne Gap leading into southern Germany and held the shoulders of the Colmar Pocket. In the Belfort Gap, the Free French First Army was at the extreme right flank of the Allied line, reaching all the way to the Swiss border.

Eisenhower's summary of the campaign since the previous August to the Combined Chiefs on December 3rd recounted great accomplishments. It also focused on new challenges. The Allies still needed to destroy the V-1 "flying bomb" sites along the English Channel coast, capture and fully open Antwerp, and develop more forward airfields for tactical aviation support to the offensive. He noted that bad weather and continuing logistics shortcomings had slowed operations, both in the main thrust along the northern route into Germany and in the supporting thrusts towards the central Rhine. Eisenhower reiterated his goal of using all of his available armies to destroy enemy forces decisively west of the Rhine. He noted that the German Siegfried Line positions and flood waters from fall rains had slowed operations in all sectors. He nevertheless believed that with increased rail and port capacity coming on line and more troops available daily, he could soon push across the Rhine and attack both north and south of the Ruhr industrial heartland.

**T/4 Truman C. Kimbro,
Co. C, 2d Engineer Combat Bn, 2d Infantry Div.**



Truman C. Kimbro was born on May 27, 1919 in Madisonville, Texas, and was working near there as a field hand when World War II began. He joined the U.S. Army in December 1941. He rose through the enlisted ranks to become technician fourth grade and was assigned to the 2d Engineer Combat Battalion of the 2d Infantry Division. He specialized in demolitions.

When the Germans launched their massive Ardennes Offensive on December 16, 1944, the 2d Infantry Division quickly redeployed to assist in holding the northern shoulder of the emerging “Bulge”. A vital task was to stymie and delay the movement of armored and mechanized units. This would limit the enemy penetration and buy time for Allied forces to react. Small American contingents emplaced obstacles, established roadblocks, and fought determined rearguard actions.

A crossroads near Rocherath, Belgium presented a critical choke point. On December 19, 1944 Kimbro led an engineer squad determined to mine the crossroads. The enemy were already there, and fierce firefights precluded the further advance of Kimbro’s squad. Establishing the squad in overwatch, Kimbro crawled forward alone laden with mines. He reached the crossroads and mined it but was repeatedly wounded by rifle and machinegun fire while doing so. His wounds proved fatal. The hasty minefield he established, covered by fire, did delay the enemy advance. This greatly assisted the repositioning of Allied forces. T/4 Truman C. Kimbro was awarded the Medal of Honor for his courage, initiative, and exemplary leadership under fire.

Adolf Hitler wrote, “Strength lies not in the defense, but in the attack.” This had been a tenet of German military philosophy from Clausewitz through Moltke. The German *Fuhrer*, though priding himself as a *feldsoldat* (field soldier), was highly read in the arts of war. When caught at a disadvantage, Hitler looked to the offensive to redress the balance in the field. As the war turned against him, offensive operations such as at Kursk and Mortain went awry. Hitler nevertheless remained committed to yet another offensive. However, his forces were no longer those of 1940. Many of the weapons had been improved, but the ranks of the German Army were heavily augmented with old men, near-invalids, and young boys. Many of his generals were exhausted and others relieved for real or imagined shortcomings. Many of his units were skeletons of what they once were. The *Luftwaffe* had decisively lost air superiority. This left Hitler’s ground forces exposed to constant air attack and Allied aerial surveillance of their every move. The German industrial base and rail transportation had suffered severe damage. Industry had dispersed widely for protection and was less efficient when scattered through areas away from the bombing. Fuel was short, hampering the training of all forces, especially pilots, and making operational maneuvers difficult. Combat power was in short supply. A bold riposte without the benefit of logistical or aerial support seemed unlikely.

The Allies believed that the German Army in the west had been essentially destroyed. This was a dangerous delusion. A new German Army “appeared” in November 1944, not as a miracle, but as a result of processes Allied intelligence analysts misunderstood. German units during the battles in Normandy and northern France had not been reinforced with replacements to the extent believed, nor were their casualties assessed correctly by Allied intelligence. This was true even when they were “destroyed” in places like the “Falaise Gap.” The German reporting system accounted daily for combat strengths, not for noncombat support units. Many divisions left their tanks and vehicles behind and lost much of their combat strength, but staffs, cadres and division base units escaped. Divisions could be rebuilt quickly by pushing replacements into these functioning frameworks. New *Volksgrenadier* divisions of a simplified design with large amounts of firepower were created through a mass mobilization of German manpower. Resulting shortages in industrial manpower were filled with slave labor. Newly recruited soldiers were often old and lacked physical fitness, but additional firepower and effective leadership still made them formidable foes.

Despite severe drubbings in the summer and fall of 1944, the “Miracle in the West” rendered the German Army capable of limited offensive operations. Hitler determined to strike in the west. He had conceived of a counteroffensive as early as August 1944, while the last operations of the German Army west of the Seine were playing out. At that time Hitler’s retreating army concentrated along three axes. A large contingent was withdrawing from the south as the DRAGOON forces of the 6th Army Group moved north. The remnants of the *Seventh* and *Fifth Panzer Armies*, which had been part of *Army Group B*, were attempting to fall back before being pinned against the Seine. Along the channel, the German “fortress” units in ports being held from Rouen to Antwerp were about to be encircled and reduced by the Canadian First Army. Meanwhile the British Second Army pointed northeast towards Brussels. Bradley had spread his First and Third Armies wide in a headlong pursuit, leaving his forces potentially vulnerable.

Hitler tried three times to regain the initiative as German forces retreated. First, he ordered an unsuccessful counterattack at Mortain. Then he ordered an offensive by the *Fifth Panzer Army* near the Neufchateau-Nancy sector in Lorraine. This also failed. Hitler intended these two attacks as spoilers. He definitively expressed an operational intent to reverse events in the west at a conference in September. Here he committed to create a “*Fuhrer* reserve” of no less than twenty-five divisions heavily based on *panzers*. He coupled this reserve with suitable air assets for a decisive strike in the west. Hitler gathered a small group of trusted senior officers, most notably the *Oberkommando Der Wehrmacht* (OKW) operations chief, General Alfred Jodl, to craft operational options. Originally, he set a target date of November 1 for the attack. Jodl’s list of options included attacks from Holland through Venlo, a two-pronged attack at Liege-Aachen, another two-pronged attack in Luxembourg, a double envelopment of troops in Lorraine, and twin thrusts into Alsace. These attacks shared a common characteristic. None of them would have been operationally decisive.

WACHT AM RHINE

Hitler selected the Liege-Aachen corridor attack option but heavily modified it. He opted for what was termed the “Grand Slam,” a massive attack that would reach all the way to Antwerp. This attack would slice through the entire northern third of the Allied armies, cut them off from their major lines of communication, and encircle them. He opted for a late November attack to assure darker skies and worse weather to limit Allied airpower. This also would lengthen his preparation time. Even the conservative Field Marshal Gerd von Rundstedt admitted the *Fuhrer’s* plan was a stroke of genius. If successful, such a bold stroke would change the correlation of forces for months. Perhaps it would change the entire course of the war if Hitler’s “wonder weapons” were ready before the Allies recovered. It might even split the Allied coalition and force a separate peace in the west. However, few German generals believed that the *Wehrmacht* of 1944 had the capability to conduct this deep of an offensive. Most favored a limited, “little slam” operation to clear the Allies out of the Aachen corridor, destroying perhaps ten divisions. Planning for the offensive, soon named Operation *WACHT AM RHINE* (*Watch on the Rhine*), pressed on. Sufficient forces for an offensive were scrapped together, along with hundreds of newly produced tanks.

The terrain selected for the counteroffensive was the scene of numerous major battles in France’s history. In 1870, the crucial Sedan battle, fought at the tip of the Ardennes forest, had paved the way for Prussian victory in the Franco-Prussian War. In 1914, Field Marshal Alfred Graf von Schlieffen’s famous “wheel” pivoted north of the woods through Belgium and only was stopped on the outskirts of Paris. In 1940, the crucial maneuver element of German *panzers* led the way for the German attack through the southern Ardennes, debouched near Sedan, and crossed the Meuse. It became the upward “sickle cut” of the German envelopment of the northern portion of the front, eventually cutting off the British at Dunkirk. The *panzers* then turned south to move against the Maginot Line positions from the rear, negating the French defensive plan. France fell in six weeks in what was termed a “Lightning War” or *Blitzkrieg*. Hitler again looked to the same area for a similar decisive blow, with an upward cutting envelopment pointing at Antwerp.



Common Ardennes terrain characterized by dense woods dashed with small streams.

Despite these decisive maneuvers in the past, the Ardennes was not good terrain for the movement of large numbers of tanks and vehicles. This contributed to the Allies overlooking it as a potential threat. In the Ardennes, parallel ridges and deep cut valleys run from northeast to southwest. There were few good, hard roads capable of supporting armies in 1944. A third of the region was covered by coniferous woods. Swamps and marshes were prevalent in the north, and deep defiles and gorges were cut by rivers and streams throughout the western end of the area. Four major road centers, Bastogne and Houffalize in the south and St. Vith and Malmedy in the north, resembled octopuses whose arms radiated from a central point. They sent roads in all directions. Cross-country movement for tanks relied heavily on the ground being frozen. A deep freeze did not occur until after Christmas and fall brought heavy rain and mud which posed trafficability problems. Rivers were generally fordable for infantry, but their rocky bottoms required bridging for vehicles to cross. For an army needing to push 100 miles quickly from a standing start to reach its objective on the shortest route, this was a difficult attack sector.

The Ardennes was considered a quiet sector by General Omar Bradley, and he used it to economize forces so he could concentrate for his two major efforts by First Army in the Aachen Corridor and Third Army into the Saar area. The nearly ninety miles of forest and rough terrain between these two offensive thrusts offered no clear avenues into the Allied rear, nor did they offer promising avenues of approach for First Army forces. Bradley stretched his forces thinly in the area and used the Ardennes sector to rest and refit hard fought divisions. He also broke in new divisions here before committing them to significant combat. Along the American front lines, the frequent comings and goings of German units appeared to be the mere shifting of forces to oppose possible Allied thrusts. The perennial fog and mist in the area hid many of the German troop movements in December from Allied photo reconnaissance and surveillance. The Germans instituted a radio blackout and ruthlessly enforced communications and operations security to hide the forthcoming attack.

Rather than entrusting the plans to the radio or even couriers, Hitler personally briefed his generals in two separate groups on December 11th and 12th at an advance command post near Bad Nauheim, north of Friedberg. At these meetings he outlined his military plans for victory and his political goal of splitting the Allied coalition. Following these briefings, Field Marshal Model, Commanding *Army Group B*, verbally issued Operation Plan *HERBSTNEBEL* (Autumn Fog). His subordinate divisions only had a few days to do their planning before having to execute their orders. Exceptionally few officers at the top knew the details of the plan. The Allies, perhaps overly reliant on the treasure-trove of intelligence that had been provided for years by ULTRA, failed to pick up on clues for the pending operation.

Model's concept of the operation placed four armies abreast with his main focus on the *Schwerpunkt* (critical point) in the center of his sector. The *Fifteenth Army*, attached to *Army Group H*, was just north of the main attacking armies in a support role near the Aachen corridor. Model was left with three armies for the attack. The *Sixth Panzer Army*, soon to be retitled the *Sixth SS Panzer Army* and commanded by SS General Josef "Sepp" Dietrich, was closest in miles to the main objective. It was given the main effort. Its four powerful SS armored divisions were assigned four 'Rollbahnen', or key main roads, to cover the 100 miles to Antwerp after crossing the Meuse south of Liege. In addition, the *Sixth Army* had five *Volksgrenadier* infantry divisions. An additional *SS Panzer Corps* was held in reserve. The *Fifth Panzer Army* in the center of the attack would seize the key road junction at Bastogne, then the crossings on the Meuse between Huy and Givet, and then move on to the west of Antwerp. It had three *panzer* and four infantry divisions. On the southern flank of the offensive, the *Seventh Army's* four *Volksgrenadier* divisions would provide a flank guard for the entire attack against expected counterattacks northward by the Third Army

The German attack plan had its units striking along the corps boundary separating U.S. V Corps from U.S. VIII Corps. A boundary between units is a classic "fault line" that leads to confusion about which of the two units has responsibilities for patrolling and fire support. Defenses tend to be weaker where two units meet. Even more important, the Germans massed a six to one ratio of attacking troops over the defenders, making a quick and decisive breakthrough more likely. Model needed a clean breakthrough at the outset of his attack and arrayed his forces to achieve it.

The northern boundary of the attacking German forces was at Monschau and its southern one at Dickweiler south of Echternach in Luxembourg. This was a frontage of approximately eighty-eight miles of undulating ground, with no clear linear defensive terrain extending for any distance -- although some isolated hills were held or blocked along the sector's front. American defensive positions were generally company-sized with forward observation posts manned in daylight and patrols and listening posts at night. Towns along the front were occupied and the troops sheltered in houses, with a few soldiers in bunkers or foxholes with overhead cover depending on the terrain or position. Most units were temporary tenants, although one had been in place since October. VIII Corps had weighted the defense in its northern sector and covered the corps boundary heavily with artillery. The 9th Armored Division had some tanks in reserve from one of its Combat Commands in each of First Army's corps, thus parceling out the division's scarce armor assets in small packets.

Allied intelligence mirror-imaged its assessment of German intentions. Seeing that Germany's homeland was threatened along several major avenues, Allied intelligence read intelligence indicators of troop movements as defensive moves in response to their own offensive preparations. Thus, German armor concentrations behind Aachen were seen as preparation for the American offensive staging to attack in the Aachen corridor. The Huertgen and Stolberg ridges, which had defied capture in November, acted as cover for the *Sixth Panzer Army's* preparations and German movement west of the Rhine in the Eifel was seen as defensive staging against Patton. Overreliance on ULTRA and other forms of signals intelligence played against the Allies as the Germans used no electrical messages to communicate the attack order.

Some indicators of a possible German offensive were noted, but from an unusual source. Allied high-level signals intelligence in the Pacific drawn from MAGIC intercepts passed to SHAEF noted on thirteen occasions that the Japanese Ambassador in Germany reported to Tokyo that a major German offensive was imminent in the west. This source was discounted, however, perhaps due to the lack of any in-theater corroborating information.

In mid-December First Army held eighty-eight miles of this "ghost front" with only two veteran divisions. These were being rebuilt after heavy combat. Two new divisions were also there being introduced to front line service. Two thirds of an armored division back-stopped these forces as an armored reserve. The northern sector of the area was occupied by the First Army's V Corps commanded by Maj. Gen. Leonard Gerow. Its 99th Infantry Division, commanded by Maj. Gen. Walter E. Lauer, was in the north along nineteen miles of the wooded Belgian and German border. The "Battle Babies" of the 395th, 393d and 394th Infantry Regiments held the line from north to south. A single battalion was in reserve just south of the Elsenborn Ridge. The corps was in the process of receiving the veteran 2d Infantry Division from defensive positions on the Schnee Eifel and passing it through the center of the 99th Division area to attack towards the Roer Dams to the north. While the 2d filed through the V Corps staging area, it was replaced on the Schnee Eifel by a green division new to the theater, the ill-fated 106th Infantry Division.



An American GI halts in the woods of the Ardennes.

The major threat to the American line was at the corps boundary between V and VIII Corps. The 99th's 393d Infantry held the position near the VIII Corps boundary. Nearby, the 394th held 6,500 yards of front inside the forest south of the international highway running from Losheimergraben towards Dom Butgenbach and Bullingen, where the division Headquarters was located. The 99th's reserve battalion, the 3d Battalion of the 394th, was to the right rear of the division headquarters at Bucholz Railroad station. The rail cut ran east to west roughly approximating the V/VIII Corps boundary.

The main effort of *Sixth Panzer Army*, the *I SS Panzer Corps*, ran through the sector of the 394th Infantry. Two of the major "Rollbahnen" assigned to the German *panzer* divisions, routes C and D, ran through this sector. They would carry first the *I SS Panzer Corps* and then, in a second wave, the *II SS Panzer Corps*. Three divisions were assigned for the breakthrough battle to create a hole for the *panzers* and then move northward to form a defensive line against the expected counterthrust from the north. The *277th Volksgrenadier Division* had the crucial mission of seizing the twin villages of Rocherath-Krinkelt which dominated and could block Route C. The *12th Volksgrenadier Division*, was charged with opening the Bullingen road, route C, in a direct attack from Losheimergraben. The *3d Fallschirmjaeger (Parachute) Division* was assigned to clear route D through Honsfeld, taking the north end of Losheim Gap and running along the corps boundary against the 18th Cavalry Squadron. German *panzergrenadier* battalions were placed close to the regular German infantry, and the German tanks were in reserve for an "on order" commitment by the army commander to prevent their initial embroilment in infantry battles. They were to be saved for the exploitation after the breakthrough.

The 106th Infantry Division, the "Golden Lions", commanded by Maj. Gen. Alan W. Jones, had only just arrived in sector on the 13th and 14th of December after a week-long journey from the coast. They were to replace the 2d Division on the long hogback ridge called the Schnee Eifel in the northern section of the VIII Corps front. Roughly four and half miles long, the slopes of the Schnee Eifel were covered in front and rear by concrete pill boxes belonging to the Siegfried Line with rough wooden shelters on the reverse slope. To the Schnee Eifel's north, 9,000 yards of flatter, lower rolling ground comprised an angled opening known as the Losheim Gap. The Gap passed through the town of Losheim, connected to roads which angled through Manderfeld to Andler and then west to the large town of St. Vith, Belgium. The latter town, formerly a German border town before it was handed over to France in the Versailles Treaty after World War I, was still pro-German. From St. Vith the Losheim Gap followed a single east-west road, but included other roads going north and southwest as St. Vith was one of the prime road junctions in the area.

The Losheim Gap was lightly held by the 18th Cavalry Squadron, detached from the 14th Cavalry Group and now attached to the newly arriving and inexperienced 106th Division. It had a single company of 3-inch towed anti-tank guns positioned mainly in the small towns in the Gap to block its many twisting roads. The cavalry dismounted its automatic weapons from its mechanized vehicles and patrolled like infantry. The 14th Group's second squadron, the 32d, was at St. Vith with plans to replace the 18th. A battalion of self-propelled 105-mm guns supported the 18th, and eight battalions of the VIII Corps artillery were in position to provide fires to reinforce the four artillery battalions organic to the 106th Division. The defense of the Gap was viewed by the corps commander, Maj. Gen. Troy Middleton, as a priority. He did not, however, believe it to be threatened. Maj. Gen. Jones felt that his division was being asked to defend positions on poor terrain and indicated his desire to alter the siting of his outposts in the following week. He chose to place his reserve battalion in St. Vith, not in Andler behind the gap, as the 2d Infantry Division had done.

South of the Schnee Eifel and the 106th Division was another high ridge which included more Siegfried Line concrete emplacements and dragon's teeth anti-tank obstacles along the border. Then the ground opened up to smaller rolling ridges which faced high ground. Behind these high ridges the German army staged its counterattack forces. Defending this sector from behind ridges along the Our River on the Luxembourg or Belgian Side, was the 28th Infantry Division. It was charged with holding nearly thirty miles of front, even longer than the nineteen miles defended by the 106th.



Major General Troy Middleton.

The 28th Division had suffered over 6,000 casualties in the brutal fighting in the Huertgen Forest in November and was being rested, refitted and retrained in the Ardennes. It was stretched so thin that it had to use one of its engineer companies to hold the front line in the "Skyline Drive" sector. The 110th Infantry Regiment held the ten-mile front in the center of the division with a battalion in reserve. The division's 109th Infantry Regiment coiled in the rough gorges around Echternach along the southern approach from Diekirch to Bastogne. There it linked in with the northern regiment of the 4th Infantry Division which

had fought from UTAH Beach through the Huertgen Forest. Now, like the 28th, it was resting and refitting after absorbing considerable casualties in heavy fighting in November.

To shorten the distances to their objectives, the Germans accepted bad roads and insufficient space for maneuver to cram an armored force of a thousand tanks and almost a quarter million soldiers into a narrow sector to achieve a breakthrough. Such a breakthrough in the center was seen as possible against a weak force with virtually no depth and few installations to fall back on for fifty miles. A similar penetration in the key northern sector would be far more difficult. The Meuse River, running roughly halfway through the attack axis, would pose a major obstacle. Even if it was reached, the offensive would be subject to massive counterattacks by more than 1,000 tanks from Montgomery's 21st Army Group in the north and nearly as many from Patton's and Patch's Armies in the south. German planners theorized a seven to ten-day window, at best, to achieve a breakthrough and capture Antwerp before the Allies could react decisively. Time lost in the initial battles to breach the American lines would be crucial. Planners allowed one day for the break through battle. The Meuse was to be reached in two. No real plan was developed for the seizure of Antwerp, perhaps in recognition of the improbable nature of the attack reaching that far. Compromising the use of Antwerp would be enough. An air support plan was later cobbled onto the main plan, but this was done in secret and not coordinated with the army.

As the Germans were beginning three nights of movement into their attack positions, the U.S. V Corps began a planned four division attack northeastward to take the Roer Dams. Having been stymied in the Huertgen Forest in a month of bitter fighting, the V Corps planned to attack into the area using the Monschau Corridor with the 8th, 78th, 2d, and 99th Infantry Divisions. The veteran 2d Division moved back from the Schnee Eifel to Camp Elsenborn and filed through the 99th up the single road behind Krinkelt-Rocherath to pass through the 395th Infantry Regiment. It was to attack the Siegfried Line on a narrow front and move in column toward the dams. The 395th would attack with two battalions on its south flank. The 78th would follow to widen the base. Neither side was aware of the other's preparations for an offensive.

The German attack achieved surprise, but the breakthrough was developed differently by each German army commander. The *Sixth Panzer Army* attacked in two waves beginning at 0530 on December the 16th following a massive artillery bombardment. The preparation fires aimed at road junctions and known communications centers where telephone poles were erected and field telephone wire between units strung. Telephone was the primary means of communication in this sector of the Ardennes since radio was unreliable in the heavy woods and steep hill country. The artillery fires had the immediate effect of blacking out

most communications. The artillery shifted onto different targets, continuing to fire as late as 0700 in some areas. *Sixth Panzer Army's* attack frontage spanned twenty-three miles initially, but only half this area was actually used as units defiled through woods onto trails towards roads leading to their objectives. Speed was of the essence.

In the northern most assault of the *Sixth Panzer Army* at Hofen, the *LXVII Corps* attacked with elements of the *272d* and *326th Volksgrenadier Divisions* against the south flank of V Corps. According to Dietrich's plan, his northern corps would secure the flank of the *Sixth Panzer Army* by seizing the Hohe Venn area of upland moors. Here it would block the major roads to protect against an American counterattack. Simultaneously, the *I SS Panzer Corps* would be unleashed to break a hole in the center of the American line using its three infantry divisions. It would then deploy its *panzer* divisions on the major roads, the *Rollbahnen*, and rapidly move westward. The infantry divisions would then swing northward to form a solid shoulder so that the *panzers* of the *I* and *II SS Panzer Corps* could move west and northwest to their final objectives near Antwerp. The key terrain dominating this battle would be the Losheim Gap, the Schnee Eifel Ridge, and the Elsenborn Ridge. The Monschau Ridgeline and town would also play a significant role in *Sixth Panzer Army's* battle.

The Losheim Gap was split between the two assaulting *Panzer Armies*. In the north half, in the *Sixth Panzer Army* sector, the *3d Fallschirmjaeger Division* assaulted the U.S. 99th Division. The stubborn resistance of elements of the 99th slowed the German paratroopers' advance in a harbinger of problems to be faced by onrushing *panzers* attempting to keep to an unforgiving timetable. This attack was immediately followed by the movement through the opened gap of the advanced detachment of *Kampfgruppe Peiper* and the *150th Special Brigade*. *Kampfgruppe Peiper*, one of four special armored spearheads in the *Sixth Panzer Army*, had the goal of cracking the American lines and leading the army to the Meuse. It was the strongest of the armored detachments. SS Colonel Joachim Peiper, at one time a personal adjutant to *Reichsfuhrer-SS* Heinrich Himmler, led over 100 tanks and 5,000 men in the attack. The column of tanks and armored vehicles included the newest German tank, the Tiger II or King Tiger. This was a heavily armored and up-gunned tank, but it suffered from mechanical unreliability and heavy fuel consumption. Both defects would manifest themselves during Peiper's torturous attempt to break through the American lines and reach the bridges over the Meuse leading the way to Antwerp.



A captured German "King Tiger" tank.

To the south of *Sixth Panzer Army*, the *Fifth Panzer Army* commanded by General Hasso von Manteuffel made a number of changes to Hitler's "unalterable concept." Manteuffel deployed strong infiltration detachments, particularly in the southern two thirds of his front where the terrain favored their use. He changed the start of his artillery preparation fires from 0800 to 0530, assisting his efforts to achieve surprise in his sector. He sent special teams of infiltrators behind U.S. lines to spread confusion and panic even prior to the first artillery barrages.

The *Fifth Panzer Army* boundary with the *Sixth Panzer Army* split the Losheim Gap giving road rights to *I SS Panzer Corps*. This corps was to turn north into the 18th Cavalry Squadron and penetrate American lines along the southern boundary of V Corps, which was also that of the 99th Infantry Division. Major attacks along *Rollbahnen* labeled D and E were to begin at Losheimergraben and Losheim and run the southern route.

Major German troop concentrations for the *Fifth Army* attack were in place only the evening before, but the units nevertheless hit their release points in the early morning fog of December 16th. None had been discovered beforehand. East of the 99th Division, the *277th Volksgrenadier Division* attacked from its assembly areas at Hollerath and Udenbreth. South of this division, the *12th Volksgrenadier Division* filed forward from its concentration at Hallschlag and the *3d Fallschirmjaeger Division* came west from Ormont. The northern concentrations hit the 99th head-on. The southern attack skirted the V Corps boundary aiding *Fifth Panzer Army* by clearing its northern flank.

Manteuffel intended to encircle the 106th Infantry Division's regiments with the *18th Volksgrenadier Division* spearheaded by attached assault guns. South of the hogback, a regiment of the *18th* would push across the ridge line and down to Bleialf, hoping to link-up with the road northwards directly towards the main road "octopus" at St. Vith. It would then rejoin the encircling force coming via Andler and the Manderfeld Ridge thus trapping the Americans. The *560th Volksgrenadier Division* would attack farther south near Burg Reuland. Manteuffel's northern corps, the *LXVI Armeekorps*, shared the breaking of the Losheim Gap as the *LVIII* and *XXXVII Panzer Corps* moved their tanks to forward attack positions east of the high ground fronting the river. There they waited to gain crossings made during the previous night's fog by the infiltration units in the center sector.

To the south of the Losheim Gap, Manteuffel's infiltration groups would cross the fordable Our River in the dark and assist the breakthrough of the *116th Panzer*, the *2d Panzer*, and much farther south, the *26th Volksgrenadier Divisions*. The Germans would use the fog and night to take advantage of the fact that U.S. listening posts in the 28th Infantry Division area were withdrawn from the Our River gorge at night since they could not be supported. To make matters worse, the thin patrol and outpost line of "Skyline Drive" was fairly porous between the company-sized positions. These positions, based on village and road locations, were often spread one and or two miles apart and could only be patrolled and covered intermittently. The 110th Infantry Regiment deployed only two of its battalions forward on this line, keeping one battalion in reserve for counterattacks. However, this reserve needed several hours to reach any threatened area. A tank battalion was also assigned to the division for counterattacks. The 109th Infantry Regiment completed the 28th's line, holding nine miles of rough terrain at the end of Skyline Drive down as far as Echternach. Manteuffel planned to surround the positions which had been located and penetrate deeply before the fog lifted. This normally happened in mid-morning.

In the southern flank of the offensive, the German *Seventh Army* took up positions against the thirty-five miles held by the battered U.S. 4th Infantry Division, which had suffered over 5,000 casualties in the Huertgen Forest fighting. The "Ivy Division" had been in combat almost continuously since June 6th. Only the 12th Infantry Regiment, the northern-most regiment of the division, was in the main attack sector. To the immediate north of the 12th, a small sector had been carved out to give combat experience to the 60th Armored Infantry Battalion of the Combat Command Reserve (CCR) of 9th Armored Division.

Lt. Gen. Erich Brandenberger's *Seventh Army* was to guard the southern flank of the penetration. He decided to use two of his divisions to hold at Echternach, anchoring the German advance, and use two divisions to advance

to the southwest to block as far forward as possible. Leaving his heavy artillery for the anchoring force, he pushed his limited self-propelled guns and horse towed artillery forward to accompany his two understrength divisions, the *5th Fallschirmjaeger* and *212th Volksgrenadier Divisions*, in their advance. This placed the main attack of the *Seventh Army* against the 9th Armored Division's 60th Armored Infantry Battalion and the 28th Infantry Division's 109th Infantry Regiment.

The northern attacks of the *Sixth Panzer Army* presaged the eventual ill-starred results of the Ardennes attack. *Sixth Panzer Army* had concentrated its forces in a fine example of German attack doctrine, yet terrain, bad weather, and determined defenders quickly threw off its attack schedule. Determined small unit resistance pushed German units off their preferred offensive axes to avoid road blocks and concentrations, and the *panzers* used up fuel in excess of their ability to resupply their own columns. Their most precious commodity, time, moved quickly. With time they lost the blanket of bad weather that protected them against Allied planes; such thick cover could not last long. The Allies reacted quickly and soon determined the true objective of the attack, Antwerp, from decryptions of now-active German radio nets.

The German time-table for the advance at the north end of their offensive fell apart almost immediately. The *277th Volksgrenadiers* hit the 38th Cavalry Reconnaissance Squadron near Monschau with about 300 men at 0615, immediately following the artillery preparation. Its attack was quickly halted by American automatic weapons fire and never renewed. The new 78th Infantry Division, north of the cavalry, had begun patrolling in the direction of its planned attack to seize the Schwammenauel dams. It had seized the towns



Two German POWs being taken to the rear in a jeep.

of Rollesbroich and Kesternich, breaking the crust of the Siegfried Line from December 12-15. Its attacks opened the Monschau Corridor which had been a key objective in V Corps' plan in November. The German offensive halted the V Corps attack to the north as its 99th and then 2d Divisions came under attack themselves. Although the more southerly 99th Infantry Division took the brunt of the German attack, the concentration of American forces intent on attacking to the north of it restricted German options in this area.

The *Sixth Army's* preparation fires had ended by 0700. These fires were echoed along the entire front as 1,900 guns and rocket launchers fired at their preplanned targets. German infantry used the time to infiltrate between known American positions, attempting to use fog and early morning darkness to penetrate deeply before the Americans realized that a full-scale offensive was in progress. More than 600 *panzers* waited to deploy in the first wave of tanks, with 370 behind them in a second wave to develop the assault in depth. The German High Command held a further 500 tanks in operational reserve for the front. The American First Army was estimated to have only about 394 tanks along the 90 miles of its front or close enough behind it for immediate commitment. Most of the German armor strength would be committed in an attack sector a few miles wide but would disperse into the Allied rear once the tanks passed over the Meuse River.

Hofen, the anchoring point of the German attack, was the entry point for the road to Eupen. Eupen had received a dose of long-range shells during the bombardment near V Corps Headquarters. Monschau, on the other hand, had been untouched by artillery due to a no-fire order prescribed by Field Marshal Model. He wished to preserve that town. The LVII Corps planned to straddle the road with its two infantry divisions to clear a path westward for the *panzers*. The *326th* and *246th Volksgrenadier Divisions* attacked to establish a line extending from Monschau to Eupen. Though this force had never been brought up to its full strength, it was well supported with artillery. American cavalry and infantry in the sector nevertheless beat these attacks to a halt.

German forces penetrating through the woods pushed the U.S. infantry back about two kilometers. The 99th Infantry Division acquitted itself well against numerous attackers in the thick woods and prevented a clean break-in by the Germans. This threw off the German time-table for committing its armor. Moreover, it prevented the 2d Division, strung out on the road and moving northward for the planned Roer dams attack, from being cut off in a nearly indefensible position.

In the Losheim Gap battle the attackers had roughly a 6:1 advantage in combat power at the immediate point of attack -- even without figuring in the benefit of their artillery support. The southern shoulder of the V Corps position was held by a thin cordon of infantry within the woods behind the international

highway running between the two front lines. While some of the 99th's positions were abnormally close together due to terrain considerations, others had major gaps in their defensive line. A dirt trail running through the woods that the Germans planned to use straddled one of the American battalion positions. Many of the American positions were dug in and had overhead cover from logs or wood, so many of the infantrymen were unhurt by the initial German preparation fires. The German infantry appeared ghostlike in the morning fog but were unsuccessful in their early attempts to neutralize the initial American positions. They were, however, able to penetrate deeply through the gaps between American units and engage the reserve platoons behind the main line of resistance as the morning wore on.

German infantry penetrated along the rail line and opened the seam between the two corps out of sight of the 99th's main positions on the high ground or the cavalry's tank destroyers. Infantry that penetrated between the American positions did more damage than direct attacks on the positions. With daylight and the lifting of the fog about ten, all the positions in the north half of the gap and some in the south half had been penetrated to a depth of about two kilometers. Units found themselves fighting in all directions as the Germans flowed around and through them.

The 99th's regiments tried to maintain a cohesive defense, giving as little ground as possible while retaining their unit integrity. If a unit lost its cohesion, it ran the risk of being destroyed piecemeal in fragmented fighting in the woods. The units of the 99th formed a firmer line deeper back in their sector on the slight ridge rising behind their first line, a mile east of the twin villages of Krinkelt-Rocherath. The 2d Division, now ordered to redeploy from the road, pulled behind them to provide a backstop to the defense. It formed in an L-shaped defense along the southern face of Elsenborn Ridge as the German attack proceeded westward towards the road junctions of Bullingen and Dom Butgenbach.

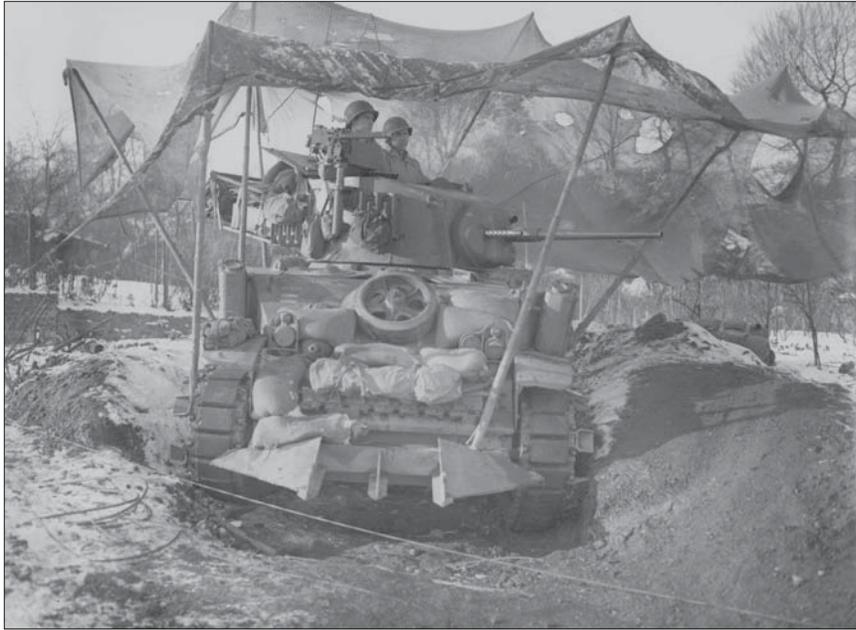
As the 394th Infantry Regiment was pushed back to the west, the Germans broke through the southern portion of the Losheim Gap along the corps seam. The Intelligence and Reconnaissance Platoon of the 99th Division behind the tank destroyers of the cavalry held valiantly for a time but was overrun, with most captured. The surrounded tank destroyers of Company A in the gap left their guns behind as they were swarmed by German parachute troops. The northern half of the gap remained jammed by the troops at Roth until late in the day. The tanks of *Kampfgruppe Peiper* came up and moved through the broken American lines as evening fell on the 17th. Peiper and his men exploited the hole through the Bucholz Station area and then moved north towards Bullingen, where they refueled their thirsty *panzers* on captured American gasoline stores. They used American POWs to aid in the refueling. Afterwards the POWs were

shot by the SS troops, the first of many American soldiers and Belgian civilians murdered by *Kampfgruppe Peiper* on its rampage towards the Meuse River. During the night of the 17th, the Germans initiated Operation *STOESSER*, dropping 1,000 additional parachute troops near Baraque Miquel, southwest of Liege. This was designed to block American reinforcements coming from the north, but the paratroops were scattered and quickly rounded up. Support troops and military police units attacked them before they could pose much of a threat.

The controlled retreat of the 99th's three regiments into a new defensive line held the V Corps southern shoulder and linked up in the north with the cavalry and elements of the 8th Infantry Division near Monschau. Behind this line, the 2d Infantry Division moved into positions which strengthened the line to the west. First Army now moved reserves from VII Corps at Aachen, rushing the 1st Infantry Division to positions to the left of the 2d Division.

By the evening of the 17th of December, the 28th Infantry Division in the center of the VIII Corps line was separated from the rest of the corps. The entire *Fifth Panzer Army* and part of the left corps of the *Seventh Army* including the *62d Volksgrenadier*, *116th Panzer*, *560th Volksgrenadier*, *2d Panzer*, *Panzer Lehr*, *5th Fallschirmjaeger* (Parachute), *62d Volksgrenadier*, *276th Volksgrenadier Divisions* hit the 28th Division. The division's center regiment, which held a string of six company sized strong points on Skyline Drive, was in the worst shape. Its ten-mile front was totally cut through between each defensive position. Its two battalions forward were surrounded, and its reserve battalion was engaged almost as soon as it came up from the rear to counterattack. The tank company from the attached 707th Tank Battalion with light M-5 Stuart tanks was annihilated by two heavy Mark V Panthers. These powerful tanks picked them off one by one as they wheeled into a muddy field, then stuck fast to await their fate. Just down the road, Company B, 110th Infantry fought until its ammo ran out. The road to and outside of Marnach was filled with Germans. Only the inner village was held by a few American holdouts as the German traffic bypassed them. All along the line, in many small villages and road junctions, handfuls of cut-off Americans traded a few rounds and their lives to delay the tide of Germans, only to be overrun and die or be captured. The aggregate of their heroic and stubborn delaying actions ultimately spelled doom for the German offensive.

The number of attacking forces seemed to grow exponentially. By midnight on the 15th, First Army intelligence had posted eight new enemy divisions in front of VIII Corps (62 VG, 116 PZ, 2 PZ, 560 VG, 5 Para., 276 VG) and three new divisions in front of V Corps (326 VG, 12 VG, 12 SS PZ). At least five divisions were believed uncommitted by *Sixth Panzer Army* and three by *Fifth Panzer Army*. Despite this evidence as to the breadth of the German assault, Allied commanders initially believed it was only a local "spoiler" attack. By midday



M5 light tank of the US Ninth Army.

on the 16th, the broad sweep of the attacks began to disprove this. With the German's increased use of radio messages that could be decrypted by ULTRA, the situation and German order of battle soon clarified. It presented a grim picture at army, army group and theater level to all those who were privy to this intelligence. By midafternoon, it was apparent at First Army Headquarters that this was no mere spoiler attack to throw off attacks towards the Roer Dams, to forestall a thrust in the Aachen corridor, or to prevent an attack towards the Saar. The width of the attack indicated a major effort. As ULTRA identified more and more divisions, it became apparent that the Germans had mustered a major force in the west to achieve operational results.

While Lt. Gen. Bradley was slow to wake to the threat to his army, others took action. Late on the 16th newly promoted General of the Army (five-star) Eisenhower ordered the two uncommitted armored divisions on the front, the 7th from Ninth Army and the 10th from Third Army, to reinforce First Army's center immediately. This proved to be perhaps the single most important operational decision of the campaign. Powerful and mobile reserves were quickly brought into play to stem and then reverse the German tide.

The fact that attack patterns and units were increasingly identified permitted SHAEF to reorder the front. Eisenhower committed the theater reserve, the airborne divisions, on the 17th and initiated orders to move many Service of Supply support troops to backstop the defense of the bridges on the Meuse. In

addition to committing the 7th and 10th Armored Divisions, SHAEF readied reserves in the U.K. for immediate shipment and pushed for troops still in the U.S. to be expedited for shipment. The air forces were readied for centralized commitment of their heavy bombers to interdict the advancing German columns once the weather cleared. Eisenhower called for the American army group commanders, Generals Bradley and Devers, to meet at Verdun on 19 December. The 21st Army Group, which was not yet affected by the German offensive, was alerted to the crisis. Montgomery began moving armor reserves behind the critical Meuse crossing sites. This placed no fewer than 1,000 Allied tanks within counterattack distance had *Sixth Panzer Army* broken out of the Ardennes.

At the time, the First Army was the only Allied army immediately affected by the German offensive. Eisenhower quickly re-tasked Seventh Army to extend its front to permit Third Army to move two of its corps to attack the German southern shoulder. Ninth Army held the line against the German *Fifteenth Army*, whose armor reserve never attacked across the northern Maastricht appendix. Ninth Army also prepared to provide reserves for First Army use as needed.

During the first two days of the battle, as the American command structure reacted to the attack and constructed its own response, the battlefield actions of the V Corps and VIII Corps troops shaped the final fate of *WACHT AM RHEIN*. In the north, Maj. Gen. Walter F. Lauer's 99th Division troops had maintained a cohesive line. The division fell back in a controlled delay and exacted a heavy toll on the enemy while maintaining its own unit integrity. This was a bravura performance for a new division. The 99th formed the rock-like shoulder for V Corps' subsequent defense of the Elsenborn Ridge in front of the crucial twin villages of Krinkelt-Rocherath. It also provided the base for defending the rest of the north shoulder as the 2d, 1st, and 30th Infantry Divisions, and eventually the



American infantrymen donned in snow capes head to the front lines.

XVIII Corps (Airborne) and VII Corps, formed up along it after December 20th. The cost for the 99th Infantry Division was high, about 3,000 casualties, but they stayed in the fight.

In the center of the American line, the German breakthrough in the Losheim Gap's southern half unraveled VIII Corps' defense and doomed the 106th Infantry Division's Schnee Eifel positions. Fog precluded VIII Corps artillery from placing accurate fire in the Gap as German soldiers surrounded or bypassed the villages of Roth and Kobscheid. American infantry positions atop the hogback ridge were surrounded as German infantry, followed by assault guns, gained the roads behind the division along the Schnee Eifel's snowy slopes. The roads behind the slopes, although muddy, were easy enough paths for the horse-drawn artillery of the *18th Volksgrenadiers*. With the cavalry positions bypassed and encircled and the village of Auw defended by an engineer detachment rather than a full infantry battalion as had been the case previously, there was little to stop the German advance. The full depth of the Losheim Gap was open to exploitation as the southern prong of the *18th Volksgrenadier's* attack penetrated down the ridgeline toward the gap patrolled by the 18th Cavalry's B Troop. Once the attack reached the crossroads at Schonberg, an avenue north to the key objective of St. Vith would be open. The penetration accomplished Manteuffel's objective of neutralizing the hogback ridge before the American regiments on it could fall back to the ridges behind it. Such a fall back would have helped create a natural defense line, essentially blocking the northern third of *Fifth Panzer Army's* sector. Manteuffel had accomplished a miniature "Cannae," a double envelopment, of the American position.

The American artillerymen behind the Schnee Eifel found themselves fighting as infantrymen against the Germans in the fog unless sufficiently forewarned, in which case they limbered up their guns and withdrew rapidly on the few roads to the rear. They hoped to find locations secure enough to reposition their tubes. Many of the retreating artillery units moved past St. Vith, but large numbers of men and guns were lost in the first hours of the German attack. Confusion, not cowardice, was the biggest factor governing the retreat for many American troops.

Maj. Gen. Jones ordered the regiments of the 106th to hold in place. The 424th Infantry, positioned below the open ridge south of the Schnee Eifel and only tenuously connected with the sharp toothed tank barriers of the Siegfried Line, fared the best. It was attacked frontally by the *62d Volksgrenadier Division* moving to seize the Our River crossing and bridge at Steinebruck. From there the Germans planned to follow the axis Winterspelt-Steinebruck to St. Vith. The 424th retained a cohesive defense as it delayed backwards. It did lose contact with its divisional headquarters, the other regiments of the 106th, and the 28th Infantry Division on its flank.

The Germans held the high ground at Brandscheid before the attack. The positions held by the Americans lower down were thinly defended, and the defile leading towards Winterspelt was only defended by a string of small positions leading to the high ground south at Heckuscheid. Here two battalions of the 424th Infantry Regiment set up a perimeter defense. The German attack through the defile split the 424th, which tied in on the right with the 112th Infantry Regiment of the 28th Infantry Division. The 112th, another regiment being rebuilt from the Huertgen battles, occupied ground forward of the Our River with two battalions in front and one in reserve. These formed a reasonably continuous line of battalions on the Eigelscheid-Heckuscheid Ridge.

Both the 424th and the 112th rolled with the punch as the Germans attacked, and fell back towards St. Vith. This favored the 424th as it fell back on its division headquarters, supplies, and remaining reserve battalion. The 112th Infantry Regiment moving with it was separated from its own division and pulled farther to the north. It would play an important role in the defense of St. Vith.

The Skyline Drive ridge in the center of the 28th Division's sector was topped by a narrow road between villages. The villages were held by five companies from the 1st and 3d Battalions of the 110th Infantry Regiment and an engineer company. The 2d Battalion was held in reserve some ten kilometers to the rear near Donnage. The 707th Tank Battalion, long a teammate of the division, was also in support. As was commonplace, its tank companies were piecemealed out to support other units.

Soldiers on the observation post on top of the water tower at Hosingen reported seeing "a thousand points of light" at about 0530 on the 16th as they looked out into the fog. The thunderous crash that followed sounded the arrival of the artillery preparation fired all along their portion of the front. As most projectiles hit road junctions and rear areas, many in the front line were unhurt and generally unconcerned. Unknown to them, they had already been heavily penetrated along the Our River gorge. While the gorge was outposted in daylight, during the early morning hours German infantry forded the river and sent strong teams towards Dasburg, Gemund, Ouren and the high ground. By daylight, the thin necklace of American positions had been bypassed and encircled by thousands of infantrymen from the *560th* and *26th Volksgrenadier Divisions*. This laid the groundwork for the early commitment of German armor, which began appearing as soon as bridging could be put in place at Dasburg and Gemund.

In the northern sector of *Fifth Panzer Army's* attack, Manteuffel's prong swinging north was hinged by *LXVI Corps*. Its mission was to take St. Vith and thus give multiple movement options to both attacking armies. The *LVIII Panzer Corps* and its southern neighbor, the *XLVII Panzer Corps*, were the main effort of the *Fifth Panzer Army's* advance. These units possessed three *panzer* divisions

whose commitment close behind the early morning infiltration of infantry units was designed to gain ground rapidly. They had the “outside track” of the attack with the farthest to go to reach their objectives, although the terrain and enemy they faced were easier than in *Sixth Panzer Army*’s area. Model had wanted to put his main effort in Manteuffel’s area but had been overruled.

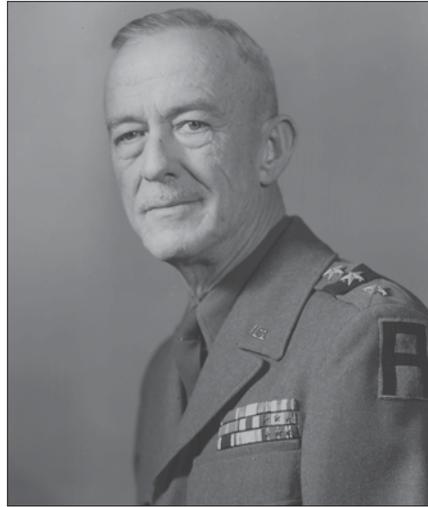
Maj. Gen. Middleton, the VIII Corps Commander, assessed the attack immediately and gave a “stand fast” order to the corps’ units. Recognizing the peril faced by the 106th Infantry Division, he promised to provide an armored division in support. He signaled Maj. Gen. Jones that he would accept his local decision as to whether he wanted to stay in place or retreat. There was a breakdown in communications, and General Jones believed that he was ordered to hold in place. Middleton believed that Jones chose to hold and that his decision was based on help being on the way. Middleton thought the 106th Infantry Division’s regiments would soon fall back to more defensible ground on Manderfeld Ridge.

In the confusion, two of the more exposed regiments of the 106th stayed in their positions despite being cut-off by the German attack. Combat Command B of 9th Armored Division was ordered to Schoenberg immediately. Later, when the 7th Armored Division was given to Middleton, he ordered it south to the Schnee Eifel to relieve the 106th. The confusion during the early hours of the attack and poor communications took the battle in the north out of Middleton’s hands, although he was not fully aware of this. He concentrated his attention on fighting the battle in the southern two thirds of his corps sector, where he still had communications. Here he had to worry about the fates of the 28th and 4th Infantry Divisions. The 106th, supposedly with significant help on the way but in reality cut-off by three German corps, was left to its own devices.

The 9th Armored Division’s Combat Command B, held in reserve in the north center by First Army, was soon released to VIII Corps by Lt. Gen. Courtney H. Hodges. Middleton sent it first to Schoenberg but then, when he received news that the 7th Armored Division was also coming to him, sent it to Steinebruck to block a German move against the 424th Infantry Regiment. The armor was to be too late to affect the Schnee Eifel battles or the fate of the isolated regiments of the 106th Infantry Division. Manteuffel’s troops moved too quickly. The 424th and 112th Infantry were pushed back towards a junction point on the opposite side of the Our River. They linked-up at Bourg Reuland and began to shape a U-shaped defensive perimeter even as the *116th Panzer Division* turned west towards Houffalize to skirt St. Vith from the south and Bastogne from the north. Unable to stop the *panzers*, the Americans pulled back onto the high ground and left the roads to the tanks. To the north, the 9th Armored Division’s Combat Command B formed a similar defensive position with its mixture of tanks, armored infantry, and artillery.

Massacre at Malmedy

The 7th Armored Division moved to the southwest, barely missing *Kampfgruppe Peiper* as it turned towards the battle. However, the 285th Field Artillery Observation Battalion at the end of its column met Peiper's *panzers* near the crossroads at Baugnez, near Malmedy in Belgium. The German tanks trapped the jeeps and trucks, taking about 140 prisoners from Battery B. They gathered the prisoners in a nearby field under guard. Some prisoners began to escape into the nearby woods, and the Germans began firing into the larger mass of prisoners. The Germans fired



Lt. Gen. Courtney H. Hodges.

haphazardly into the prisoners, so even more broke for the woods in panic. The SS troops shot down those who could not escape, and then executed those who fell but still showed life. In all, some forty-three Americans escaped, including a few who played dead underneath the bodies of others. At least eighty-six Americans were murdered. Another, smaller group of Americans was murdered in the next town. In neither case was Peiper himself seen to be present, but the troops were under his command and he was ultimately responsible for their actions. After the war, Peiper and a number of his men were tried for war crimes. Several were hanged. Peiper himself spent twelve years in prison for the crimes of his command in Belgium. Once released he lived until 1976, when he was murdered by Belgian Communists.

German success in the Losheim Gap, with its many roads, greatly endangered U.S. First Army. The *1st SS Panzer Division* staged behind the *3d Fallschirmjaeger Division* in the north half of the Gap awaiting a breakthrough even as its *Kampfgruppe Peiper* raced ahead in an attempt to capture the Meuse bridges. Slightly to its north, the *12th SS Panzer Division (Hitlerjugend)* (Hitler Youth), had a more difficult route through the woods from Hollerath. It followed its own *Panzergranadiers* and attempted to penetrate the muddy trails leading to Krinkelt. The 99th Infantry Division's 393d Infantry Regiment blocked this route on the 16th but fell back late in the evening of the 17th. They were then joined by the 2d Infantry Division's 38th Infantry Regiment and, along with some additional U.S. tanks, fought against the German armor at the twin villages of Krinkelt-Rocherath. This battle extended westward to Wirtzfeld, now held by the 2d Division.



M4 Sherman tanks of the 7th Armored Division stage for combat in the Ardennes.

The 394th Infantry Regiment of the 99th Division had extended to Murringen and Hunnigen in the south and assisted in delaying the advance of the *12th SS Panzer*. On the 19th, however, the Germans broke through their line, sweeping across the twin villages and pushing towards the Elsenborn Ridge. There a new American defensive line formed on the ridge line extending to the west, with the 1st Infantry Division holding Dom Butgenbach and the 30th Infantry Division manning the line to the west around Stavelot.

The German time-table had broken down. A strong wall of American divisions formed in the north that reoriented the German offensive to the south. The Allies waited for the weather to clear to launch air attacks against German lines of communications. Montgomery worked to build a counterattack corps to slice off the German columns once their attack culminated as a result of American resistance and German lack of fuel. Lt. Gen. Horrocks' British XXX Corps positioned itself behind the Meuse River with over 1,000 tanks in three armored divisions. The enemy would soon have nowhere to go and, with their lines stretched, find themselves in a vulnerable position.

In the short run, front-line American units still faced overwhelming German forces. The opening up of the southern half of the Losheim Gap by the *Fifth Panzer Army* portended disaster for the 106th Infantry Division and its cavalry attachment. The 18th Cavalry Squadron had been overrun. Its mate in the 14th Group, the 32d Squadron, was nearly destroyed racing to its rescue. Survivors of the 32d were ordered to fall back behind the Manderfeld Ridge to form a defensive line. Their light vehicles, configured for fast reconnaissance and ill-suited to a force-on-force mission, would succumb over the next few days. The V and VIII Corps boundary was breached, and the *Sixth Panzer Army* was running the seam between the two corps. It was unable to overrun the 99th Infantry Division, however, or to get onto the better roads northwestward that led to their designated crossings over

The M4 "Sherman" Tank

The tank most widely used by the United States and its Western Allies during World War II was the Medium Tank, M4, nicknamed and widely remembered as the "Sherman". Over 49,000 were produced, of which over 19,000 went to the U.S. Army, 17,000 to Great Britain, and 4,000 to the Soviet Union. The M4 earned a well-deserved reputation for mechanical reliability, turret responsiveness, and operational mobility. When introduced into combat in late 1942 it was superior with respect to firepower and armor protection, but was soon eclipsed in these regards by heavier German tanks.



The M4 had a five-man crew: commander, gunner, loader, driver and assistant driver (bow gunner). In addition to the main gun it had the powerful complement of a .30 caliber coaxial machine gun, a .30 caliber bow machine gun, and a .50 caliber machine gun pintle-mounted on top of the turret. The number and size of these machine guns reflected the primary purpose of the M4 as a breakthrough and exploitation vehicle, engaging a wide variety of targets as it made maximum use of its mobility to penetrate deep behind enemy lines. Designers anticipated the task of slugging it out with enemy tanks would fall primarily to purpose-built anti-tank guns and tank destroyers, not medium tanks.

The main gun in earlier models, a relatively short 75-mm primarily firing high explosive rounds, reflected the designers' priorities. Hard lessons learned when the Germans forced tank-to-tank combat with the heavier Panther and Tiger tanks led to models of the M4 with longer 76-mm guns and improved ammunition with respect to muzzle velocity and armor penetration. Even these rarely penetrated the front slope of a Panther or Tiger, but readily penetrated its flank or rear. By the time of the German Ardennes Offensive, about a third of the M4s in 12th Army Group had these improved guns.

The M4A3, widely used in the Ardennes fighting, had a gasoline-powered Ford GAA eight-cylinder engine capable of 500 horsepower. The tank travelled a mile on about 1.7 gallons and had a range of about 100 miles without refueling. It averaged 16 miles per hour cross country and could achieve 24. Most important, it was mechanically reliable with a mean miles between breakdowns notably superior to that of its German adversaries. Epitomizing American mass production, the M4 featured ample numbers of replacement vehicles and vast stockpiles of spare parts. Increasingly experienced M4 tankers were backed up by increasingly proficient mechanics and support architecture.

The Ardennes Campaign showcased the strengths of the M4. Armored battalions speedily redeployed into the battle area from all across the front. Ambushes and swirling tank battles enabled the M4s to maneuver on the flank and rear of German tanks rather than opposing them head on. Their robust complement of machine guns and high explosive ammunition allowed them to readily dispatch German infantry, fighting positions, artillery and lighter vehicles as well. The M4s stood up to the punishment of the battlefield. After two weeks of intense fighting, only 45% of the surviving Panther tanks remained operational whereas 91% of the surviving M4s did. Virtually all the destroyed M4s were replaced, whereas almost none of the Panthers were. The German armored units in the Ardennes had been rendered combat ineffective, whereas the American armored units were stronger than ever.



the Meuse River. The westward tack of the battle favored the American defense, which built up a strong shoulder to the north of the penetration while the British moved to backstop the Meuse crossings.

Two regiments of the 106th Infantry Division, the 422d and 423d Infantry on the Schnee Eifel, were completely encircled. They grimly held their positions and waited for the 7th Armored Division to rescue them. They were mostly intact and had sufficient ammunition for small arms, but their artillery had been overrun or left unmanned. The infantry battalions themselves were fit to fight. They were not in wire communication with their division, but intermittently had radio communications. Weather prohibited their support by air and they had no physical contact with other friendly units. Isolated, their commanders believed that the lives of their soldiers would be wasted if they attempted a breakout to the rear through an unknown number of Germans. They ordered the destruction of their weapons and key documents and surrendered *en masse* on December 19th. At least 7,000 U.S. soldiers were captured, the largest U.S. force to surrender in the European theater. VIII Corps had requested an airdrop of food and ammunition to the beleaguered regiments, but weather prohibited it. By the time the weather cleared, two-thirds of the division was in enemy hands.

Brig. Gen. Robert W. Hasbrouck stopped his 7th Armored Division at St. Vith, some twelve miles shy of the Schnee Eifel, on December 17th. Road jams and slow coordination when crossing army boundaries delayed them. Hasbrouck sent his scouts forward, not wanting a meeting engagement in the dark on twisting, forested roads. He soon learned that the Germans had stopped four miles short of St. Vith, held up by a stubborn engineer detachment and troops from the 32d Cavalry Squadron of the 14th Cavalry Group. The *18th Volksgrenadier Division's Mobile Detachment* was soon moving up to renew the attack and encircle the town. While it probed the American positions, Combat Command B of the 7th under Brig. Gen. Bruce C. Clarke took over the defense of much of the St. Vith perimeter. The German attacks began around the city at Poteau, Recht, and Hunningen.

No longer a simple matter of crashing through to the east, General Clarke soldered together a defensive line around to the north and east of St. Vith. He was soon joined by elements of Brig. Gen. William Hoge's Combat Command B, 9th Armored Division, falling back from Steinebrucke. These were added into the defense perimeter in the south and east. The 112th and 424th Regiments, the erstwhile defenders of positions on the Heckuscheid-Branscheid Ridges, had been cut off from their divisions. Through luck, heroism, and skill they fell back into the St. Vith perimeter, reinforcing the southern and southwestern edges. The 7th Armored Division and these attached units now formed a strong horseshoe-shaped defense of St. Vith. They effectively blocked the critical road "octopus" in the *Fifth Panzer Army* area and thus threatened five *panzer Rollbahnen* that were essential

Henri-Chapelle American Cemetery

The Henri-Chapelle American Cemetery contains burials from all major battles in Northern Europe from September 1944 through March 1945, including the Battle of the Bulge. The cemetery is the final resting place for 7,987 American war dead. An overlook west of the highway offers an excellent view of the rolling Belgian countryside that was once a battlefield. To the east is the



long colonnade that, with the chapel and museum room, forms the memorial overlooking the burial area. In the museum are two maps of military operations, carved in black granite, with inscriptions recalling the achievements of the Allies. On the walls of the colonnade are inscribed the names of 450 of the missing.

for *Sixth Panzer Army's* attack. Capturing this road junction would have permitted easy communications between the two German army areas and provided an essential avenue to Houffalize and Bastogne to its south.

In his sector, Middleton committed every combat engineer battalion he had, seven in all, to a desperate attempt to form a VIII Corps defense line between the eroding forward defenses of the 110th Infantry Regiment and the line from Houffalize to Bastogne where he proposed to place the soon to arrive theater airborne reserves. The 10th Armored Division sent its Combat Command B north immediately, and another one shortly thereafter. Middleton committed the 9th Armored Division's Combat Command R at Trois Vierges to defend the road junctions between Bastogne and the bypassed forward positions. Although the corps reserve, it immediately became embroiled in the battle for the center of the corps line. Assigned to it were one armored infantry and one armored field artillery battalion, plus engineers, medics, and a tank destroyer company. It had no actual tanks.

The arriving XVIII Corps (Airborne), under the temporary command of 82d Airborne Division commander Maj. Gen. James Gavin, was ordered to deploy a division northward and one to Bastogne. As Houffalize had already been captured, the 82d's "All Americans," deployed behind the already committed 1st Infantry Division. The 101st Airborne Division's "Screaming Eagles" took positions on the roads east and south of Bastogne. They were supported by combat teams from 10th Armored Division. These teams provided an armor company to the 101st's light infantry battalions as they filled in the defensive perimeter.



3-inch motor gun carriage fires on enemy positions.

As the Bastogne perimeter shaped up, other VIII Corps units were fighting for their lives. The valiant defense of the 110th Infantry Regiment, the corps engineers, and Combat Commands A and R of 9th Armored Division, has too often been overlooked. These forward units of the corps took heavy casualties as they stalled for time, holding multiple road blocks against powerful German armored forces that often outgunned and outmaneuvered them. The 110th, hit by parts of five different German divisions, suffered 90% casualties in the course of its fighting in the Ardennes. The seven engineer battalions engaged in the bloody fighting were also rendered combat ineffective, and the 9th Armored Division's two combat commands were effectively destroyed. Yet these units bought the rest of the American Army precious time by their stubborn fighting withdrawal.

A valiant defense played out around the critical town of Bastogne. The roads in front of Bastogne in the center and south of the *Fifth Panzer Army's* sector had been effectively blocked for three days. The defensive perimeter was based on armor-infantry team road blocks within a cordon of 101st parachute infantry forming a complete half-moon perimeter in front of the town. This was in place by the morning of the 19th. The *2d Panzer* Division and the advanced reconnaissance battalion of the *Panzer Lehr Division*, moving on the Wiltz road in the south, had lost the race to take this southern road "octopus" before it could be adequately defended. The VIII Corps still maintained its headquarters in Bastogne and orchestrated its tenuous defense.

Each of the armor-infantry teams at Bastogne--Team Cherry at Longvilly, Team O'Hara on the Wiltz road south of Wardin, and Team Desobry at Noville north of Bastogne--fought key actions to prevent enemy armored columns from using the main roads to break into the city. As the U.S. armor was slowly forced back, the Bastogne perimeter contracted to its final form wrapped around Longchamps, Foy, Bizory, Neffe, and Marvie. The 101st paratroopers and glider troops filled in the holes in the line as the 10th's armor and infantry teams were depleted in close combat. Middleton moved his headquarters to the southwest of

the city to retain better control of his corps before the perimeter closed around Bastogne. The corps artillery, now reconstituted, had its fire missions joined by artillery battalions from the Third Army moving northwards towards Bastogne. They were soon close enough to fire in support of the garrison from the south and southeast.

Eisenhower's conference at Verdun on December 19th settled the Allied response to the German counteroffensive. First Army would hold its ground, forming a firm shoulder on the northern edge of the penetration to prevent a northward move against the Allied rear and the channel ports, especially Antwerp. Antwerp had been identified by ULTRA intercepts as the prime German objective. With the weather beginning to clear, the strategic air forces would soon begin bombing German lines of communication. These stretched from the front to the Rhine bridges and then further east. Bombing could isolate the Germans on the battlefield from their main sources of fuel and reserves. The Allied 6th Army Group to the south would cease offensive operations and stretch its forces to the north to take up some of Third Army's front. This would release two corps of Patton's army for a counterattack into the southern flank of the German drive towards Bastogne, which had not yet been fully encircled.

The situation map on the 19th showed VIII Corps separated from V Corps by nearly fifty miles, with only St. Vith and Bastogne holding as islands of resistance. These islands were rapidly being bypassed by German *panzers* with infantry close behind, filling the roads and pushing hard to expand maneuver room on the flanks. Von Rundstedt privately predicted doom for the offensive, as he saw its ambitious schedule had already been upset by the stubborn American defense. Some German field commanders still believed they could destroy as many as a dozen American divisions if permitted to switch gears to a "small solution" before Allied airpower brought their advance to a halt. On the Allied side, neither Eisenhower nor his commanders were panicked, but they were concerned with unfavorable news reports and growing public anxiety over the unexpected reverse. Much of the public, both in America and in Britain, had come to believe the Allies were invincible and that Germany no longer had the power to resist the Allies' onslaught. The bold German stroke had come as a great shock.

By midday on December 20th, Eisenhower reorganized the command structure on the battlefield to improve control during the present crisis. Despite Bradley's protests, he assigned armies in the northern half of the penetration to Field Marshal Montgomery's 21st Army Group. Montgomery now assumed operational command of U.S. First and Ninth Armies to the north of the "bulge" in Allied lines. The U.S. IX and XXIX Tactical Air Commands would fall under the tactical control of 2d Tactical Air Force, RAF, to coordinate their strikes. Montgomery visited the U.S. corps and many of the divisions almost daily and sorted the battlefield into a cohesive defense. He conferred with General

Hodges frequently, and Hodges issued formal orders for First Army based on oral guidance given by Montgomery. Montgomery's doctrinal differences with the Americans resulted in an uneasy, if essential, partnership. He believed that it would be better to let the Germans beat themselves against good defensive ground and run out of fuel. Once that happened, the air forces would attack vulnerable German supply lines. Such attrition would avoid premature and costly head to head armor battles counterattacking the German units, who would then have the defenders' advantage. An Allied counteroffensive would follow eventually. Montgomery saw no advantage to hurrying into a battle when the Allies grew stronger every day. Eisenhower and Bradley, sensitive to headlines at home, wanted to end the German offensive quickly with vigorous counterattacks. For the moment, Montgomery's cautious approach prevailed.

In the center of the penetration, the *Fifth Panzer Army* attack against St. Vith reflected its inability to fight two major actions simultaneously. While the army was preoccupied with how to bypass Bastogne, the unexpected arrival of U.S. armor at Steinebruck and St. Vith caused its *LXVI Corps* to reevaluate its plan. The Germans had not been able to concentrate their forces quickly enough or gain sufficient road space because of American holdouts. This limited their maneuver options. Switching the *18th Volksgrenadiers Mobile Detachment* to take the lead towards St. Vith, the *62d Volksgrenadiers* moved to push back the 9th Armored Division. The 7th Armored Division's presence at St. Vith was an unpleasant surprise to the Germans on the east-west road and in the northeast quadrant. There an element of the recently committed *Fuhrer Begleit Brigade* attempted to bypass the blocked roads and take the town from the northeast.

Houtfalize, St. Vith, Bastogne, and Luxembourg City had been identified by Middleton as the key points to hold in the Ardennes from the first moments of the attack. Of these objectives, the Germans were only able to seize Houffalize quickly. Bastogne and St. Vith were still in the balance and Luxembourg City was never seriously threatened. Middleton's plan to choke the German flow westward at its nodal points was working, both by design and by the accidents of battle.

St. Vith and Bastogne

Maj. Gen. Jones at St. Vith, recognizing that two of the three regiments of his 106th Infantry Division were no longer in contact with him, turned over the defense of the city to 7th Armored Division commander, Brig. Gen. Robert W. Hasbrouck. Hasbrouck's command was generally intact. Hasbrouck assumed command of the 424th Infantry Regiment of the 106th Division and the 112th Infantry Regiment of the 28th Division. Both had managed to fall back successfully under the German onslaught. Hasbrouck also absorbed Brig. Gen. Hoge's Command Command B of the 9th Armored Division. With the arrival of additional forces, many of them units which had been cut off and struggled to extricate themselves to the rear, the city eventually had a complete circular defense.

The continued defense of St. Vith, now in an all-round defense configuration, became more essential as news was received that Col. Peiper's *Kampfgruppe* continued its successful attacks towards the American rear. His attack had bypassed St. Vith and opened a path for the *I SS Panzer Corps* to move west. Additional attacks by the *Fuhrer Begleit Brigade* and SS Colonel Otto Skorzeny's *150th Special Brigade*, some of whose soldiers were dressed as Americans and driving captured American tanks or vehicles made to look American, threatened the survival of the St. Vith "goose egg." St. Vith held out and severely degraded the flow of major German units to the west, although its long term survivability remained in doubt.

From within the St. Vith perimeter, it was impossible for the defenders to gauge how much of the German force would bypass the city and how much would be used to reduce the pocket. The same problem would soon be posed at Bastogne. The American defenders would have to hold out and trust that relief forces were coming to them. Bastogne looked to a counteroffensive from Patton's Third Army. St. Vith, however, was much farther from a large American force and had substantial German forces flowing around it. These made the distance a relief force would have to travel farther every hour. Initially, XVIII Corps (Airborne) took reinforcing divisions in hand and hoped to organize an attack to push through the Germans and link-up with the St. Vith defense from the west. However, to the south of St. Vith, *1st SS Panzer* had already reached the Ambleve River and the *116th* and *2d Panzer Divisions* had passed Bastogne to the north and were moving towards the Meuse. Bastogne was encircled by December 20th when the last road was cut by the enemy. St. Vith was now out of reach of XVIII Corps (Airborne). Nor could VII Corps, which Montgomery was assembling in the north as a counter offensive force, make it to the city in time. It was not until a relief force from the Third Army pushed north starting on December 22nd that the German stranglehold on Bastogne was threatened.



U.S. mortarmen hang a 60mm mortar round at St. Vith.

St. Vith's fate was tied to battles around it at Stavelot, Recht, Gouvy, and to the north on the Elsenborn Ridge. The American defenses on that key ridge held. This forced von Rundstedt and Model to switch the main offensive effort farther south on the 19th. They committed the *II SS Panzer Corps* in the *Fifth Panzer Army* sector, which still had maneuver room for the tanks. The stubborn American defense of key pieces of terrain and road junctions had seriously disrupted the German plan.

Counterattacks around the “race-track” of small roads near St. Vith by armored combat teams orchestrated by Clarke, and close battles fought by Hoge, held off the Germans through the 21st. At that point decreasing supplies of fuel and ammunition, the life blood of armor, imperiled the defense. With a narrow neck remaining for withdrawal, General Hasbrouck asked the XVIII Corps (Airborne) commander, Maj. Gen. Matthew Ridgway, for permission to fall back to the American defensive line now forming in the rear. Ridgway preferred that the St. Vith defenders hold the line to maintain the fight forward. He even proposed to resupply the city by air drops. However, he did not have full access to Allied intelligence on the German plans and had relatively little experience with mobile battles. His hesitation to give up ground was understandable, but the risk of losing the forces at St. Vith was unacceptable. The Americans did not need another Schnee Eifel disaster like the surrender of two-thirds of the 106th Infantry Division.

Field Marshal Montgomery, during his daily visits to First Army's corps, had assessed the battles around the St. Vith perimeter. He saw more value in saving the regiments and as much armor as possible to reinforce the XVIII Corps defensive line. German attacks late on the 21st made further defense of the town infeasible and the Americans began to pull back. A freeze the night of the 22d provided the hard ground necessary to withdraw heavy vehicles, and the 7th Armored Division and its attached infantry escaped the German trap. German armor, short of fuel, was generally unable to stop the withdrawal or pursue it. The St. Vith garrison escaped after blocking the German advance for six critical days.

A similar fate seemed to be in store for Bastogne. Patton's attack north against the Germans' southern boundary was a 'building' corps assault, not three complete divisions attacking simultaneously as he had earlier promised Eisenhower and Bradley. His dramatic one-hundred-mile shift to the north of units which had been attacking east left many of his support vehicles behind. The Germans were aware of his movement and shifted forces to meet it. Both sides were stretched thin at the time, and full-strength units were rare in either army.

Leading the way towards Bastogne was the 4th Armored Division, now commanded by Maj. Gen. Hugh J. Gaffey. His attack pushed north with depleted units along icy roads against the German *5th Parachute Division*, which had bypassed Bastogne and cut off roads linking it to the south. A tenuous link-up with Bastogne was finally achieved on December 26th. Patton's III Corps, which had by then mustered the three complete divisions Eisenhower had directed for its attack, did not gain much purchase into the German south flank. Four divisions, the 4th and 6th Armored and 26th and 80th Infantry Divisions, continued to widen the penetration into the city. Manton Eddy's XII Corps piled into the attack, adding part of the 10th Armored and 5th Infantry Divisions to the attempt to pry open the shoulder. Cross compartmented terrain, limited road nets, deep snow, and sub-freezing weather conspired to make this a slow-moving attack rather than a slashing riposte to slice off the enemy salient.

The shift of the German main effort from the north to the center sector of the penetration after the 20th of December brought more German armor into the Bastogne fight. Even then, neither side had a decisive numerical advantage although American artillery and airpower were becoming decisive in interdicting German supply routes and movement. With clearing weather, Allied air power was soon able to break up German attempts to concentrate their forces against U.S. units.

Weather in the Ardennes was always a key factor in how the battle was planned and fought. It favored both the attacker and the defender at different times. At the time of attack, the Germans counted on a week of dark skies to hide German columns from photography and keep rampaging Allied fighter bombers from

demolishing German columns on the Ardennes limited road networks. The northern Ardennes was snow covered, with the Schnee Eifel blanketed with several inches of snow. The ground was hard but not deeply frozen, forcing tanks and heavy vehicles to stay on the roads. In the central and southern sectors, overcast and light rain was still prevalent. Although temperatures were freezing at night, roads were muddy in the day. Trafficability was poor except on the few macadam main roads. Cross country mobility was limited.

Tanks soon turned small trails into slurry, unusable by infantry or horses. German infantry divisions were still reliant on some 5,000 horses to pull their artillery and supply wagons. Only *panzer* divisions were fully motorized. In contrast, in the American Army divisions were heavily motorized with 4,000 vehicles in an infantry division. There were no horses. Armored divisions had over 5,500 vehicles, of which 232 were tanks. Additionally, the U.S. services of supply, air forces, and artillery had huge numbers of trucks to move supplies. The poor roads and bad weather would affect either side in their attempts to move quickly, either in the attack or the counterattack. It slowed the German advance into the Ardennes but was also inhibited the Allied attempts in January to cut-off the penetration.

Bad weather cloaked the initial German moves from attack, but after their attack began radio intercepts and direction finding quickly chalked up the identification of units, unit locations, and the extent of German supply routes. Heavy and medium bombers began to hit targets when weather permitted, and radar and radio directed bombing struck supporting targets such as rail yards. The German hopes for continued bad weather to cloak their movements from Allied aircraft were soon dashed.

The major improvement in the weather came on December 22nd when a “Russian High” swept across northern Europe, freezing the ground solid, clearing the air, and bringing out the Allied air forces. While temperatures plummeted, making life for the poor infantryman miserable, a greater gift appeared in the form of air support. Clear skies brought out the entire Ninth Air Force and 2d Tactical Air Force with a vengeance, as well as the heavies of the Eighth Air Force and RAF Bomber Command. Moreover, with rock-hard ground and roads, tanks and trucks gained freedom of movement. This granted the heavily mechanized American units mobility that was never again lost during the battle. However, deep snows would hamper road use and cross-country movement in the northern areas. Cold weather casualties increased. In January they equaled battle casualties, heavily depleting the firing line of fighting divisions.

The clear weather and the arrival of air support changed the nature of the Ardennes campaign. Besides exposing German columns within the Ardennes to air attack, it opened the entire German support structure to attacks within

the battle area and up to the Rhine. The Eighth Air Force hit targets deep into Germany. Bombardment Division's medium bombers hit the rail bridges behind the German lines which, combined with Eighth Air Force bomber raids on rail yards, began to cripple the already constrained supply lines into the Ardennes. Fighter bombers roamed the long winding roads of the region strafing columns of vehicles, making daylight road movement nearly impossible. St. Vith was singled out for bombardment as a road junction, and the road octopus soon became a heavily cratered death trap for units and vehicles.

Another immediate impact of overwhelming air support was aerial resupply to the Bastogne perimeter. The unimpeded flight of cargo planes dropping much-needed supplies to the beleaguered defenders of Bastogne assured the continued resistance of the 101st Airborne and 10th Armored Divisions. This aerial resupply effort was maintained until 27 December, when ground elements re-established a line for regular supply by Third Army logisticians.

In late December, major actions were still underway in the north by the *1st SS Panzer Division* as it continued to move westward towards the Meuse River following the trail ripped open by *Kampfgruppe Peiper*. Peiper's group, after initial success, met with strong resistance as it attempted to bypass American roadblocks and as American engineers successfully blew up key bridges in its face. Peiper's rapid move on the 17th through Lanzerath, Bucholz, Honsfeld, Bullingen, Moderscheid, Schoppen, Ondennaal, Thirmont, Baugnez, and Ligneuville left a trail of murder and destruction, as he sought a clear route to the Ambleve River while also seeking heavy capacity concrete bridges for his heavy tanks to cross. Blocked by the engineers holding the bridge near Trois Ponts, he turned north. Finding himself in a pocket near the hamlet of La Gleize, and running out of fuel, Peiper was counterattacked by infantry from the 82d Airborne Division and held in place by the 30th Infantry Division's positions to its north. Finally cut off on December 24th, Peiper ordered his men to retreat on foot at nightfall, leaving their tanks intact for fear their burning hulks would give away their escape. A key spearhead for the attack had been blunted.



Soldiers of the 101st Airborne retrieve medical supplies via airdrop.

By New Years' Day, stubborn American resistance and Allied air power had begun to turn the tide. Ninth Air force had chalked up over 10,305 sorties on its operations board and dropped 6,969 tons of bombs on targets in the battle area. Some 264 enemy aircraft were claimed shot down, along with the destruction of over 2,300 motor vehicles, 200 tanks, 600 railroad cars, 45 locomotives, 330 buildings, and 7 bridges. This posed a significant operational drain on German capabilities to advance, sustain their forces in the salient, and bring to bear their second wave of armor and reserves to affect the battle in progress.

The New Year also gave the Allied air forces a shock similar to that faced by ground forces hit with the Ardennes Offensive. The Germans surprised Allied airmen with the execution of *Operation BODENPLATTE (Base Plate)*. Sheltered by hand-carried plans and initiated by a single code word, "Teutonicus," German air units launched a surprise maximum effort against Allied airfields. At 0940 on January 1st more than 900 enemy aircraft struck a number of Belgian airfields, destroying 156 aircraft on the ground. Most heavily hit were RAF airfields belonging to 2d Tactical Air Force. It was a pyrrhic victory at best. To achieve these results, the Germans sacrificed over 300 planes, included 85 shot down by their own anti-aircraft fire due to bad coordination. They also lost about 245 pilots. The Allied aircraft losses, while heavy, were easily made up. Not so the losses to the *Luftwaffe*. The German fighter commander General Adolf Galland's analysis of the raid was that the *Luftwaffe* had bled itself of irreplaceable pilots for no operational gain.

On the ground, the U.S. First Army, under the operational command of the British 21st Army Group, fought to hold and defeat the main German forces. It was able to stop the German main effort even though the Germans continued attacking until after Christmas. Both *Sixth* and *Fifth Panzer Armies* were under orders to bypass resistance, shake off counterattacks, and press on to the Meuse. This would allow them to get into the vitals of the Allied rear areas. However, stubborn resistance and quick reactions by the Allies fatally delayed this timeline. Hitler ignored assessments by von Rundstedt that the offensive had failed and relied upon Model's fighting tenacity to keep the *panzer* columns moving.

First Army had turned its front to the northern flank of the German attack, pulling divisions from the Aachen corridor to line the Elsenborn Ridge. This formed a defensive line to the north and west of the penetration and blocked the northwestward push of the *panzers*. This line initially included elements of the 1st Infantry and the 26th Infantry Divisions, but rapidly added the 30th Infantry Division, 9th Infantry Division, 3d Armored Division, 84th Infantry Division, 2d Armored Division, 82d Airborne Division, 75th Infantry Division, and 5th Armored Division. The XVIII Corps (Airborne) and VII Corps shifted their lines to assume command of divisions alongside the beleaguered V Corps, which still anchored the line in the east.

The major combat units of the First Army were augmented by a heavy concentration of artillery, independent tank and tank destroyer battalions, engineers, signal battalions, transportation, and antiaircraft units drawn from theater, Ninth Army, and First Army elements. Montgomery's first orders to Hodges were to stop the German advance, hold the line, run the enemy out of gas, and then tear up his columns by a combination of long-range fires by artillery and air. He formed an attack corps using the VII Corps intending to cut off the tip of the enemy spear. Although slowed in his plans with false reports that the Germans were planning another major attack in late December, Montgomery finally ordered a full counteroffensive from the north on January 3rd. This would connect with one already begun from the south to close the Bulge in mid-waist.

A few days earlier, the 2d Armored Division, commanded by Maj. Gen. Ernest Harmon, had jumped the gun and launched a frontal attack on the *2d Panzer* Division near Celles as it came up short of the Meuse River and was waiting for reinforcements. Montgomery had wanted the VII Corps to permit the *panzers* to pass to take them in the flank, but Harmon's tankers attacked the fuel-starved enemy tanks first with air and artillery and then with armored and mounted assault. The "Hell on Wheels" Division hit the enemy at their "high water" mark, their furthest penetration into the American lines. Despite their attempts to maneuver further, and even after receiving some reinforcements, the Germans were unable to regain forward momentum or to prevent their flanks from being crushed by pincer attacks.

The Ardennes salient driven into the Allied line had become a huge trap for nearly thirty German divisions. Eisenhower's plans to crush it, already begun with Third Army's drive north to relieve the encircled garrison at Bastogne, solidified into a proposed operation to close a vise at both ends of the line. This vise was designed to link together in the middle of the salient, reestablish contact between the Third and First Armies, and then transfer command of First Army back to Bradley's 12th Army Group. There would be no slackening of the battle in the north even while southern operations intensified, but Eisenhower managed to create an armored reserve south of Metz in case of a German breakthrough in the Alsace region. This reserve included the elements of the 9th and 10th Armored Divisions, both badly damaged in the Ardennes, and the newly arrived 8th Armored Division.

NORDWIND: The Last German Offensive in the West

Even as the fight to reduce the Ardennes salient was underway, the Allies faced a new threat. Allied intelligence, which had signally failed to foresee the German counteroffensive in the Ardennes, now spotted German forces shifting to the south. The intelligence structure rebounded from its initial setback once the Ardennes attack started and German radio traffic resumed. Intercept stations had plenty of signals with which to work. Using triangulation and location of headquarters and ULTRA decrypts, Allied intelligence quickly gave an increasingly clear picture of the German attack, both its order of battle and its specific objectives. The Allied strategic and tactical air forces, in particular, used this information to target supply, munitions, and headquarters elements in transit, and within the battle area.

Allied intelligence gave particular attention to the uncommitted *panzer* divisions behind the *Sixth Panzer Army* and the additional divisions in the north which could threaten Lt. Gen. Simpson's Ninth Army. Once these were committed to the battle, Montgomery was convinced the enemy had shot his bolt. Their movement south in late December not only signaled the high-water mark for the "Rundstedt Offensive", as the Allies had come to call the German attack, but also prompted the Allies to reinforce the now weakened Alsace front. The 6th Army Group and its U.S. Seventh Army had stretched out its defensive lines and weakened some corps in order to provide reserves for Patton's drive into the southern flank of the German Ardennes penetration. The movement of German reserves southward potentially signaled a new German offensive in that region.

The intelligence analysts of 6th Army Group and Seventh Army soon identified definite German offensive preparations along their front. Combined with ULTRA warnings sounded at Theater, Army Group, and Army level, the two Allied armies in the south braced themselves for the German attack they knew would begin. The French First Army Commander, General de Lattre, was not privy to ULTRA, but he was informed that a "secret source" had given the Americans indications of an impending attack. He and the Seventh Army Commander, Lt. Gen. Alexander Patch, began preparing plans to receive the attack.

The new German operation in the south, codenamed *NORDWIND* or *Northwind*, was designed to restart offensive movement towards the west and reinvigorate the thrust towards the Meuse. Several attacks comprised the offensive. An attack towards the Saverne Gap twenty miles northwest of Strasbourg aimed to split the U.S. XV and VI Corps and retake the Saar region north of the Rhine-Marne Canal. A follow-on attack named *ZAHNARTZ* (*Dentist*), would then be launched if the breakthrough was successful. This initiative would seize objectives further to the west on the southern flank of the Third Army in the vicinity of Luneville and Metz. The *XIII SS Corps* would

launch the main attack in the Sarre River valley, while four divisions from two flanking corps, the *XC* and *LXXXIX Corps*, attacked southwesterly into the Vosges clearing the old Maginot Line positions near Bitche. Hitler held two *panzer* divisions in reserve. A special army group, *Army Group Oberrhein* (upper Rhine), personally commanded by *Reichsfuhrer-SS*, Heinrich Himmler, would fix the southern flank of the Seventh Army in place with holding attacks as the main attack unfolded.

The 6th Army Group Commander, Lt. Gen. Jacob Devers, had prepared both Patch's forces and de Lattre's for the attack by creating a strong reserve rather than immediately withdrawing to more defensible ground as SHAEF had suggested. This would have involved the unacceptable surrender of newly liberated French territory, including the city of Strasbourg. Seventh Army covered a 126-mile front to the northwest of that city with only six divisions after losing two to support Patton's counter-offensive. De Lattre's French divisions to the Seventh Army's south were understrength and still absorbing recruits and reinforcements. These were being trained "on the job". To add some additional combat power, Seventh Army created three "Task Forces" comprised of infantry regiments from newly arrived divisions. These were deployed without their usual divisional troops or support due to transport shortages. The task Forces were Task Force Linden (42d Infantry Division), Task Force Harris (63d Infantry Division) and Task Force Herren (70th Infantry Division). These stripped-down combat units held the line with the support of other divisions' artilleries and support assets.



Lieutenant General Jacob Devers and Lieutenant General Alexander Patch.

On New Year's Eve, General Patch told his commanders that the German attack would begin early the next day, although its major objectives were still unclear. In reality, the attack had already started late on the 31st of December. The Seventh Army G-2 accurately forecast the German attack avenues based on troop buildup areas and basic terrain analysis. The intelligence pointed to major thrusts with converging axes of attack from near Bitche in the north and Benfeld in the south, although the actual German attacks were staggered and not simultaneous. Devers informed Patch that part of the SHAEF reserve would be available to him to help organize forces in threatened sectors for defense.



100th infantry division soldiers on post in a machinegun nest.

Patch's forces in Alsace on December 31st manned a defensive line along the Rhine from Strasbourg north to Lauterbourg and then west through Wissembourg to Bitche and then Sarreguemines. VI Corps manned the right of the line with the 79th and 45th Infantry Divisions and the 14th Armored Division, minus one of its Combat Commands held in reserve. On its left flank, was Task Force Hudelson, a force composed of two cavalry squadrons and the infantry elements of the 14th Armored Division. XV Corps held the northern and western edge of the army line with the 100th, 44th, and 103d Infantry Divisions with the 106th Cavalry Group screening the left flank. Forty miles of the Rhine on the south and east flank were covered by the understrength Task Force Herren and Task Force Linden from the 70th and 42d Divisions, respectively.

XV Corps, commanded by Maj. Gen. Wade Haislip and now part of Seventh Army on the far-left flank, was in the line of the German attack and it immediately created a secondary defense line using part of the Maginot Line in its western sector. The corps' divisions, the 36th Infantry, 14th Armored, and French 2d Armored, were alerted to prepare counterattack plans. General Haislip's plan was to receive the German attack in his forward positions and conduct a fighting delay back to his secondary positions. Then, depending on the tactical situation, he would counterattack either to the northwest or southeast. De Lattre's First French Army, to the south and east of *Seventh Army*, also prepared a defense in depth around the Colmar pocket, intending to hold Strasbourg and as much French ground as possible.

On the German side, General Blaskowitz's *Army Group G* had fifteen divisions for *NORDWIND*. The plan for the operation was somewhat of a gamble, but it stood a chance to gain ground and give the German Army much needed defensive space forward of the Rhine. Even if fully successful, the result would not be as strategically significant as a victory in the Ardennes. Neither the German High Command, which was ordered to execute the offensive, nor SHAEF, which fought the attack, viewed the offensive as a potential war-winner for the Germans.

The German attack in the north was launched by the *XIII SS Corps* late on the last day of the year. It hit the XV Corps in the 44th Division sector between Rimling and Sarreguemines and attacked down the Saare River valley. Haislip used his ground to advantage to receive and slow the German attack. Corps units moved back towards prepared positions and shortened their lines. Four more attacks would follow in the 6th Army Group area, as the Germans attempted to gain the initiative in the Alsace region and take pressure off the stalled Ardennes offensive. On January 2nd, the VI Corps was attacked in turn by the *6th SS Mountain Division*. General Brooks executed a planned withdrawal to the corps' Maginot Line positions along a line from Lembach to Hatten and Sessenheim.

Himmler's *Army Group Oberrhein* attacked across the Rhine at Gambesheim just north of Strasbourg on January 5th. Spearheaded by its *XIV SS Corps*, the attack achieved some success against Task Force Linden and Task Force Herren and drove a salient into American defenses five miles wide and two miles deep. Two days after the *XIV SS Corps* attack, a new offensive called *SONNENWINDE* (*Summer Solstice*) was launched using the *LXIV Corps* attacking north towards Strasbourg along the Rhone-Rhine canal. These actions increased the threat to Strasbourg and foreshadowed three weeks of intensive fighting.

The renewed German attacks stretched 6th Army Group forces to their limit. The VI and XV Corps were both engaged to their front with previous German attacks. Devers assigned responsibility for the defense of Strasbourg to the French II Corps. Elements of the American 14th Armored Division were sent to Maj. Gen. Brooks' threatened right flank on the Rhine and as reinforcements for the threatened 79th Infantry Division. Additionally, a Combat Command of 12th Armored Division moved to the Gambesheim bridgehead sector. As in the Ardennes, U.S. armored divisions provided both the mobility and firepower to bolster an imperiled defense.

On the 7th of January, the Germans launched the *XXXIX Panzer Corps* with the *21st Panzer* and *25th Panzergrenadier Divisions* into the center of the VI Corps sector between the Vosges and Lauterbourg. The commitment of the *21st Panzer Division* in the Bitche salient signaled the seriousness of the German attack. The *Seventh Army* line was now threatened from multiple directions with its front and center being attacked at its northern hinges. Devers quickly regrouped his forces and SHAEF offered him the XXI Corps from SHAEF reserve.

The XXI Corps, commanded by Maj. Gen. Frank W. Milburn, now took control of the 103d Infantry Division and 106th Cavalry Group on the far-left flank of the Seventh Army, relieving the pressure on neighboring XV Corps. XV Corps, which controlled the 44th and 100th Infantry Divisions, Task Force Harris (one regiment of infantry from the 70th Division), and the French 2d Armored Division, could now concentrate to its front and not worry about its flank. In the center and right of the army front, VI Corps commanded the 45th, 79th, and 36th Infantry Divisions, the 12th and 14th Armored Divisions, and Task Forces Herren and Linden. Seventh Army's more robust force effectively blocked both the Sarre Valley and the Bitche salient from deep penetration. As Patch rolled with the attack and countered the German thrust, de Lattre picked up the slack by assuming sixteen additional miles of Rhine frontage to the south.

Heavy fighting along the Bitche front in mid-January kept the French 2d Armored Division fixed behind the left flank of the Seventh Army and away from Strasbourg where de Lattre wanted it. Bitter fighting for hundreds of yards gained typified combat in this sector as the *6th SS Mountain Division* launched relentless attacks over rough ground against the 70th Division and elements of the veteran 45th and 79th Divisions. Slowly the VI Corps pulled back under pressure in a controlled withdrawal to the south. All through this, the defense held a cohesive line as units withdrew intact. There was to be no repeat of cut-off regiments as had occurred in the Schnee Eifel in the Ardennes.

The intent to hold Strasbourg shifted the battle's focus for both attacker and defender. Denied an easy victory by encirclement, the German attackers were forced to close on their objective and to cut off its communications and support arteries. Devers ensured that Patch had the armor to prevent this. With the attack of Blaskowitz's best division, the XXXIX Corps' *21st Panzer Division* along with



7th Army troops enter a fortress on the Maginot line.

elements of the *25th Panzergrenadier Division* towards Hagenau, the Germans signaled a new offensive threat. With enemy armor moving toward the twin villages of Hatten-Rittershoffen in the Low Vosges foothills, the 12th Armored Division moved to counter. The Germans moved through the wooded hills from the northeast and east while the Americans moved across snow covered roads directly into the towns from the west. The German armor pressed past mines, through a snow storm, and penetrated the thin defenses of Task Force Linden before hitting elements of the 79th Division withdrawing to its new planned defensive lines. Attacking the outer ring of the defenses of the old Maginot line, now held by the Americans, the Germans skirted southward looking for an opening in the line and running into the twin towns of Hatten and Rittershoffen.

Both towns were strongly defended by the 1st Battalion of the 242d Infantry of the 42d Infantry Division, reinforced by Combat Command A, 14th Armored Division. The 14th Armored Division's 48th Tank Battalion opened the battle against the German attack southeast of Rittershoffen. German and American tanks clashed head-on in a snowstorm. The Americans were soon reinforced by the 242d Infantry's 2d Battalion. Both sides attacked and counterattacked in the swirling confusion. On January 10th, the 2d Battalion, 315th Infantry of the 79th Division arrived at Hatten relieving the battered 2d Battalion, 242d Infantry as it withdrew to Rittershoffen. Meanwhile, two German divisions attempted to widen the breach in the Maginot Line positions on the approaches to Hatten. Both sides reinforced this ongoing battle as neither side yielded their positions.

The next day an encircling move from the south towards Rittershoffen by the German attackers attempted to cut off the Americans in Hatten. The 2d Battalion of the 242d clung to Rittershoffen and the 3d Battalion held on to Hatten. Both villages, situated on level ground surrounded by open snow-covered fields, were exposed to armored attack, but the open ground also made antitank fire deadly from both sides. Each side committed more forces to the fight.

General Brooks committed more forces from the 14th Armored Division to both towns as the Germans sent infantry from the *7th Fallschirmjaeger Division* in an attempt to clear the American infantry from the town's buildings. The Americans responded by sending in Combat Command B on January 13th and the remainder of Combat Command R on the 14th. A night attack by the Germans restored a stalemate to the towns as both sides held their positions. The Americans held even when the Germans attempted to burn them out of the buildings with a flamethrower vehicle. A fresh *Volksgrenadier* division replaced the *panzers* who were suddenly pulled from the line and moved to the eastern front to counter a major Red Army offensive on January 17th, but the action continued. Finally, the Germans were forced to admit defeat and withdrew. The Germans suffered heavy casualties and left more than fifty *panzers* and twelve half-tracks behind in the town.



German POWs are marched past a full American half-track.

The victory was not without cost to the defenders. The Americans lost thirty-one Sherman tanks, nine Stuarts, and eight half-tracks along with a large numbers of infantrymen. The battle of the two villages had dragged on for more than twelve days. After the German forces withdrew the American units also left and pulled back behind the Moder River as part of a new defensive line established by Seventh Army. The two villages were no longer important, but for a time the battle for Rittershoffen-Hatten was one of the most hotly contested battles of the entire campaign.

While the fight in the twin villages unfolded, the 12th Armored Division moved to reduce the penetration at Herrisheim with another armor attack. Combat Command A employed two tank battalions and an armored infantry battalion in an attack through woods and towns against strong antitank defenses. The Americans suffered heavy tank losses to both the antitank guns and superior German Panther tanks of the *10th Panzer Division* but were able to gain ground. The commitment of another American armored division in the sector tipped the balance in numbers but could not overcome the disparity in the quality of the tanks. However, with the withdrawal of American troops south of the Moder River and a shortening of the line at Hagenau, the overall combat power ratio in the sector soon shifted to the Americans.

Seventh Army established its defensive line along the Moder River to take advantage of the terrain and to consolidate its divisions into a coherent defense against piecemeal German attacks. Successive defensive lines had characterized the VI Corps controlled withdrawal from the German advance in the Hagenau sector. Brooks never lost control of his units as they slowly withdrew to the river. Although the eastern part of the Moder defense in the French sector had become untenable due to the German-held bridgehead at Gambesheim, the rest of the river line defense was thoroughly integrated.

By the end of January, the American defense in the Alsace ran from Hagenau in the west to Bichweiler in the East, where it curved southward to give the Americans a line from the Vosges foothills to the Rhine. VI Corps, which had taken the brunt of the German attacks, now mustered six divisions. General Brooks listed the 36th and 103d Infantry Divisions as being in “very satisfactory” condition. The 45th and 79th Infantry and the 14th Armored Divisions were categorized as “satisfactory”. The 12th Armored Division, which had taken heavy casualties in weeks of fighting, was considered by him in “unsatisfactory” condition, as were Task Forces Linden and Herren. All of his divisions were understrength in infantry and all were suffering from fatigue.

The enemy was slow to follow the careful American withdrawal to the Moder due in part to a severe shortage of transport to move ammunition and tow artillery. The lack of enemy patrols by the normally aggressive German forces encouraged the Americans and signaled a slowing of the attacks. Alsace although still threatened, was no longer imperiled. While company-sized attacks were launched by German units near Gamsheim and Weyersheim, and a company infiltrated near Kurtsenhausen attempting to penetrate the lines, these probes were driven off by tank destroyers and artillery.

Army Group G now attempted a follow-on attack to open a clear avenue of advance to the Saverne Gap. However, this attack was expected by VI Corps and it prepared defenses in depth to contain any penetration into the rear areas. The expected attack began with elements of six German divisions attacking across the Moder during the night of January 24-25 and straddling the village of Hagenau. The three-pronged attack was badly executed by the Germans. In the west, the *6th SS Mountain Division* attacked the 410th Infantry of the 103d Division at Schillersdorf while its neighbor, the *36th Volksgrenadier Division*, fixed the remainder of the 103d in place with holding attacks. The 79th Division in the center sector was next hit. The 222d Infantry was attacked between Naubourg and Schweighausen by elements of three divisions: the *47th Volksgrenadier*, *25th Volksgrenadier*, and *7th Fallschirmjager Divisions*. In the east, the Moder was crossed by the *10th Panzer Division* at Kaltenhause attacking the 242d Infantry. While the latter two drives appeared to be a double envelopment to take both Hagenau and Brumath, their final objective was assessed to be Strasbourg, the major strategic target in the area. Heavy fighting took place in the Ohlungen Forest until a reserve battalion counterattack in the 222d sector restored the main line of resistance. A combat task force organization similar to that used in the Hatten-Rittershofen fighting was organized from elements of the 232d, 222d, and 314th Infantry Regiments and Combat Command B, of the 14th Armored Division. The 222d used these forces to restore the situation. Heavy fighting cleared the towns and restored the Moder River line.

The last enemy attack of Operation *NORDWIND* came at 0200 on January 25th in the eastern foothills of the Vosges in the 103d Infantry Division's sector. Its reconnaissance troop ran into enemy soldiers between Bitschoffen and La Walck and determined that enemy units had already penetrated into Pfaffenhoffen. A heavy German attack soon developed against the 410th Infantry Regiment which was stopped at the high ground at Muhlhausen. Tank-supported attacks were driven off the next morning at Bischoltz. Although some German gains were made against American outposts, the main defense line was well supported by both division and corps artillery and held off the attackers. On the 26th, the village of Schillersdorf was cut off, captured and then recaptured on the 27th. The 36th Infantry Division on the east flank parried patrols but otherwise rode out the attacks unmolested. The Seventh Army had prevailed.

The German attacks in the Alsace had failed. American intelligence had not been surprised and Devers and his army commanders had troops, supplies, and a plan in place to meet the enemy's offensive. Even without extensive air support due to poor weather, the small amount of ground lost in the phased withdrawal behind the Moder River was easily recovered. The minor enemy gains on the Rhine at Gambesheim and south of Strasbourg were of minimal importance and soon erased. In short, the German offensives in Alsace were both costly to them and indecisive.

Erasing the Bulge

North of the Alsace fighting the Allied commanders were concerned with reducing the enemy's Ardennes salient, now called the "Bulge." From the beginning of *WACHT AM RHEIN* they had envisioned large-scale counterattacks. The decisions as to where and how the attacks would be launched, however, underscored their different perspectives. The theoretical solution was to attack the salient at its base. Patton planned to have the Third Army's right flank corps, the XII, attack further eastward toward Bitburg, Germany, along what he referred to as the "honeymoon trail." Bradley, however, as the commander responsible for the southern attack, wanted to cover the shortest distance to relieve Hodges' beleaguered First Army units. Overruling Patton, he designated Houffalize, midway between Bastogne and St. Vith, as a primary objective. Middleton's reinforced VIII Corps, the westernmost force, would drive on Houffalize; the middle force, Millikin's III Corps, would remain on Middleton's right flank heading for St. Vith; and Eddy's XII Corps would serve as the eastern hinge. Bradley's choice made the best use of the existing roads. Sending Millikin's III Corps along advantageous terrain corridors avoided the favorable defensive ground on the successive ridges east of Bastogne. Once linked with the First Army, the 12th Army Group's boundary would revert to its original northern line. Only then would Bradley send the First and Third Armies east into the Eifel toward Pruem and Bitburg in Germany. Bradley further solidified his plan by committing newly arriving reinforcements—the 11th Armored, 17th Airborne, and 87th Infantry Divisions—to the west of Bastogne for Middleton's VIII Corps.

Montgomery had eyed Houffalize earlier, viewing the approaches to the town from the northwest as excellent for a corps-sized attack. His own extended defensive line on the northern shoulder of the Bulge and the piecemeal entry of Collins' VII Corps into battle further west did not shake his original concept. Much like Bradley, he saw an interim solution as best. Concerned that American infantry losses in Gerow's V Corps had not been replaced, and with the same terrain and road net considerations that had jammed the German assault westward, Montgomery ruled out a direct attack to the south at the base of the Bulge.

Unwilling to weaken his western flank now that his reserve had been committed, Montgomery seemed more prone to let the VII Corps attack from its present positions northwest of St. Vith. Eisenhower raised the issue of committing the British XXX Corps. Having inactivated other units to rebuild the corps for use in his projected Rhineland offensive, Montgomery nevertheless agreed to move it across the Meuse to assume Collins' vacated front. This transfer would not be completely accomplished until January 2nd. XXX Corps would conduct limited supporting attacks. Although Hodges, as First Army commander, would select the precise counterattack axis, he knew Montgomery's repeated preference for the VII Corps to conduct the main effort and Bradley's



Snow camouflaged tanks lead the way for the infantry through heavy snow.

preference for a quick linkup at Houffalize. Hodges' decision was predictable. The VII Corps would constitute the First Army's main effort, aimed at Houffalize. Ridgway's XVIII Corps (Airborne) would cover the VII Corps' northeastern flank, and, like Millikin's III Corps, its advance would be pointed at St. Vith. The Germans would thus be attacked head on rather than from the flanks. Timing the counterstrokes also raised difficulties. The American generals wanted the First Army to attack immediately, claiming the Germans had reached their high-water mark. Montgomery demurred, citing intelligence predictions of an imminent offensive by the *II SS Panzer Corps*—an assault he welcomed as it fit his concept of weakening enemy armor further rather than conducting costly attacks. Contrary to Montgomery's tactics, Eisenhower preferred that the First Army attack immediately to prevent the Germans from withdrawing their *panzers* and shifting them southward.

Patton's renewed attacks in late December caused the Third Army to learn firsthand how difficult the First Army battles had been. In the Third Army sector the relief of Bastogne had not changed the intensity of combat. As Manteuffel received *panzer* reinforcements, he threw them into the Bastogne salient before it could be widened and extended northward toward the First Army. Patton's Third Army now encountered *panzers* and divisions in numbers comparable to those that had been pressing against the northern shoulder for the previous ten days. In the week after Bastogne's relief the number of German divisions facing the Third Army jumped from three to nine around Bastogne and from four to five in the III and XII Corps sector of the front.

The fighting during the nine mile American drive from Bastogne to Houffalize became a series of bitter attacks and counterattacks in worsening weather. Patton quickly added the 17th Airborne, the 87th and 35th Infantry, and the 11th and 6th Armored Divisions to his attacking line, which stretched twenty-five miles from the Ourthe River to the Clerf. III Corps continued its grim attacks northeastward against the forested ridges of the Wiltz Valley leading toward German escape routes east out of the salient. VIII Corps forces added some width to the Bastogne salient but gained no ground northward before New Year's Day. Both sides reinforced the sector with every available gun. In a nearly week-long artillery duel Patton's renewed attacks collided with Manteuffel's final efforts to eradicate the Bastogne bridgehead.

During the same week, German attacks continued along the First Army line near the Elsenborn Ridge and in the center of the XVIII Corps (Airborne) line before a general quiet descended upon the northern front. In many areas the fields, forests, and roads were now covered with waist-high snowdrifts, further impeding the movement of fighting men and resupply vehicles.

Casualties mounted, bringing on a manpower shortage in both camps. Although the Germans continued to commit fresh divisions until late December, the Americans, with only three uncommitted divisions in theater were forced to realign their entire front. Many units moved from one combat to another without rest or reinforcement. December's battles cost the Americans more than 41,000 casualties. With infantry replacements already critically short, antiaircraft and service units had to be stripped to provide riflemen for the line. African-American soldiers were offered the opportunity to fight within black platoons assigned to many white battalions, a major break from previous Army policy.

Despite the shortage of replacements, both Patton's Third Army and Hodges' First Army attacked as planned on January 3rd. Collins' VII Corps in the north advanced toward the high ground northwest of Houffalize, with two armored divisions in the lead. Meeting stiff opposition from the LXVI Corps, VII Corps infantry soon replaced the tanks as difficult terrain, icy roads, and a tenacious defense using mines, obstacles, antitank ambushes, and armored counterattacks took their toll. The XVIII Corps (Airborne) moved its right flank south to cover Collins' advance, and in the far west the British XXX Corps



A US soldier looks at the wreckage of St. Vith.

pushed eastward. Under intense pressure Hitler's forces pulled back to a new line, based on the Ourthe River and Houffalize, with the bulk of the *SS panzer* divisions withdrawing from the battlefield. The return of poor weather restricted Allied flyers to intermittent close support for only three days in the nearly two weeks that VII Corps units fought their way toward their juncture with the Third Army. South of the Bulge the Third Army intensified its attacks northward to meet the First Army. Still counting on Middleton's VIII Corps to break through, Patton sent Millikin's III Corps northeastward, hoping to enter the road net and follow the terrain corridors to link up with Ridgway's XVIII Corps (Airborne) attacking St. Vith. Despite having fewer than fifty-five tanks operational, the *I SS Panzer Corps* counterattacked the III Corps' 6th Armored Division in ferocious tank fights unseen since the fall campaign in Lorraine. While the III Corps' 90th Division infantrymen broke through to the heights overlooking the Wiltz Valley, the VIII Corps to the west struggled against a determined force fighting a textbook withdrawal. By January 15th Noville, the scene of the original northern point of the Bastogne perimeter, was retaken. Five miles from Houffalize, resistance disappeared. Ordered to escape, the remaining Germans now withdrew. On the sixteenth the Third Army's 11th Armored Division linked up with the First Army's 2d Armored Division at Houffalize.

The next day, 17 January, control of the First Army reverted to Bradley's 12th Army Group. Almost immediately Bradley began what he had referred to in planning as a "hurry-up" offensive, another full-blooded drive claiming the Rhine as its ultimate objective while erasing the Bulge en route. On the 23rd, Ridgway's XVIII Corps (Airborne), now the First Army's main effort and reinforced by the 7th Armored Division, took St. Vith. This action was the last act of the campaign for the First Army. Hodges' men, looking out across the Losheim Gap at the Schnee Eifel and hills beyond, now prepared for new battles.

In the Third Army sector Eddy's XII Corps leapt the Sure River on January 18th and pushed north, hoping to revive Patton's plan for a deep envelopment of the German escape routes back across the Belgian-Luxembourg-German borders. Intending to pinch the escape routes via the German tactical bridges on the Our River, the 5th Infantry Division crossed the Sauer at night. Its main body pushed north to clear the long Skyline Drive ridge, where the 28th Division had faced the first German assaults. By the campaign's official end on the 25th, the V, XVIII, VIII, III, and XII Corps had a total of nine divisions holding most of the old front, although the original line east of the Our River had yet to be restored.

The Germans had fought a tough withdrawal battle from the Bulge all through the month of January. They left behind large numbers of tanks, many of them abandoned due to lack of fuel. Many of the Germans surrendered when out of ammunition or cut off, but they were not yet a dispirited or beaten army. They were defending their homeland at their homeland's borders, and they were still professionally led. For the soldiers of the U.S. Army the battles in Alsace and the Ardennes, like the Meuse-Argonne for their fathers, had been a crucible. They had proven themselves worthy of the monumental task at hand.

Taking Stock

The combined offensives in the Ardennes and Alsace region cost the Germans approximately 100,000 casualties, 67,000 in the Battle of the Bulge and 23,000 in the Alsace. American losses in the Ardennes were somewhat higher, due both to the number of prisoners lost and the high percentage of non-battle casualties. These were 41,315 for the period December 16 to January 1 and 31,505 for the period of January 1 to January 25. Additional research into air casualties and later updated reports indicated that final casualties for the Ardennes alone were as high as 89,500. In terms of critical equipment, the Germans lost approximately 600 tanks of all types for both the Ardennes and Alsace. American losses were approximately 600 medium tanks, 200 light tanks, 100 tank destroyers, and 400 armored cars. These were almost irreplaceable losses for the Germans, whereas the flow of replacement American equipment quickly made up all the losses.

Hitler had rolled the dice in the Ardennes and in Alsace, hoping to score a major psychological victory over the Allies and buy time to firm up the defenses inside Germany. It is also possible that he hoped to replicate the example of Prussian King Frederick the Great in the Seven Years War, whose resolute defense of the heart of Prussia finally split apart the coalition opposing him. For a time, it seemed as if his forces, achieving tactical surprise, might go a long way towards making his gamble pay off. However, after some initial reverses, the Allied response was quick and decisive. Hitler failed in all of his hopes and the *Wehrmacht* paid the price. The German Army expended valuable reserves of men and equipment, the Allies rebounded stronger and more unified than ever, and Germany would soon face the final Allied offensive in the West.

Rhineland Campaign, Part II

January 25 – March 21, 1945

As his offensive in the Ardennes ground to a halt, Hitler looked southward for yet another chance of victory. Just before midnight on December 31, 1944 he launched Operation *NORDWIND*, sending the *First Army* south through Bitche and the Wissembourg Gap and the *Nineteenth Army* north out of the Colmar pocket against the 6th Army Group. The Allies contained this offensive handily by January 25th. As during the Ardennes offensive, much of the fighting took place in bitter winter weather and frostbite and trench foot were almost as dangerous as the foe. At the highest command level, *NORDWIND* demonstrated some of the tribulations faced by Eisenhower as the commander of a coalition force. As part of his response to the German offensives, Eisenhower ordered a limited withdrawal of 6th Army Group units from parts of Alsace including recently liberated Strasbourg. He was concerned that isolated units would be cut off and forced to surrender as had some regiments in the Battle of the Bulge. The withdrawal, however, would have exposed citizens of Strasbourg to potential German retribution. General Charles de Gaulle, head of the French Provisional Government, found the desertion of Strasbourg unacceptable and appealed directly to Roosevelt and Churchill. Eisenhower relented, bowing to political necessity over military efficiency. He left it to his ever-diplomatic 6th Army Group Commander, Lt. Gen. Jacob Devers, to soothe the ruffled feathers of his subordinate French commanders.

In December and January, in the Ardennes-Alsace Campaign, the Allies fought to contain and then destroy Hitler's final offensives in the West. Although there were times during the initial days of the "Bulge" when the Allied cause seemed in danger, Eisenhower believed the Germans had given the Allies a great opportunity by impulsively committing their reserves. Eisenhower wrote to the soldiers of the Allied Expeditionary Force that "by rushing from his fixed defenses the enemy has given us the chance to turn his great gamble into his worst defeat." However, heavy snowfalls and overcast skies crippled Allied mobility on the ground and in the air, rendering the fighting more difficult. So did the fanaticism of the surprisingly well-equipped German attackers. Ultimately victorious, the Allied soldiers had little to celebrate initially.

The completion of operations to contain and roll-back German gains in the Ardennes and Alsace freed Allied commanders to plan for renewed offensives. They reassessed the Rhineland campaign tasks decided upon at the Maastricht Conference before the Germans launched their attacks in December. They saw new opportunities. As Eisenhower predicted, German losses during their offensives now made it easier for the Allies to attack in more areas without constant worry about open flanks. German offensive capabilities were effectively neutered. German losses in men and equipment in Operation *WACHT AM RHEIN* and in the follow-on *NORDWIND* offensives were heavy, indeed irreplaceable. On the other hand, new American divisions continued to arrive in Europe. Despite an unexpected shortage of infantry-trained individual replacements, many units which had suffered losses were soon brought up to strength. By the end of January 1945, the Allies had seventy-one divisions available and anticipated getting an additional fourteen divisions by the spring. This would give them a total of sixty-one U.S., sixteen British Commonwealth, and eight French divisions. Allied commanders were eager to unleash this force against the retreating, greatly weakened, German units.



The effects of allied bombing on the German railway system.

Eisenhower sought to coordinate a nearly simultaneous attack all along the front by all three army groups. The Supreme Allied Commander directed the creation of a concerted plan of attack which was to be ready for launch by the end of January. He divided the upcoming campaign into three phases. The first phase was to complete the



Soldiers “drop pack” briefly on the way to the front lines.

destruction of the German forces west of the Rhine River in a continuation of the Rhineland campaign. Second, the Allies were to seize bridgeheads over the river to create a solid lodgment for an assault into north-central Germany. Lastly, they were to break out of the bridgeheads and push into the heart of Germany for the final annihilation of the Nazi regime.

Knowing that the area north of the Ruhr offered the shortest route into Germany and was probably the most heavily defended by the enemy, Eisenhower and his staff planned for the major effort to be in the north directly towards the Ruhr Valley. The more central Frankfurt-Kassel route offered less favorable terrain, but rather than leave German forces there unengaged, he ordered additional attacks along that route. This would take advantage of his larger force and ensure that the Germans could not concentrate against his main attack. In the south, additional supporting attacks would tie down more German divisions. The main attack would come from bridgeheads established from Wesel to Emmerich by the 21st Army Group. The supporting attacks would come from the 12th Army Group in the Mainz-Karlsruhe area and the 6th Army Group in Alsace and in the Saar-Palatinate. Eisenhower’s planners believed he could support a force of thirty-five divisions across the Rhine and that permanent bridging would be available to them in the spring, probably in May.

The Allies were determined to complete the clearing of the Rhineland up to the banks of the Rhine as quickly as possible. The 21st Army Group developed twin operations named VERITABLE and GRENADE. The 12th Army Group named their operation LUMBERJACK and the 6th Army Group named theirs UNDERTONE. These operations would finish the “old business” interrupted by the German attacks in December and January and fulfill the mission of destroying the bulk of the *Wehrmacht* west of the Rhine. Any offensive operations east of the Rhine would be challenging enough without letting substantial enemy forces retreat intact from west of that barrier.

The Colmar “Pocket” and Closing to the Rhine

Prior to the final Rhineland offensives ordered by SHAEF, Eisenhower intended to reduce the Colmar Pocket in the south of the Allied front, a sore spot which had irked him since the fall. This German salient in the French First Army area had survived due to French General de Lattre’s earlier shortages of troops and supplies. General Devers’ army group was also severely short of divisions and replacements. He had lost the use of his 442d Regimental Combat Team and the Airborne Task Force, as these were moved south towards Italy to cover his southern flank. He did manage to reinforce de Lattre with two American divisions, the 28th Infantry and the 101st Airborne. The 28th Division had twice been “wiped out” in the sense it had taken over 50 percent of its strength in casualties in the battles for the Huertgen Forest and the Ardennes. The 101st had taken heavy casualties in its heroic defense of Bastogne and needed time to absorb replacements. Both units needed rest, but Devers considered them essential for de Lattre to accomplish the mission of eliminating the Colmar Pocket. De Lattre’s army faced strong elements of *Army Group G*, now under the command of SS General Paul Hausser. These German forces were battered but held excellent defensive positions. Hitler informed his generals that Alsace and Lorraine were now part of Germany, having been annexed in 1940, and would be defended to the death just as would any other part of Germany.

The actual pocket at Colmar was approximately fifty miles wide and thirty deep, reaching from the Vosges Mountains to the Rhine. De Lattre had been pushing against the Germans since early December, but his weakened forces had made little headway. The French I Corps, commanded by Lt. Gen. Antoine Bethouart, attacked on January 20th toward Breisach on the Rhine with four divisions. In eleven days it made little progress. On the 23rd, the French II Corps under General Joseph de Goislard de Monsabert attacked with three divisions in a converging attack from the north. Assisting in the attack were four divisions of U.S. XXI Corps commanded by Maj. Gen. Frank W. Milburn. His forces included the U.S. 28th and 3d Infantry Divisions, and the U.S. 75th Infantry and the 12th Armored Divisions soon joined them. Milburn attacked in the center of the line between the two French corps. The 12th Armored Division moved south, linking up with I French Corps attacking north at Roufflach. By the first of February, the American infantry divisions were within three miles of Neuf Brisach. The French continued to split the pocket in the north and south of the sector. They were able to close it completely by February 9th, ending the last German bridgehead west of the Rhine in the south of the Allied front. Allied losses in the closure totaled over 18,000, with 8,000 of those casualties suffered by XXI Corps.



The German town of Breisach under heavy artillery bombardment.

The First French Army was avenging scores for several wars as it moved through Alsace, clearing the Rhineland northwards. Alsace had been one of Germany's prizes after the Franco-Prussian war. They lost it after World War I and retook it in 1940. While many of de Lattre's soldiers came from France's African colonies, others were newly joined from the Resistance and the officers were mainly French regulars. For all of them, the liberation of France was a point of honor, not a matter of politics or ideology. French and German Empires and Republics had clashed over these self-same fields for hundreds of years. Sons and grandsons now fought against their traditional enemies. To de Lattre and his soldiers, "to take part in the invasion of Germany was for our country a duty and a right."

The operations around Colmar were conspicuous for individual acts of heroism. One of these has resonated with the American public for decades. During a series of attacks near Holtzwihr, Germany (now France), on the afternoon of January 26th, 1st Lt. Audie L. Murphy, commanding Company B, 1st Battalion, 15th infantry, 3d Infantry Division, earned the Medal of Honor for conspicuous bravery above and beyond the call of duty. Attacked by German infantry and tanks, Murphy ordered his men to retreat to positions in the woods, remaining alone at his post. Engaging the Germans with rifle fire, he also directed artillery fire via his field radio. Under constant fire, Murphy mounted an abandoned, burning tank destroyer and began firing its .50-caliber machine gun at the advancing Germans. He stayed on the burning vehicle for an hour, killing or wounding over fifty Germans. During the fight he sustained a leg wound but stopped his firing only when he ran out of ammunition. He insisted on remaining with his men while his wounds were treated and led them in further attacks. Audie Murphy became, in the minds of many Americans, representative of all of the heroic young soldiers of the Second World War.

Following the clearing of the Colmar Pocket, General Devers ordered his two armies to prepare for Operation UNDERTONE to close to the Rhine. Seventh Army would make its main effort towards Kaiserslautern to breach the Siegfried Line and seize a bridgehead on the Rhine in the Worms area. The French First Army was to attack east, close on the Rhine, and clear German forces along the west bank of the river. The French were authorized to launch raids across the Rhine in the Brisach sector but barred from crossing the river in force. Devers knew that he could not sustain any major bridgehead over the Rhine at this time.

Lt. Gen. Alexander Patch, Seventh Army Commander, planned to attack to the northeast towards Worms in the Saar basin. He would capture terrain and destroy enemy forces in front of the Rhine. His soldiers were primed to attack after being on the defensive in December and January, despite his army's shortage of 20,000 infantrymen. To assist him, SHAEF shifted five infantry divisions to the Seventh Army along with an additional 12,000 re-trained support soldiers that had been added to the infantry replacement pool.

While the Germans retreated from their collapsing positions on the west bank of the Rhine, Patch cobbled together a series of limited objective attacks to straighten his line in preparation for the UNDERTONE attacks. These attacks were spearheaded by the 36th Infantry Division with the 70th, 63d, and 44th Infantry Divisions following, all part of Maj. Gen. Wade Haislip's XV Corps. The 100th Infantry Division would provide diversionary raids to cover the attacks as XV Corps moved to straighten its line.



Pre-assault platoon briefing. Note the M7 rifle grenade launchers fixed for the mission.

The open, rolling terrain encountered after leaving the Vosges Mountains offered Patch and Haislip challenges when coordinating the attacks of the new divisions. It offered few terrain features to serve as visible “control” points to preserve boundaries and coordinate attacks. The German forces, although depleted, were still formidable. American soldiers knew that this was no training exercise. The Germans would fight harder as the Allies moved closer to the defenses of the Siegfried Line and Germany. The Seventh Army attack was a prelude to the upcoming “big show” across the Rhine.

The limited attacks would position Maj. Gen. Wade Haislip’s XV Corps for its assault through the Siegfried Line into the Sarre Basin. This was one of the key economic areas of southern Germany and a critical objective for 6th Army Group. Attacking on February 15th, the corps’ attacks were staggered to assure the new divisions had support from newly cleared terrain to their flanks. Night attacks using “artificial moonlight”, created by searchlights beamed against clouds, permitted battalions to move against heavily fortified areas without risking assaults in broad daylight. By the 18th, the 63d Division had crossed the Franco-German border. The 70th took the outer heights of the fortress city of Saarbruecken, later to be a major Seventh Army objective. Its three regiments attacked Forbach on line, fighting over the 1870 Franco-Prussian War battle grounds toward the Spicheren Heights.

Attacks in the Saar-Palatinate

Phase I of Eisenhower’s campaign unfolded in February to push Allied troops to the Rhine in his north and center. The Seventh Army and the right flank of Third Army were still edging towards the Saar- Palatinate. This region was formed by the triangle created by the Rhine on the east, the Moselle on the northwest, and the Lauter-Sarre River on the south and west. Within this “island,” four major terrain features dominated: the Rhine Valley, the Hardt Mountains, the Saarbruecken-Kaiserslautern-Worms Corridor, and the Hunsruck Corridor. All of these terrain features posed major planning considerations for Allied commanders who sought to finish-off the enemy in their sectors. The Hardt, or Low Vosges, Mountains were mostly forested, with wet and muddy terrain and steep east-west movement corridors. The Rhine Valley was flat bottomed, crossed by streams and woods, blocking vehicles or men trying to move north. Movement north to south was limited and over-watched by the Hardt Mountains and shouldered by the Saarbruecken-Kaiserslautern-Worms Corridor. The sixty miles of the Hunsruck Corridor consisted of rugged terrain between the Sarre and the Rhine.

The Saar-Palatinate and the basin of the Sarre River was a great economic asset in early 1945 and was expected to be heavily defended. It produced ten percent of Germany’s coal and iron. It was on the route towards Ludwigshafen, which produced over 40 percent of the Reich’s chemicals. The numerous towns and industrial plants in the basin, including the important towns of Speyer and Worms, were manufacturing centers as well as jewels in a cultural-historical area.

Bradley wanted a breakthrough straight to the Rhine by the First and Third Armies, bypassing the Roer Dams that stymied his December attempts. He wanted Eisenhower to beef up the 6th Army Group to his south rather than bleed off more forces to Montgomery or Simpson in the north. He also wanted to ensure a methodical closure to the west banks of the Rhine all along the front prior to attempting a crossing. His army group was chasing a beaten enemy, and he wanted to give them no respite as they fell back into their West Wall positions. Difficult terrain kept his sector from being chosen for the main effort crossing the Rhine.

Third Army determined its potential crossing points along the Rhine and moved to clear a path to the river. By February, Patton's Third Army had recovered from the Ardennes Campaign. It was stronger in divisions than at any previous time in the war. It now mustered four corps and thirteen divisions. As part of Bradley's "Hurry Up" campaign, Patton was to clear the Eifel region and move towards the designated Rhine crossing sites. Patton's realignment was considerable, as he had been aiming directly into the Saar when his offensive had been preempted by the German attack in the Ardennes. His right flank was now north of those earlier objectives with the Moselle to his south. Patton was loath to shift corps from his command because he regarded continuity important for morale purposes, but the new plans demanded significant army boundary shifts and divisions often shifted with those boundaries. The 95th Infantry Division would go north to Simpson's Ninth Army and the 17th Airborne Division would go back to the First Allied Airborne Army in SHAEF Reserve. Patton fought to retain the Saar Moselle Triangle within his sector for his upcoming campaign, as it fit with his long-term plans. Even though his request that the 9th or 10th Armored Divisions be assigned to him was turned down, he still had a large force under his command.



American M1917A1 machinegun nest around Saarburg, Germany.

Bradley's First Army attacked on January 26th into the Losheim Gap. Maj. Gen. Matthew Ridgway's XVIII Corps (Airborne) attacked east with the 1st Infantry and 82d Airborne Divisions. This offensive was followed the next day by Patton's Third Army. Patton used the veteran VIII Corps with three divisions attacking abreast against the Schnee Eifel. This was where the German Ardennes assault had hit in December. Attacking in snow that in places was waist deep, the divisions regained familiar terrain against diminishing resistance as the Germans slowly fell back to the Rhine.

The heavy weather and snow slowed movement more than enemy opposition, although the river crossings of the Our River were heavily opposed in places. Little new ground was gained, rather the line was restored to positions held in December. As he had feared, Bradley was ordered to give up five divisions to Lt. Gen. Simpson's Ninth Army in Montgomery's 21st Army Group for Operation GRENADE. Simpson was to clear the Rhineland to the north. First Army was forced to curtail most of its operations as it moved slowly to complete the seizure of the Roer Dams. Patton continued offensive operations by seizing upon a loophole in his instructions calling for "preventing enemy divisions from reinforcing attacks against the northern operations". Patton interpreted this broadly to mean he could push as hard as he wanted against the divisions opposite him.

Patton began his attacks using the experienced 5th Infantry Division to cross the Sauer River. It was supported by the 80th Infantry Division and a combat team of the 76th Infantry Division further upstream. The attacks achieved some success despite flooded conditions. Troops who made it across the river were resupplied at night to avoid enemy artillery fire in daylight. Due to an initial lack of bridging, airdrops of supply were necessary until bridging could be brought up and anchored in the flooded gorge. The 10th Armored Division was re-attached to the Third Army as it moved on the Saar-Moselle triangle and towards the city of Bitburg.

Troy Middleton's VIII Corps had to clear the Vianden "Bulge", a scenic tourist area in peacetime but a tactical nightmare of twisting roads, enfilading positions and impossible gradients. The hills were challenging for tracked vehicles, trucks with trailers or towed artillery pieces, and heavily laden soldiers. German infantry had successfully crossed the shallow Our River on December 16th. Now with melting snow and their battle lost, the Our became American again. The east banks of the river were patrolled by Americans, and the bridges destroyed by the retreating Germans were rebuilt with steel girders for American vehicles. Narrow lanes constrained by nature slowed the American build-up and protected the retreating enemy to some degree. Steep banks and valleys made it difficult to bomb targets effectively, and adjusting artillery was a challenge.

While the Vianden Bulge was cleared, the 94th Infantry Division conducted a series of limited objective attacks. These were parried attack for attack by the *11th Panzer Division*, still acting as the front's "fireman". With additional armor support from the 8th and 10th Armored Divisions, the 94th broke through the Siegfried Line positions, racing for the city of Trier. The "Tigers" of the 10th moved into Trier after seizing a bridge over the Moselle on the first of March. Patton then moved his divisions up to begin his final drive toward the Rhine.

VERITABLE and GRENADE

While attacks toward the Rhine took place in the middle and southern portion of the Allied front, the 21st Army Group launched attacks of its own in the north. In Operation VERITABLE, the Canadian First Army was to attack with eight British and Canadian divisions from the Nijmegen salient along the Rhine. Dempsey's Second Army was to simultaneously exert pressure in its sector. To the south of the Canadian First Army, Lt. Gen. Simpson's U.S. Ninth Army was to attack to its northeast and link up in Operation GRENADE. Ninth Army would form the southern arm of a pincer movement to cut off German forces west of the Rhine.



Engineers construct a Bailey bridge while troops cross on a footbridge already established.

Simpson's Ninth Army had been reinforced by units from the 12th Army Group and planned to use them both for Operation GRENADE and for post Rhine crossing offensives. The Ninth Army had remained on the defensive during the Ardennes offensive, prepared to meet the Germans if they reached the deep rear of the Allied northern flank. This was an important but unsung mission. The Ninth Army had suffered over ten thousand casualties in the drive to clear the Roer River sector before the Battle of the Bulge. GRENADE would finish that assault, and now Simpson had double his previous strength. His forces were to seize Cologne and turn north to clear the west bank of the Rhine. They would also clear designated crossing sites for the joint crossing of the Rhine by British and American troops.

Ninth Army's original forty-mile front was held by two divisions throughout the Ardennes campaign. Frontages narrowed for its attack and Simpson was given additional forces. With a boundary shift on February 5th Ninth Army assumed eighteen miles of ground from the British Second Army. Simpson planned to attack on a narrow frontage with three corps, the recently added XVI and the previously assigned XIX and XIII. XXIX Tactical Air Command commanded by Brig Gen Richard E Nugent paired with him as his Army Air Forces partner. More than 303,000 men now comprised the Ninth Army. In addition, the First Army's VII Corps was to assist the launch of GRENADE by a supporting attack to its south.

GRENADE was to begin with a massive barrage from 130 artillery battalions. In addition, Simpson would derive additional fire support from his organic tanks and tank destroyers. This massive fire support would not run short of ammunition. Due to improved rail and truck logistics from Antwerp and the Channel ports now operating, ammunition in excess of 40,000 long tons filled Ninth Army's supply dumps during the first five days of the operation. Simpson had advantages in number of forces and amount of supply that Bradley, Hodges, and Patton had not had during the late summer of 1944. He was, however, fighting the Germans on their home ground. The upcoming campaign was to be no walk-over.

GRENADE aimed laterally across the Cologne plain to cross the Roer and then the Erft Rivers. Two large forests were also obstacles. The Hambach Forest straddled the sector in the first third of the attack. The Heinsberg Forrest was shared with the British Second Army to the northwest. Ninth Army's attack sector was nevertheless generally open, with rolling ground, streams, roadways and several good-sized towns. The attacks required careful synchronization as veteran tank-infantry teams, using artillery to soften defended objectives prior to street by street clearance, moved into the towns. With artillery and air support plentiful, Ninth Army could reduce heavy opposition. Simpson's plan was flexible, beginning with a night attack to achieve a measure of surprise. The success of GRENADE was subject to First Army's success in seizing the Roer dams. If the Germans suddenly opened the dams, the resulting flood waters would seriously affect Ninth Army's operations.

While Ninth Army received its reinforcements, Lt. Gen. Henry Crerar's First Canadian Army initiated Operation VERITABLE. The Canadians jumped off on February 8th from positions originally seized by the 82d Airborne Division during Operation MARKET-GARDEN in September. Beginning on 10 February, British and Canadian troops cleared the Reichswald Forest and punched through several defensive lines. They endured flooded conditions and some of the toughest fighting in northwest Europe at Goch, Cleve, and Emmerich. The southern half of the pincer operation, Ninth Army's GRENADE, was scheduled to attack the next day.

There was a problem, however. GRENADE was downstream from the Roer Dams at Schmidt. Bradley's earlier "Hurry Up" offensive had initially bypassed these and the RAF bombing of the dams in December had failed to destroy them. These failures now affected GRENADE. The Germans destroyed the sluice gate control valves and caused a constant flow of water from the dams. This rendered the operational area of the Ninth Army and even parts of the British Second Army area virtually impassable for vehicles. The start of GRENADE was delayed from February 9th to the 23rd, and then launched while the area was still in flood conditions with many roads and fields under water. General Simpson accepted degraded mobility, not wishing to wait for a drying out period of several more weeks.

Finally attacking on February 23rd, Simpson's 2,000 guns fired forty-five minutes of preparation fires as six divisions crossed the Roer on a seventeen-mile wide front between Linnich and Dueren. They were supported on their southern flank by First Army's VII Corps, which would clear the Hambach Forest to the Erft River. XIII Corps was to clear an unopposed passage for XVI Corps to cross, envelop Muenchen-Gladbach from the east and move towards the Rhine River. Simpson's left two corps would constitute the Army's main effort, rolling up the Siegfried Line positions and clearing the area between Roermond and Meunchen-Gladbach from the west and south. With three corps on line, Ninth Army would then wheel northeastwards. Simpson instructed his corps that any breakthrough would be seized upon and that all opportunities would be used, regardless of exposed flanks or friendly boundaries. He intended to tear deeply into the German defenses and not simply crumble them piece by piece.

Crossing the still-flooded Roer on the 23rd, the Ninth Army managed to achieve a measure of surprise. By the end of the day, some twenty-eight U.S. battalions had firmly established a bridgehead. Simpson unleashed his armored forces on February 27th, pushing east towards Dusseldorf and north towards Geldern and Wesel. His units linked up with the Canadians at Geldern on March 3rd and by the 5th had closed on the Rhine. The fifty-mile drive to the river killed or captured some 36,000 Germans at the cost of fewer than 7,300 U.S. casualties. Crerar's Canadian and Simpson's Ninth Armies jointly attacked the last German bastion west of the Rhine in the sector around Wesel on the 10th.

The Yalta Conference



The Yalta Conference, sometimes called the Crimea Conference and code-named ARGONAUT, was the second meeting of the leaders of the “Big Three” of World War Two: Premier Joseph Stalin for the Soviet Union, President Franklin Roosevelt for the United States, and Prime Minister Winston Churchill for the British Empire. The conference took place in Yalta, in southern Russia, from February 4-11, 1945. The Allied victories of 1944 and early 1945 pointed to the imminent collapse of Nazi Germany, and this meant that a high-level summit of the key leaders was necessary to shape the post-war world order.

Each leader had his own agenda for the conference. President Roosevelt hoped both to ensure Soviet help against Japan after Germany’s surrender and to secure Stalin’s support for a new world organization that would help keep peace in the post-war world. Stalin wanted to ensure that Germany was never again a threat to Russia by dividing Germany into zones of occupation and establishing a “cordon sanitaire” of communist-dominated countries in Eastern Europe. Churchill, aware that Britain was increasingly viewed as the junior partner in Allied councils, wanted to limit Soviet influence in Europe to the extent he could while building stronger ties with the Americans. The leader of the provisional Free French government, General Charles de Gaulle, was not invited. Perhaps as a result, he was highly critical of the Allied decisions reached at Yalta.

The key decisions of the conference included the division of Germany into occupation zones; the early entry of the Soviet Union into the war with Japan with promised territorial accessions in the Sakhalin and Kurile Islands; the basis for German war reparations; agreement on the need for a conference that would establish a world organization (that would become the United Nations); and the status and borders of Eastern Europe. Roosevelt and Churchill managed to extract vague promises from Stalin about holding free democratic elections in countries occupied by the Red Army, but there was no way to hold him to these promises. Eastern Europe quickly became dominated by pro-Soviet puppet states. Later recriminations that Roosevelt had “sold out” Eastern Europe at Yalta, however, do not hold water. Political dominance, east and west, depended more on the final dispositions of the various Allied armies in May 1945 than on treaties.

Perhaps the most consequential decisions made at Yalta involved the establishment of occupation zones in Germany and Berlin, zones that ultimately divided Germany into two countries and that would serve as the focal point for East-West confrontations for over forty years. Germany was divided into three major zones of occupation held by the Americans, British, and Russians, with a provision that the French could have an occupation sector that would be taken out of the British and American zones. Stalin, reluctantly, also agreed to French membership in the post-war Allied Control Council for Germany and in the government of occupied Berlin. Berlin was divided into four occupation sectors and placed under Allied control that would not be formally ended until after the fall of the Berlin Wall in 1989.

The Bridge at Remagen

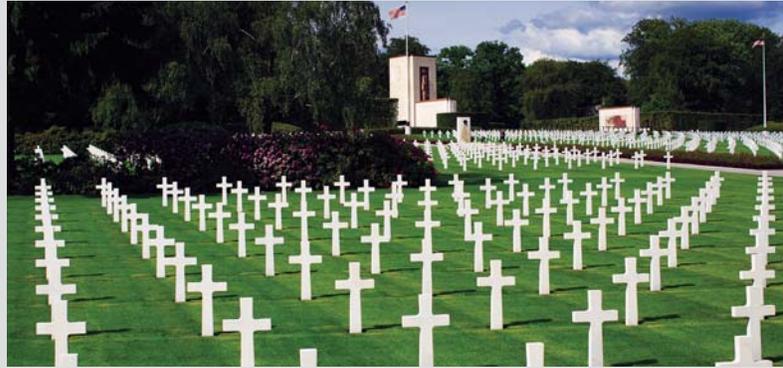
During late February, the Supreme Allied Commander toured the American army command posts while expressing an out-loud wish for the capture of a Rhine bridge. This sparked a rush of task forces racing for the bridges remaining on the Rhine. Few really expected success, given the methodical German defense of important targets and their routine destruction of key bridges. Nevertheless, armor and infantry raced forward on the off-chance of achieving a major coup. Patton had foreseen the need to move up bridging assets and had several plans for “jumping” the Rhine to beat Montgomery or anyone else over that major obstacle. Ninth Army proposed an assault crossing into the southern Ruhr Valley as it arrived at the bank of the Rhine, hoping to forestall Montgomery’s plan for it to be part of his Army Group’s crossing effort after the completion of GRENADA and VERITABLE. Denied that, Simpson’s army moved up the Rhine looking for possible bridge sites while it cleared the banks of hold-out German troops.

A unit of First Army, the 9th Armored Division, found a bridge over the Rhine that the Germans had failed to destroy. To their surprise, advance division elements found the Ludendorff bridge at Remagen intact. They moved quickly to seize it despite continuing attempts by the Germans to blow it up. German charges had been placed even as an American assault team was primed to go across. The 27th Armored Infantry Regiment’s Company A watched the charges blow, the bridge shudder and settle slightly, and then nothing. 1Lt Karl Timmerman, a German-born American, quickly led his company across the bridge despite the expectation of its imminent collapse. Digging in on the other side, they held it against all counter-attacks. With a bridge in hand, First Army’s III Corps rushed 8,000 men across by the next day. Eisenhower, surprised by the turn of events, was hesitant at first to rush troops into this bridgehead. He limited the III Corps movement of troops into the salient while maintaining that the northern thrust into the Ruhr was the more logical attack and should continue as the main effort. He conceded that the fortuitous bridgehead might pull German reinforcements from the northern thrust, but hesitated to give First Army a free rein.



A column of infantrymen wind their way into Germany.

Luxembourg American Cemetery



In this cemetery are buried 5,073 American war dead, many of whom lost their lives in the Battle of the Bulge and in the advance to the Rhine River. General George S. Patton, Jr., is buried here along with two Medal of Honor recipients, one woman, and twenty-two sets of brothers buried side by side. Near the entrance stands the white stone memorial chapel, embellished with sculptures in granite and bronze, a stained-glass window with American unit insignia, and a mosaic ceiling. Flanking the chapel are two memorial pylons with the names of 371 war dead whose remains were never recovered or identified. Battle maps of various granites are also inlaid upon the pylons, recalling the achievements of the American armed forces in this region.

The unhappy Hodges found himself with an unexpected salient slowly creeping outward from the lone bridge in a disorganized fashion. Unsatisfied with the degree of control exerted over his attacking forces, Hodges relieved the III Corps commander, Maj. Gen. John Milliken, and replaced him with the more aggressive Maj. Gen. James A. Van Fleet. Hodges moved his favored corps, the VII, to expand the northern flank of the Army salient across the Rhine. After ten days the Ludendorff bridge collapsed from damage and strain, but by that time a pontoon bridge had picked up the traffic flow. Connectivity with the far shore was never lost.

Bradley and Devers chafed at Eisenhower's hesitancy to exploit the capture of the Remagen Bridge, but not Montgomery. He believed that careful preparation for the thrust into Germany would ensure a less costly outcome than a hasty attack, no matter how fortuitous. Perhaps the Americans could afford an opportunistic approach, but Montgomery knew that neither Britain nor Canada had resources or troops to gamble at this stage of the war. Time was on the Allied side as the Russians daily ground down the German army in the east. Their advance preoccupied the Germans even more than that of the Allies. Once across the Rhine, Montgomery intended to have enough supplies staged forward to continue to Berlin if permitted. However, the northern approach was heavily defended by SS troops with armor who would doubtless attempt to block his path to the Ruhr. He faced a different scale of defense than in the 6th or 12th Army Group sectors.



Remagen Bridge prior to its collapse.

Seventh Army continued to stage its forces south of Third Army, its own conquest of the Saar-Palatinate unfinished. Patch was unconcerned about the gap between them as the Germans were attempting to escape and posed no threat to his northern flank. The last line of departure for his army's attack was the Saar River. The Germans staged eleven divisions behind the river and one in front of it to slow the American attack. Operation UNDERTONE, the Seventh Army plan, tasked eleven infantry and three armored divisions to break the German line, cross the Saar, and then move on to the Rhine. The 6th Army Group would coordinate with Third Army's attacks to its north as part of this plan. Two additional armored divisions were added to Patch's force before the kick-off of the attack.



Ramagen bridge after its collapse.

Pfc. Frederick C. Murphy, Medical Det., 259th Infantry Regt., 2d Infantry Div.

Frederick C. Murphy was born in Boston, Massachusetts on July 27, 1918 and graduated from the Thayer Academy in Braintree in 1939. After the Japanese attacked Pearl Harbor on December 7, 1941, he attempted to enlist in the U.S. Army but was classified as 4-F for medical reasons. After corrective back surgery he was allowed to enlist in November 1943.

Murphy was assigned to the 65th Infantry Division, wherein he was further assigned to the Medical Detachment of the 259th Infantry Regiment. As an aid man, Murphy had the dangerous responsibility of accompanying infantrymen into combat and providing immediate medical assistance to the wounded. These were often in the most dangerous places on the battlefield.

On March 18, 1945 Murphy's unit was assaulting the Siegfried Line near Saarlautern, Germany. The advancing troops found themselves in an anti-personnel minefield amidst intense machinegun, mortar and artillery fire. Although wounded, Murphy continued to medically aid and evacuate soldiers, saving many. He lost a foot to an anti-personnel mine but persevered in crawling through enemy fire to assist others. Another mine exploded and killed him. Murphy was awarded the Medal of Honor for his courage, dedication and self-sacrifice above and beyond the call of duty. He was survived by his wife, and by a daughter born two months after his death.

Pfc. Frederick C. Murphy is buried in the Lorraine American Cemetery, Plot F, Row 11, Grave 19



Seventh Army's three corps would attack abreast, with the First French Army supporting the attack in the south. XII Tactical Air Command was in support. Heavy bombers would interdict rail lines into the area prior to the attack and tactical fighter bombers would attack communications lines prior to the offensive. Brig. Gen. Glenn Barcus, the new tactical air command commanding general, was keen to participate in the operation.

UNDERTONE began on schedule on March 15th, advancing along the axis Rimling-Zweibruecken-Homburg-Kaiserslautern. An intermediate objective, the fortress town of Bitche, was quickly captured. Seventh Army attacked through open fields, patches of woods, and low ridges. Leaving France and entering Germany, tank-infantry teams of the 63d Infantry Division dealt with pillboxes and fortifications at the border and crossed several rivers to cut off Saarbruecken.

Third Army attacked into the Saar-Moselle Triangle perpendicularly towards the Seventh Army. The two armies coordinated their actions carefully. Patch's XV Corps broke through the Siegfried Line by March 20th. This led to the collapse of the remaining enemy forces west of the Rhine. By March 22nd, the 3d and 45th Infantry Divisions were reconnoitering possible crossing sites over the Rhine. Boats were staged and plans made for crossing the river.

The French continued their attacks to the east as the Rhine grew closer. The northern-most unit of the French First Army was the 3d Algerian Division, which reported to VI Corps. The Algerians were told to hug the northern boundary of the corps to get as close as possible to the Pforzheim Gap. This ran between the Odenwald and the Black Forest on the opposite side of the Rhine. The division commander, General Augustin Guillame, obliged. His colonial troops moved alongside Brooks' VI Corps towards their proposed crossing points, hoping to launch a surprise assault over the Rhine. The rest of French First Army cleared the Alsace region and completed the liberation of France.

The Rhineland campaign, both before and after the dramatic German counterattack in the Ardennes, was a brutal struggle against renewed German defensive strength and the elements. The heady days following the brilliant success of the Normandy landings and the race across France, when it looked as if the war in Europe could be over by Christmas, were over. Colliding with a newly reinforced and resupplied German army with its back to its homeland when their own supplies were exhausted, the Allies faltered in their attacks. The weather turned miserable with cold rain and snow leading to mud, soaring medical problems, and unreliable air cover. The war in the Rhineland was not the dramatic sweep of armored columns, so beloved of the press. It was now more an infantryman's war, with the slow misery of a foot-by-foot struggle against a determined and skilled enemy. In mid-December Eisenhower summed it up in a letter to Ernie Pyle, the well-know war correspondent. He stated that it was the foot soldier who demonstrated the "real heroism—which is the uncomplaining acceptances of unendurable conditions." At Aachen, at Metz, in the misery of the Huertgen Forest, in the Vosges Mountains, along the length of the Siegfried Line and in the push to the Rhine River, Allied infantrymen had persevered.

By the end of March, the Allies had overcome the weather and the enemy and were poised along the Rhine River. In one place they were over it. They were prepared to complete the defeat of Germany. Montgomery's 21st Army Group in the north was well-positioned and well supplied for the main attack into the Ruhr. Montgomery was now in the midst of planning how best to use all of his resources for a massive, methodical, and overwhelming attack across the Rhine and deep into Germany. To his south, Bradley's 12th Army Group had a bridgehead over the Rhine in the First Army area and Patton's Third was poised to cross that river and drive deep into southern Germany. Devers' 6th Army Group had destroyed the German forces facing them west of the Rhine as well. The French First Army and the U.S. Seventh Army were preparing to attack over the Rhine, engage as many enemy forces as possible, and help ensure the Allied victory. The stage was set for the final offensive in Europe.

Central European Campaign March 21 to May 22, 1945

As the Allies closed on the Rhine, General Eisenhower re-examined his strategy and outlined it in SCAF Directive 180. He divided the remaining operations of the European campaign into three phases: the destruction of all remaining enemy forces west of the Rhine, the crossing of the Rhine by all three army groups in accordance with his broad-front strategy, and the final destruction of the *Wehrmacht* and Germany's war-making potential including the seizure of the industrial Ruhr Valley. As the last major obstacle to the German heartland, the Rhine River mesmerized the American commanders, as if reaching it, and then crossing it, signaled the end of the war. This presumption was common. Field Marshal Montgomery from the first focused on crossing the river, then immediately taking the Ruhr, and without a pause going on to Berlin. To him, the Rhine would be the start line, or in American military parlance, the line of departure, for the final offensive. The development of operations in all the army groups reflected this general viewpoint.

Eisenhower received his last operational reserves from the United States in early 1945, signaling the imminent end of the campaign. The last of sixty-eight divisions arrived in the European and Mediterranean Theaters in March 1945 with sixty-one of them going to northern Europe. His forces were now as strong as they were going to be for his final push to end the war. Some members of his staff were already beginning their planning for post-hostilities in German under the ECLIPSE plan. Others, both in Europe and in Washington, were laying plans for the redeployment of a number of the European divisions back to the United States and then to the Pacific.



A German soldier surrenders to an American.

The Rhine, besides being Germany's most storied river, was also a major bulwark of her defense. Once the Allies had breached the West Wall defenses along the border, German resistance had toughened. Enemy units all along the front had conducted numerous local counterattacks. In addition, two major counteroffensives, linked in time and intent, had been launched in December and early January to wrest the initiative away from the Allies. However, the destruction of many German units in these offensives left them with few mobile reserves and no new divisions. The *Wehrmacht* faced other problems. While German industries continued to produce weapons for the soldiers, the Allied air offensives had destroyed a large part of German synthetic oil production and reduced oil and fuel reserves to a trickle. This severely crippled the transport system and inhibited the smooth movement of motorized reserves to meet Allied attacks. This plunged the *Wehrmacht* and all elements of its military and economic support structure into crisis. While the military continued to operate even under these reduced circumstances, the civilian population was near starvation level.

The 810-mile-long Rhine river was the natural terrain feature best adaptable for Germany's final defense. As such, it was carefully studied by planners from each of the Allied army groups for many months. Staff officers held conferences at SHAEF with geographers, intelligence analysts, and weather experts to predict its moods, conditions, and flooding history. The U.S. Navy brought up special units with landing craft on large trucks to prepare for the assault. Heavy artillery, specialized bridging for rail road links, and additional pontoons for multiple bridges were added to army level bridging units. The Rhine crossing was planned like a separate amphibious invasion almost on the scale of the Normandy landings.



A treadway pontoon bridge is used to cross the formidable Rhine River.

Since most of the prime German economic and military targets were in the north, Field Marshall Montgomery's 21st Army Group was still to be the main effort. He was given priority of planning for use of the Allied Airborne Army to assist in the Rhine assault. After the crossing, the 21st Army Group would then push to the north of the Ruhr to outflank that area. Bradley's 12th Army Group to his south would assist Montgomery's attack by encircling the region from the south and together they would catch the defenders in a huge pocket. Devers' 6th Army Group on the Allied right flank would also cross the Rhine, guard the right flank of Patton's Third Army as it pushed past Darmstadt and Frankfurt, then reorient to the south and clear Bavaria. In short, Eisenhower intended to continue his broad-front attack on Germany giving each of the army groups a share of the crossings and the battle for Central Germany.

After the elimination of the last remnants of the forces used in the German offensive in the Ardennes, Eisenhower's strategy for Phase I had been achieved. The great bulk of the *Wehrmacht's* forces in the west had been brought to battle and their wounded remnants had withdrawn beyond the Rhine. Apart from the single rail span captured at Remagen, no bridges remained intact over that river. In late March, the 291st Combat Engineer Battalion rapidly added a pontoon bridge next to the damaged Ludendorff rail bridge to take some of the pressure off that already weakened structure. While it was being repaired, the rail bridge collapsed leaving the floating pontoon bridge the only remaining link to the American forces across the river.



Engineers work hard to quickly build bridges for the allied armies to cross the Rhine.

Eisenhower and Bradley directed that Lt. Gen. Hodges' First Army on the left flank of the 12th Army Group secure its bridgehead at Remagen and launch a thrust towards Frankfurt. In addition, it was to prepare to launch some ten divisions north towards the Ruhr to exploit the planned envelopment there. Eisenhower was already planning to make the battle for the Ruhr an entirely American fight. He had already written to his army group commanders that if a second army was to be employed north of the Ruhr, that he would shift army group boundaries and reattach the Ninth Army to the 12th Army Group. This would make the coordination and logistics of the southern and northern wings of the planned double envelopment of the Ruhr easier with one army group in command. But for the moment, Ninth Army was to remain part of Montgomery's 21st Army Group.

As the plans for the crossing of the Rhine finalized, the 6th Army Group moved to close on the Rhine along its entire front. It was planned that the group would establish crossing sites in the Mainz-Mannheim-Worms area. The 12th Army Group would assist 6th Army Group's operations to clear the west bank and prepare for its crossings. The Third Army on the 12th Army Groups southern flank would attack all along its unit boundaries with Seventh Army to clear out the German forces and protect Patch's and the 6th Army Group's flank.

Montgomery's Directive M559, dated March 9, 1945 and entitled "Orders for the Battle of the Rhine", outlined his plan for both the British Second Army and American Ninth Army for their river crossings and the development of the bridgehead over the Rhine. Unlike some proposed small crossings in the Seventh Army area and the unexpected crossing of First Army elements at Remagen, Montgomery planned for a massive and deliberate crossing. His plan would initiate a single, unending, offensive to end the war by a massive thrust in the north, both to seize the major economic and political heart of Germany, and



Troops and equipment cross the Rhine en masse.

to threaten its capital. Montgomery relied heavily on the 12th Army Group to support his southern flank and assist in the isolation of the Ruhr. His plan also relied upon the continued successful advance of the Red Army from the east. He knew that the Germans in their last-ditch defense of Berlin would not dare release forces to assist in the west. Montgomery's plans were for a massive attack, not just to cross the river and establish a bridgehead, but with enough forces and supplies to launch the final offensive that would end the war.

Allied Intelligence identified the far shore in the 21st Army Group attack sector to be defended by three divisions of the *II Parachute Corps* and three divisions of the *LXXXVI Corps* with the *XXXXVII Panzer Corps* in reserve. After the month-long Rhineland offensive, the Germans had adequate preparation time for their main defensive positions in the west. Monty's armies directly threatened Berlin and the northern flank of the Ruhr and the Germans knew they had to be stopped. The German *First Army* intended to oppose a crossing all along its twenty-five mile front, with an eight mile-deep defense. Its three corps mustered nine divisions on paper. A dense flak and artillery web covered the entire Ruhr. The flak batteries, which for four years had defended against Allied bombers, would now be turned into close ground support weapons.

Montgomery's intelligence officers also noted that the Red Army was beginning its offensive from Kustrin to Frankfurt on the Oder. This meant that the Germans would not easily be able to raise another wave of *Volksgranadier* battalions to meet his offensive as they had done the previous August. With the Allied logistical system now functioning smoothly, in contrast to the severe supply shortages faced by the Germans, the odds were excellent for a successful crossing and exploitation. The Allies also planned for intensive fire support and the use of airborne forces to ensure success and hold down Allied casualties. Central to the 21st Army Group plan was the rapid crossing of as much armor into the bridgehead as possible once crossings and bridges were established.



An M36 Tank Destroyer crosses the Rhine on an assault boat raft.

Field Marshal Montgomery's multi-phased plan was a massive undertaking codenamed PLUNDER-VARSITY. It called for an in-depth attack across the 500-yard-wide Rhine on a wide frontage using assault boats assisted by an airborne landing, deep artillery strikes, commando assaults, and aerial bombardment. His attack frontage included two armies, British General Dempsey's Second Army to the north of Wesel and U.S. Gen Simpson's Ninth Army to its south. Dempsey planned to capture the crucial communications center across the river at Wesel early and establish bridges at Emmerich to take advantage of the road net there. Lt. Gen. Simpson's plan for Ninth Army, codenamed FLASHPOINT, was to use the XVI Corps with the veteran 30th and 79th Divisions to cross on the southern flank of Montgomery's army group. The corps would capture crossing points at Rheinberg and Dorsten and a force of three infantry and one armored division would cross on bridges to prepare for the second phase.

The 21st Army Group's plan included the following units:

Corps	Code Name	Formation	Objective	Timing of Assault
XXX Corps	Operation TURNSCREW	51st Highland Division	Assault on Rees	2100 hrs. 23 March
XII Corps	Operation WIDGEON	1st Commando BDE	Assault on Wesel	2300 hrs. 23 March
	Operation TORCHLIGHT	15th Scottish Division	Assault Xanten	0200 hrs. 24 March
XVI (U.S.)	Operation FLASHPOINT	30th Division	Assault south of Wesel	0300 hrs. 24 March
		79th Division	Assault south of Wesel	1000 hrs. 24 March
XVIII Airborne Corps (U.S.)	Operation VARSITY	17th Airborne (U.S.)	Airborne LZ in sector Diersfordt	1000 hrs. 24 March
		6th Airborne (British)	Airborne LZ in sector Diersfordt	1000 hrs. 24 March

The British crossing plan, Operation PLUNDER, would use naval landing craft or Buffalo "amtracs", tracked amphibious landing craft. The Rhine was one of the world's great rivers and a major obstacle. A fast river, already in flood, the Allies had to wait for the ice to clear, find its underwater obstacles and mines, and then cross in the face of determined defenders near Germany's most heavily populated and critical industrial cities. The capture or destruction of German industrial capacity, long part of Eisenhower's orders, would hasten the war's end. No other geographic or industrial point in Germany matched its value, even Berlin.



C-47 Dakota Aircraft and CG-4 Waco gliders lined up in preparation for the airborne drop east of the Rhine.

The airborne portion of the plan to cross the Rhine was Operation VARSITY, a massive two-division airborne drop by the First Allied Airborne Army. It would employ the U.S. XVIII Corps (Airborne), commanded by Maj. Gen. Mathew B. Ridgway, with the U.S. 17th Airborne and British 6th Airborne Divisions. They were to seize airheads on the far side of the Rhine but close enough for quick link-up with ground elements. The XXX and XII Corps from British Second Army would then cross north of the Ruhr, establish a link with the airborne forces in their perimeters, and then exploit eastwards. In many ways, it mirrored the concept used at UTAH beach, albeit along a wider frontage and with a shorter water obstacle.

As in Operation MARKET GARDEN, the failed plan to cross the Rhine to the far north at Arnhem the previous September, the First Allied Airborne Army retained operational command of all of the airborne forces until the airheads had been established. Then the XVIII Corps (Airborne) would revert to the operational control of the British Second Army. The airborne corps' objectives, plans, and fire support were all carefully coordinated with General Dempsey. The landing zones were close enough to the river that Second Army could support them with artillery fire.



Airborne troops cordon their British Horsa glider after landing east of the Rhine.

VARSAITY relied upon an integrated air plan controlled by the 2d Tactical Air Force Commander, Air Chief Marshal A. W. Coningham, and not the Air transport commander as MARKET had been. The British 6th Airborne, a veteran of Normandy, would seize objectives around Hamminkeln and Ringenberg on the Rhine. The 17th Airborne, a new unit which had first been committed to ground combat in the Ardennes, was to make its first combat jump in this operation. They were to land close to Wesel. Both airborne divisions aimed to capture or destroy the German artillery in the area and provide depth to the bridgehead while the crossings were made.

After the crossing of the Rhine, the second phase of the 21st Army Group plan would send its forces north and east deep into Germany. It would push forces to Hamm, Munster, and northwards towards Holland, northeast towards Hamburg, and east towards Magdeburg. Eventually the army group would have three full armies along a massive front with the Canadian First Army on the left, the British Second Army in the Center, and the U.S. Ninth Army on the right. There was to be no stopping.

In the center of the Allied front was Bradley's 12th Army Group. He recognized the new strategic situation caused by First Army's surprise capture of the Ludendorff Bridge and sought to complete the original directive to close-up to the Rhine along its length before any additional large-scale crossing attempt. He would continue to push his forces, including the III and VII Corps into the Remagen bridgehead and launch his offensive from there. As such, he held up First Army units in sector, except those moving into the bridgehead. Bradley further ordered Patton's Third Army to support Seventh Army's attempts to clear the western bank of any remnants of enemy forces while building up for its own crossing and the final offensive sweep into Germany.

Bradley's crossing plans followed the original strategy aimed at reducing the Ruhr. His intention was to develop operations north of the Main River at Frankfurt in the direction of Kassel. This would envelope the Ruhr from the south and become the southern pincer of Eisenhower's great sweep toward the north German plain. Using Hodges's bridgehead at Remagen as his northern anchor point, his southern base was the Hanau-Giessen-Sieg River line from which Third and First Army would move to the northeast. The newly formed Fifteenth Army under Lt. Gen. Leonard T. Gerow, which had been assigned several battle worn divisions would secure the army group's rear and lines of communications. It was also prepared to act as a stabilizing force for U.S. military government units that would take over German cities and districts as the forces plunged deeper into German territory.

These military government units had been formed in the U.S. when it became apparent that only the Army had the equipment, personnel, and skill to assume the responsibility for the control and management of a devastated Germany. Trained in a variety of locations at universities and training centers in America and England, the units were staff with lawyers, administrators, linguists, city managers, policemen, sanitation engineers, and specialists with other vital skills. These units had been tested in North Africa and Italy and now faced the greatest challenge of all. The governance of Germany in the wake of its defeat and its eventual rehabilitation to rejoin the community of nations was in the hands of the U.S. Army. These units followed closely behind the battle and maintained order, prevented mass disease and famine and dealt with all aspects of the destruction of a modern nation. One of their special units, later the subject of the movie *The Monuments Men*, recovered looted art work from all over Europe.



A Signal Corps lineman strings telephone wire in the Rhineland.

The southern army group was also to have its share of the battle. In February, Lt. Gen. Jacob Devers began to reorient his front to take the offensive. In this endeavor he was somewhat handicapped since General Eisenhower's guidance was that one of his two armies, the French First Army, would have to undergo further refitting and retraining due to their influx of new troops. This would necessitate rotating some of their regiments out of the line to absorb and train the new men. To further compound Devers' problems, SHAEF now removed the divisions that had been loaned to the 6th Army Group to defeat the NORDWIND offensive. On February 10th, the group lost the 28th, 75th, and 79th Infantry and the 101st Airborne Divisions. They reverted to SHAEF reserve to support Bradley's operations in the center.

The Germans in front of the 6th Army Group were much weakened, so the loss of offensive power was not crippling. The army group's G-2 estimated that the enemy only had reduced capabilities as a result of the failed Ardennes and Alsace attacks. Most of the German units would only be able to mount a limited defense with the possible exception of some units defending the Saar-Palatinate sector. The enemy to their front had, perhaps permanently, lost the initiative. By mid-February, it was estimated that the 6th Army Group faced only about 35,000 infantry effectives and no more than 150 to 180 tanks and self-propelled guns. Perhaps 650 artillery pieces supported them. The Third, Seventh, and French First Armies were to benefit from the weakest and thinnest enemy defenses that faced the Allies along the Rhine.

Devers' main combat force was the Seventh Army with eight infantry divisions, one U.S. armored division, and one French Armored division underneath two corps headquarters. Many of Devers' other French units were either undergoing training or guarding the eighty-mile defensive sector along the Italian border. Here the French had seven infantry divisions and two armored divisions with one infantry division in reserve. SHAEF ordered Devers to plan to cross the Rhine with the Seventh Army no later than April 15th. The initial aim of the group would be the occupation of the Saar to draw enemy strength away from the Allied main effort in the north and to develop an avenue to attack towards Kassel. Although a relatively low priority mission, that would soon change to include the occupation of all of southern Germany and prevent a possible Nazi "last-ditch" defense in that area.

SHAEF estimated that sixteen infantry and five armored divisions would be needed to break the enemy defenses south of the Moselle River valley and along the remnants of the Siegfried Line for a southern bridgehead over the Rhine. The Moselle was seen as the natural break point between the northern and southern lines of operations. The Blies Valley between Pirmasens and Saarbrücken was considered the most favorable avenue for breaching the Siegfried Line between the Moselle and the Saar. This would require a shift of the army group boundary



American infantry run forward of their supporting M-4 Sherman Tank.

northwards to give Seventh Army room to conduct its operation. The 6th Army Group main effort was to attack along the Neunkirchen-Zweibrücken-Pirmasens-Homburg-Kaiserslautern-Bad Kreuznach axis with the secondary effort in the vicinity of Hinterweidenthal. Bridgeheads were to be seized in Worms or Speyer-Germesheim depending on levels of resistance.

The Third and Seventh Armies would deploy a maneuver mass of more than two dozen divisions along this southern axis of advance. The Third Army would attack with eight infantry and two armored divisions and Seventh Army with seven infantry and two armored divisions. Both Armies would have an armored division in reserve. This would give them twenty infantry and six armored divisions for their major offensives. Other divisions concentrated in the Saarburg and Saverne areas would act as a diversion. As part of this diversion, the French would cross the Rhine to patrol in front of Strasbourg.

The Rhine in the 6th Army Group sector was noted by intelligence estimates “as a mighty military obstacle.” Its channel was between 700 and 750 feet wide in Devers’ sector. In the spring of 1945, the river’s average velocity was 4 mph at Karlsruhe and 6 mph at Basel. During November 1944, a bad month, the river rose ten feet and the velocity increased to 10 mph at Basel. The Siegfried Line defenses were just behind the river in this sector on the far banks, with three to six foot-thick earth or concrete emplacements one or two hundred feet apart. All the Allied commanders understood that any crossing in this location would be a frontal assault into the enemy positions.

Experience with German engineer induced flooding in the Italian campaign and at the Roer dams gave planners a guide to the enemy's use of artificial flooding as a weapon. Eight dams between Basel and Lake Constance in Switzerland and the upper Rhine in Germany were watched by Allied intelligence for any sign of such actions. The opening of their sluice gates would cause considerable damage to pontoon bridges, disrupt ferrying operations, and possibly inundate bridgeheads. The Allied engineers concluded that, despite the possible effects, they would still be able to overcome them. They could not, however, prevent the defenders use of such tactics in advance save by destroying the dams or by capturing them. This was too difficult due to terrain and distance although some Allied bombers attempted the deed.

Devers, whose armies could draw upon the massive ports of Toulon and Marseilles, could sustain a major attack along a wide front. Given this capability, and the weakness of the German force opposing them, the 6th Army Group was to gain a greater strategic role as the end of the war unfolded. Once seen as a mere support to hold the flank for the 12th Army Group, the 6th Army Group soon became critical in overrunning a large portion of southern Germany, liberating a large portion of central Europe, and closing in the enemy's final strongholds. Seventh Army's final offensive would have two corps attacking abreast. The XV Corps, Seventh Army's main effort with four infantry and one armored division, was to cross the Rhine near Worms and move northeast. Its 3d and 45th Divisions would cross using revisions of plans originally devised in October when Seventh Army thought they were about to cross the river at that time.

With all three Army Groups squared up to cross the Rhine, and virtually on the eve of the launch of Montgomery's Operation VARSITY-PLUNDER, Patton launched his own hasty crossing of the river the night of March 22-23. Achieving tactical surprise against a relatively unoccupied sector near Oppenheim, the 5th Division's 10th Infantry Regiment, supported by amphibious tanks of the 748th Tank Battalion, pushed over the Rhine. They assaulted the village of Nierstein just north of Oppenheim. Two additional battalions were rafted across about 10 in the evening. They rapidly seized the villages of Trebur and Wallerstadten. Despite German counterattacks, Third Army had a good foothold. Moving rapidly to exploit the bridgehead, the entire 5th Division was across the river by noon on the 24th. They were quickly followed by the 90th Division and a Combat Command of the 4th Armored Division. Within thirty-six hours, a treadway bridge supported the bridgehead, permitting the passage of the remainder of XII Corps, including the 26th Infantry and the 6th Armored Divisions. Patton accepted the handicap of later having to cross the Main River in addition to the Rhine in order to seize a crossing site at Oppenheim and beat Montgomery over the Rhine.

Eisenhower had not authorized Patton's surprise crossing, but neither had he forbidden the army groups from launching their assaults over the river when they wished. This was his operational style which often caused consternation among some commanders when others seemed to benefit at their expense, but it allowed for operational and tactical innovation. The task of coordinating massive army groups in consonance with guidance from the Combined Chiefs of Staff and his own political and military masters back in Washington was onerous enough without attempting to micromanage armies or corps except perhaps, as in the Ardennes, in the direst of emergencies.

The Allied main effort crossings in the northern 21st Army Group area, Operation PLUNDER, began in the British Second Army's sector on the evening of March 23rd. The British crossings followed an extensive three-hour artillery preparation fired by 3,500 guns, designed both to neutralize the German defenses and mislead them as to the actual crossing sites. The crossings were covered by the extensive use of smoke generators to further conceal the troops moving forward to their boats at night. The crossings were successful with the troops landing at their planned sites and with little organized resistance. The defense hardened as the troops moved inland, especially in the northern XXX Corps sector.

The XII Corps was on the British right and XXX Corps on the left. Each crossed in their sector with VIII Corps holding in reserve. The American XVIII Corps (Airborne) with the U.S. 17th Airborne and British 6th Airborne Divisions would be dropped after the initial bridgehead was established and within the range of artillery support from the Allied-held west side. To the north of Second Army, II Canadian Corps was to pass through Second Army's bridgehead after bridges were established and carve out a sector for the First Canadian Army. The immediate British objective was the low ridge of the Wesel-Emmerich railway. At 11 in the evening on March 23rd, the 1st Commando Brigade (WIDGEON) crossed to seize Wesel which had been heavily bombed. The 51st Highland Division simultaneously crossed up-river at Rees. The 15th Scottish Division assaulted Xanten at 2 A.M. on the 24th.

The assault of the 15th Scottish Division, crossing between Rees and Wesel benefited from the extensive artillery preparation fires and linked-up with both the 6th and 17th Airborne Division drop zones by early in afternoon of the 24th. On its left flank, however, the 51st Highland Division crossed north of Rees and fought against heavy resistance from the *15th Panzergrenadier Division*. They required assistance from additional tanks and from its reserve brigade to defeat the German defenders east of the Mehr stream line. Both British corps were firmly established over the Rhine by late afternoon on the 24th and bridging operations were underway.

The U.S. Ninth Army's XVI Corps, commanded by Maj. Gen. John B. Anderson, assaulted south of the British sector at 2 in the morning on the 24th with the 30th Division crossing south of Wesel and the 79th Division north of Dinslaken. The corps' artillery preparation, fired by 2,070 guns, began at 1 in the morning and was watched by Generals Eisenhower and Simpson from a nearby Church tower. In an hour 65,261 rounds were fired across the river. The artillery preparation was followed by waves of bombers attacking airfields and designated targets throughout the battle area. Each battalion of the 30th Division proceeded across in fifty-four storm boats and thirty assault boats, leaving in waves two minutes apart, with four waves per battalion. There was little opposition on the other shore to their crossing. Two battalions crossed in the first hour along with a platoon of amphibious, Duplex Drive (DD) tanks. The 79th Division crossed an hour later sending over two regiments with single battalions from each regiment in column, side by side. Though scattered by fog, each regiment landed two battalions on the east shore by dawn with comparative ease. Ninth Army had crossed the Rhine with only thirty-one casualties.

The fifteen-foot-high winter dike throughout the XVI Corps attack sector proved to be a greater problem than German resistance at the river but bridging and ferry sites were established quickly. The rapid transit of troops into the bridgehead was made easier by the construction of additional roads and bypasses. Landing Vehicles, Tracked, or LVTs, and amphibious DUKWs worked overtime to pass supplies and troops over. In the interim, Bailey rafts and ferries were established to bring tanks across the river. For three days, these transports brought tracked and wheeled vehicles to the east bank of the Rhine until bridges could be emplaced. By the end of the day on the 24th, Maj. Gen. Anderson's bridgehead was nearly ten miles wide and six miles deep in the north and three in the south. Within two days, the American XVI Corps bridgehead had driven ten miles inland with the 35th Division quickly following the assault divisions. Other river crossers on the 25th of March included Prime Minister Winston Churchill who made a surprise visit into the corps bridgehead along with Field Marshal Montgomery.



A lone soldier watches as B-24 Liberators fly overhead to support the forces crossing the Rhine.

The airborne troops hit their designated drop zones in the British sector mid-morning on the 24th. The U.S. contingent, the 17th Airborne Division commanded by Maj. Gen. William M. Miley, led the way. As part of Operation VARSITY, the 17th Airborne's mission was to seize bridges on the Issel River to facilitate a breakout from the bridgehead, as well as to prevent an armored counterattack from using the same bridges. They dropped on two sides of the Diersfordt Forest in the morning on the 24th of March in their only combat drop of the war. Already veterans of the Ardennes campaign, they parachuted onto Drop Zones W and E, and landed by glider on Landing Zone S. The 507th Parachute Infantry Regiment landed near Diersfordt. They were followed by the 513th Parachute Infantry but their planes landed them at the wrong drop zone, forcing them to change their attack plans. The 194th Glider Infantry Regiment successfully landed near Wesel despite encountering heavy flak on the run in. Carrying most of the division's artillery and heavy equipment, the gliders landed on their drop zone and their infantry cleared the zone to the river within two hours of their landing. During their operations as part of Operation VARSITY, the 17th Airborne dropped 4,550 parachute troops and flew in 3,492 by glider.

The British 6th Airborne Division, commanded by Maj. Gen. Eric Boles, also was transported across the river at mid-morning on the 24th and hit the ground moments after the 17th Airborne. Their mission was to seize bridges over the Issel river and key points on the railway to interdict movement into the bridgehead by counterattacking forces. They landed north of the Diersfordt Forest astride Hamminkeln in three glider landing zones and two drop zones. The 6th Airborne dropped 1,900 paratroops and air landed a further 3,383 troops by glider in the British zone. Within hours they had linked up with the ground assault forces.

The Allied crossing of the Rhine, though immediately successful, was not accomplished without problems. Limited German counterattacks in the British sector shortly after the landings slowed British operations. To push forward faster, the 17th Airborne Division partnered with the British 6th Guards Armoured Brigade and together they attacked the troublesome *116th Panzer Division*, an old opponent from the Ardennes fighting. Limited bridging assets also slowed the movement of additional forces into the Ninth Army bridgehead. It managed to get the 8th Armored Division across as an exploitation force but until more bridges could be established, including extending rail across the river, movement into the expanding bridgehead would be slow.

In the 6th Army Group sector, Seventh Army's XV corps reconnoitered possible crossing sites over the Rhine on March 22nd. The final assault plan issued by the corps tasked the 45th Infantry Division to cross from staging sites north of Worms and the 3d Infantry Division to assault the far bank from launch points south of the city. The 63d Infantry Division would follow the 45th and attack in unison with it and the 44th would follow the 3d Division. The river at the crossing sites was about 1000 feet wide and estimated to be about seventeen feet deep. Revetted or built up embankments were on both sides. Some eight miles from the far shore in the east were the Odenwald mountains which paralleled the Rhine. They constituted a forty mile stretch of mountains and forest thirty-two miles wide favoring the defense. Third Army to the north at Oppenheim would protect the corps' left flank although no serious counterattacks were expected.

The 3d and 45th Divisions trained as best they could for their crossing, although they were handicapped by not having yet received their assault boats. To prepare for their crossing, they practiced their loading and unloading drills in outlines of boats taped on the ground. The troops practiced loading by "lists" and performing their drills while the engineer columns carrying the boats moved under darkness toward the actual staging sites. Because of the risk of the Germans flooding the river to prevent the assault, specially trained boat crews who could deal with flood conditions were to pilot the craft.

The XV Corps' crossing began at 2:30 in the morning on March 24th. Some mortar and artillery fire fell in the river in the 3d Division area, indicating that the Germans knew that an attack was coming. Once surprise was lost, the 3d Division started their artillery preparation fire which would consist of some 12,000 rounds. The northern crossing of the 45th Division remained undiscovered and it crossed silently without artillery cover. Regiments from both divisions met enemy fire from flak guns, artillery, mortars, and automatic weapons.



Two African-American soldiers keep watch on the sky with their HB M2 .50 caliber anti-aircraft machinegun.

During the assault, nearly half of the boats, most in the 3d Division sector, were sunk by enemy fire. Nevertheless, five waves of troops assaulted over the river and fought inland pressing against rapidly fading opposition. By midmorning the XV Corps beachhead line was reached, and troops linked up with the neighboring units from Third Army. Although the 3d Division met the stronger opposition of the two divisions, their extensive preparation fires had eased their attack. By the time the Germans were able to mount serious counterattacks, follow-on units were able to handle them. Amphibious DD tanks were used in small numbers to reinforce the bridgehead until pontoon bridging could bring over reinforcements. By the end of the day on March 26th both a treadway and pontoon bridge were emplaced for wheeled and tracked vehicles to move supplies, artillery, and reinforcements across. The 12th Armored and 44th Infantry were able to move into the bridgehead along these new bridges. To protect the bridges, antiaircraft artillery batteries were emplaced. The AAA guns on the eastern bank did double duty as ground defense.

By month's end, additional forces from the Seventh Army's remaining VI and XXI Corps crossed over the Rhine, including the 10th and 13th Armored Divisions and the 4th, 42d, and 63d Infantry Divisions. Seventh Army now mustered ten infantry and three armored divisions plus two cavalry groups in its three assigned corps headquarters. The XV Corps had the 3d, 44th and 45th Infantry Divisions along with the 12th Armored Division. The XXI Corps controlled the 4th, 42d, and 63d Infantry Divisions and the 10th Armored Division. The veteran VI Corps had the 36th, 71st, 100th and 103d Infantry Divisions and the 14th Armored Division.

The other army in the 6th Army Group, the French First Army, did not participate in the initial assault over the Rhine. It had spent many weeks absorbing and training its new replacements and it also lacked organic bridging and engineer units. Generals de Gaulle and de Lattre, however, fervently wished the French First Army to participate fully in the final offensive into Germany. Their pleas to attack into Germany were, however, temporarily tabled. The issue, more political than military in nature, revolved around the still unresolved issue of the exact nature of the French role in the planned occupation of German. It took time to resolve this issue and, in the meantime, the French had to wait.

General Patton to the north augmented his crossing at Oppenheim by launching his VIII Corps across the river at Boppard with the 87th Infantry Division on the 25th of March. The next day the 89th Division crossed at St. Goar, eight miles upstream. These linked the area around the famed Lorelei Rock to the southern Remagen bridgehead and put in place a firm southern shoulder for the Ruhr offensive. Patton sent Combat Command A of the 4th Armored Division around Darmstadt to attack northeast towards Frankfurt and Hanau. Aschaffenburg and the Rhein Main air field were taken, and in a daring gamble, Patton launched an armored task force to Hammelburg in an attempt to rescue Allied prisoners of war at a camp there.

The Hammelburg raid was a disaster. Employing a Task Force of tanks and armored infantry under Maj. Abraham Baum from the 4th Armored Division, the Task Force from XII Corps drove deep into enemy lines starting on the 27th of March. It succeeded in liberating 5,000 prisoners of whom 1,400 were Americans but many of them were too weak to march or keep up with a column of armored vehicles. As they fought their way back toward the American lines, the Germans cut off the Task Force and destroyed most of its fifty-seven vehicles. Surrounded, the column essentially was destroyed. Some thirty-two Americans were killed and, except for thirty-five soldiers who made it out on foot, the rest of the soldiers and prisoners were captured. The fact that General Patton's son in law was in the camp caused many, then and now, to believe that the raid was motivated by personal rather than operational concerns. Its failure, however, should not detract from the bravery and determination of the men on the raid who tried to save their comrades. The Hammelburg raid was the only specific rescue attempt recorded in the European Theater to attempt to free Allied POW's prior to the camps being liberated in the normal course of combat operations.

By the 28th, Montgomery was poised to lead his army group on a continuous drive toward the River Elbe, the designated demarcation line to meet the Russians. He directed Ninth Army on the right of his army group toward Magdeburg and Second Army in the center towards the port of Hamburg on the North Sea. Meanwhile, his First Canadian Army in the northern part of the bridgehead would finish the liberation of the Netherlands.



A column of U.S. M-36 tank destroyers roll through Magdeburg, Germany.

Finally, at the end of March, having received permission to cross the Rhine, the French First Army conducted the first of five assault crossings of the Rhine at Speyer. Later that same day, de Lattre conducted two more crossings, at Mechtersheim and Germersheim. Additional crossings at Leimersheim on April 2nd and at Strasbourg on April 15th finalized de Lattre's river operations. His divisions moved over bridging provided by Seventh Army. De Lattre's orders from De Gaulle had been direct, "You must cross the Rhine, even if the Americans do not agree and even if you have to cross it in rowboats. It is a matter of the greatest national interest."

The French First Army, by now 130,000 strong, crossed three infantry and one armored division over the Rhine, fanning out into a widening bridgehead. The French soon became a key element in Eisenhower's southern attack into the Black Forest area and then through Bavaria to Austria. Ignoring boundaries that hindered bold moves, Stuttgart and Ulm soon fell to the French. De Lattre raced to beat the American Seventh Army to the passes linking the German forces in Austria with the Italian-based German forces now retreating north. The European war's end would find French General Le Clerc at Berchtesgaden, Hitler's Alpine retreat, with the American 101st Airborne Division.

S. Sgt. George Peterson and 1st Lt. Walter J. Will, Co. K, 18th Inf. Regt., 1st Infantry Div.



George Peterson was born in Brooklyn, New York and Walter J. Will in Pittsburg, Pennsylvania. Both joined the United States Army as World War II erupted, and by 30 March 1945 both were serving in Company K, 18th Infantry Regiment, 1st Infantry Division. At that time Allied forces had invaded deep into Germany and the 1st Infantry Division was battling for the town of Eisen. The Germans, fighting on their own soil, promised the intervention of “miracle weapons”, fearful of mistreatment, and heartened by rumors of a split between Russia and the Western Allies, fought on with desperation and determination.

On March 30, 1945 S. Sgt. Peterson was acting platoon sergeant and given a flanking mission. Wounded by mortar fire, he nevertheless pushed up a shallow draw and destroyed two machine gun positions with hand grenades. Wounded again, he advanced on yet another machine gun and knocked it out with a rifle grenade. He was being treated by the company aid man when he broke off his treatment to go to the aid of a comrade just hit by mortar fire. He was hit and killed while attempting this rescue.

That same day 1st Lt. Will was advancing as well and dared withering fire to rescue three wounded soldiers from exposed positions. Wounded, he nevertheless crawled on, destroying two machine gun positions with grenades and rifle fire. He then led a squad against two other machine gun positions and destroyed these as well. With the machine guns knocked out, Will led his platoon in a final charge that forced the enemy to retreat but was killed in the course of it.

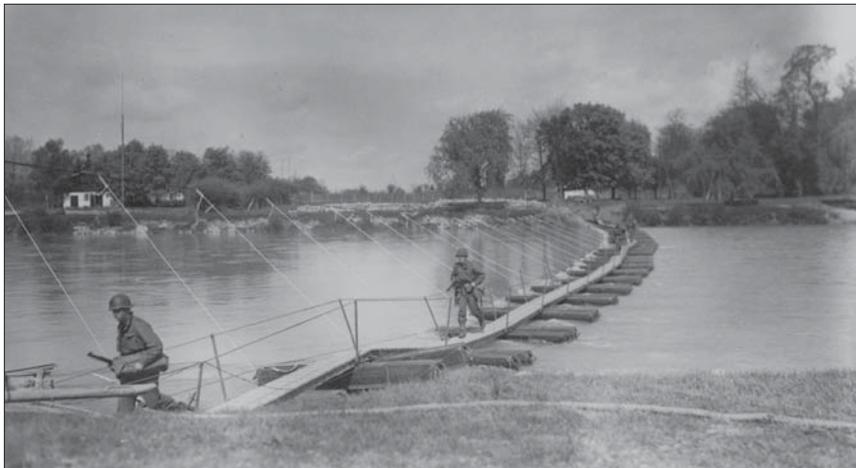
S. Sgt. Peterson and 1st Lt. Will were both awarded the Medal of Honor for their courage, dedication, and exemplary leadership under fire.

S. Sgt. George Peterson is buried in Netherlands American Cemetery, Plot D, Row 21, Grave 10

1LT Walter J. Will is buried in Netherlands American Cemetery, Plot D, Row 3, Grave 32

On April 4th, at Eisenhower's direction, the 21st Army Group reassigned the U.S. Ninth Army back to the 12th Army Group to assist in its Ruhr reduction mission. The next day, Montgomery gave orders to his remaining two armies, the Canadian First Army and the British Second Army. The Second Army was to secure the Weser River line and capture the port of Bremen. To accomplish this, it would have to capture bridgeheads on the Weser, Aller and Leine rivers. Second Army would then move towards the Elbe and establish a bridgehead over the river. The Canadian Army would continue its campaign in the Netherlands, clearing western Holland and the northeast. The Canadians were soon rejoined by their I Corps which had been fighting in Italy, making the Canadian First Army the largest all-Canadian Force ever formed.

The forces from the First Army broke out of the Remagen bridgehead starting before dawn on the 25th. All three corps, the VII Corps on the left, the III Corps in the center, and the V Corps on the right, employed five infantry and two armored divisions as they pushed slowly to the east. At the end of the day, the VII Corps had pushed forward twelve miles, the III Corps four miles and the V Corps 4 miles. On the next day, the armored divisions of all three corps completely shattered the German lines and began roaming "at will" into the German rear areas. By the 28th, the First Army had crossed the Lahn River and turned north towards Paderborn. The VII Corps' 104th Infantry Division, the "Timberwolves", now commanded by Maj. Gen. Terry de la Mesa Allen formerly the commander of the famed 1st Infantry Division in North Africa and Italy, pushed forward steadily until confronted by stiff resistance from students at the *SS panzer* replacement training center at Paderborn. Assisted by the 2d Armored Division from the Ninth Army to



7th Army troops walk across a footbridge over the Danube River.

its north, this obstacle was overcome and the tankers from the 2d and 3d Armored Divisions link-ed up at Lippstadt joining the two armies and sealing the Ruhr pocket.

The southern flank of First Army's breakout from the Remagen bridgehead was protected by Patton's Third Army. His units which had crossed near Oppenheim now made for Frankfurt to the north. Patton's and Hodges' corps formed a near parallel advance with Patton moving up the Wetterau corridor north of the Vogelsberg mountains. On Patton's right flank, the Seventh Army was attacking towards the Fulda Gap with its unit boundary along the Kinzig River valley. Both armies moved quickly against crumbling resistance.

The speed of the American advance preempted what was to have been the last great Allied airdrop. It was planned to assist the Seventh Army's crossing of the Rhine or any of its follow-on operations. The operation was named CHOKER II and was to have been the baptism of fire for the newly arrived 13th Airborne Division, stationed in the United Kingdom. As with other planned airborne assaults, it had to await events and strike only if the movement of forces required their intervention. CHOKER II planned to use an airborne division to seize key terrain on the east bank of Rhine near Worms during the Seventh Army's crossing.



A soldier looks out over a POW enclosure filled to the brim with German Army captives.

Both the initial drop near Worms and a latter planned drop in the Bisingen area near the Black Forest, were canceled. The Allies' speedy success in their operations, in this case the French First Army capturing Stuttgart, would obviate the need for any of the planned airborne drops.

The southern army group's attacks only proceeded after Bradley's and Montgomery's crossings of the Rhine, reflecting the relative low priority given to the campaign in the south. There were, however, important factors that would change this equation. Besides the important industry in the Saar region and its large population, Allied intelligence soon caught wind of the possibility that German government officials and elite units planned to create a "National Redoubt" in the south. This redoubt would purportedly use the mountains and forests of the southern borderlands to create a "last-ditch" defense and spur a partisan war. Although many analysts considered the capability or intent to be spurious, they did note that some senior Nazis had relocated from Berlin and that the southern regions would be difficult to clear if defended. Additionally, German scientists known to have worked on top secret programs were reported having fled to that area. General Devers was given the mission of ensuring that such a "National Redoubt" was never formed or, if created, would soon be crushed.

On the left flank of the 6th Army Group's advance into Germany, and protecting Patton's right flank, General Patch moved his Seventh Army troops over one hundred miles into southern Germany reaching towards the Danube, and pushing one hundred twenty miles to the northeast, into the southern end of the Fulda Gap. The Seventh took the city of Nuremberg, the location of the yearly rallies of the Nazi party in the 1930s. Each of Seventh Army's three corps was spearheaded by an armored division with infantry following in its wake to mop up pockets of resistance which grew spotty as more towns chose to surrender, although some hard-core German units did fight. As the Allied columns moved eastward, ever greater numbers of Allied prisoners were liberated along with slave laborers in concentration camps.

The "National Redoubt" and the consistent threat of its formation pressed heavily on all formations as they pressed on. Seventh Army easily penetrated what intelligence assessed was a logical outer defense line for such a great National Redoubt when it passed the Black Forest, the Kraighau Valley, the Thuringer Forest, and the Hohe Rhon area of the Fulda Gap. With de Lattre setting a rapid pace in his attack into Bavaria and Patch moving deep into southern Germany, any such National Redoubt was being encircled successfully from the north and confronted head on by two determined armies with no less than three corps. In the end, no trace was found of any serious effort to create such redoubt or continue the war. Germany had had enough.



A Red Army tanker hugs an American GI as the western armies meet the eastern armies.

Seventh Army moved to seize major population and industrial centers in Germany. Aschaffenburg fell after heavy resistance, to provide room for the 14th Armored division to parallel 12th Army Group's drive northeastward. Wurzburg fell to the 12th Armored and 42d Infantry Divisions using the same pattern of armor leading with infantry mopping up resistance. The infantry then turned to attack the ball bearing production center at Schweinfurt, a target well-known to Allied air crews. American engineers built additional bridging over the Main river to speed-up the flow of forces into the fight on the east side of the Rhine and Main rivers as the main battle shifted into the German heartland. General Devers two armies fanned out to seize all of Bavaria, the birthplace of the Nazi movement and Germany's link with its Fascist allies to the south.

The transfer of Ninth Army back to 12th Army Group meant that Bradley's three-army-strong group now had the sole mission to take the Ruhr Pocket from the north and from the south. The capture of the Ruhr and its estimated 150,000 defenders was still the most important strategic objective of the entire campaign in the west. Bradley's directive for April covered the move of his army group eastward from all the bridgeheads with a subsequent reorientation to the northeast. He wanted to link all three of his Armies together into one large maneuver mass, a separate "broad-front", clearing Germany without leaving pockets of resistance behind. Ninth Army and First Army finished their encirclement of the Ruhr and began to constrict the pocket. The two armies managed to capture more than 317,000 Germans of *Army Group B* in the Ruhr pocket. Their commander, the notorious Field Marshal Walter Model, would choose suicide rather than surrender. Fifteenth Army which had only one full-strength division assigned, the 66th still occupying the Brittany ports, would follow the other armies establishing military government for German towns and taking control of the large numbers of German prisoners captured.

Bradley's forces peaked at war's end to thirty-three infantry and twelve armored divisions. In the very last weeks of the war, an airborne division, one infantry, and two armored divisions were sent to Montgomery's 21st Army Group to assist his units in clearing the North Sea port towns and northern Baltic regions. By the end of the war in Europe, Bradley commanded the largest American field force in history: approximately 1.3 million men.

Bradley's final campaign was heavily guided by the terrain of central Germany. Broad avenues of advance channeled moves across Germany after the defensive crust was broken at the Rhine. The remnants of *Wehrmacht* forces hoping to fall back on good defensive ground were simply overwhelmed by stampeding American armor, closely followed by infantry mopping up behind them. With armored divisions in every corps, and tank and self-propelled tank destroyers bulling forward with most infantry columns, resistance was quickly beaten down. Soon there were no full combat formations in existence to stop the Americans. As the American movements concentrated by virtue of the restricted terrain, their power grew as they moved around industrial areas or through towns. The *Luftwaffe*, a mere shadow of its former self, offered no opposition to a sky full of Allied planes that scouted for columns of retreating enemy troops and vehicles and destroyed them.



An American Jeep drives through a town showing white flags of surrender.

For the last part of the campaign, Eisenhower had the challenging task of coordinating the movement of his armies with those of the Red Army. With permission, he had exchanged liaison officers and plans with the Soviet headquarters and established a coordination line on the Elbe river to avoid any friendly fire issues. He changed the main effort to his 12th Army Group in the center of the front and ordered them to push to the Elbe. He directed his northern forces under Field Marshal Montgomery to advance to the line Bremen-Hanover and clear northern Germany. General Bradley's 12th Army Group in the center was to complete its fight in the Ruhr and then move on the axis Kassel-Leipzig to the Elbe. The southern 6th Army Group under General Devers was directed to develop operations along the line Nurnberg-Regensburg-Linz and to prevent the consolidation of any German resistance in the south.

The British objected to the switch of the Allied main effort to the 12th Army Group and further objected to Eisenhower's reluctance to press on to Berlin. General Eisenhower, on the other hand, was focused on completing the destruction of the German armies and crippling Germany's ability to prosecute the war. Berlin loomed as a reachable objective and the Ninth Army and British Second Army were within striking distance. Eisenhower also retained control of a powerful Airborne Army, eager to provide an operational lever of support. Attacking towards Berlin, however, raised a host of problems. Discussions in the fall of 1944 between Eisenhower and Montgomery had led the latter to assume he would lead his army group to this objective should the occasion arrive. Montgomery in January had even told Simpson he would take Ninth Army into Berlin. However, Eisenhower ruled against Berlin as an unnecessary political objective. Bradley, who was half-heartedly offered the opportunity to try for it after Ninth Army was attached to him, said it would cost 100,000 casualties.



American officers greet their Soviet officer counterparts.

These orders provoked discussion from the CCS and British Prime Minister, but they were loyally followed and executed smoothly by all three army groups. The Red Army had already staged forward on the Oder River for its final offensive and Eisenhower saw no reason to race them toward Berlin. Nor was guidance forthcoming from the Combined Chiefs ordering him to do so. The Yalta Conference in February had finalized the plans for the partition of Germany, zones already known to the military commanders and, due to a captured document, Hitler himself. The capture of Berlin by the western Allies would not only have created a diplomatic furor with the Russians, it would have been temporary. Even had it been taken, with its attendant cost in casualties, all British, French, and American forces would have had to evacuate to occupation zones in the west. Eisenhower given latitude to act, saw no need to seize Berlin, and focused on the military issues that were his direct concern. The orderly move to the Elbe on a broad front proceeded.

The 21st Army Group moved to the northeast to Hamburg, and not directly east to Berlin as Montgomery had hoped. His task was to finish the clearing of the north coast of Germany. As his troops were racing to clear the areas of north Germany of any remaining enemy troops, it became evident that the German populace was now moving west in large numbers. They were attempting to escape from being overrun by Soviet forces as news of Russian atrocities spread. Many of these accounts were broadcast widely by German radio to stiffen German resistance. Instead, it increased the flight of refugees to the west and prompted the faster surrenders of towns who now showed white sheets from every household to avoid shelling or attack.

As the terrain to be covered by the British Second Army exceeded that of most armies, Eisenhower attached three U.S. combat divisions to Dempsey's army along with the XVIII Corps (Airborne) from Ninth Army. Thus, the 8th Infantry Division, the 82d Airborne Division, and the 7th Armored Division became the sole U.S. divisions serving with Allied commands in northwest Europe as the final operations unfolded. They halted on the Elbe river to the east of Hamburg, about 15 kilometers forward of Montgomery's forward command post on Luneburg Heath.

Bradley established bridgeheads over the Elbe River and directed his armies to move past them to link-up with the Russian armies moving west. This line was developed through coordination with the Stalin's Headquarters and communicated to SHAEF through his Military Mission. The Allied army group commanders were aware of the post war occupation sectors and the general ideas agreed to in political meetings. The updated military plan covering the surrender of German, ECLIPSE, outlined military areas of responsibility for planning purposes. Finally, on April 25th, U.S. troops of the 69th Infantry Division met up with Soviet troops of the 58th Guards Rifle Division at Torgau, southwest of Berlin.



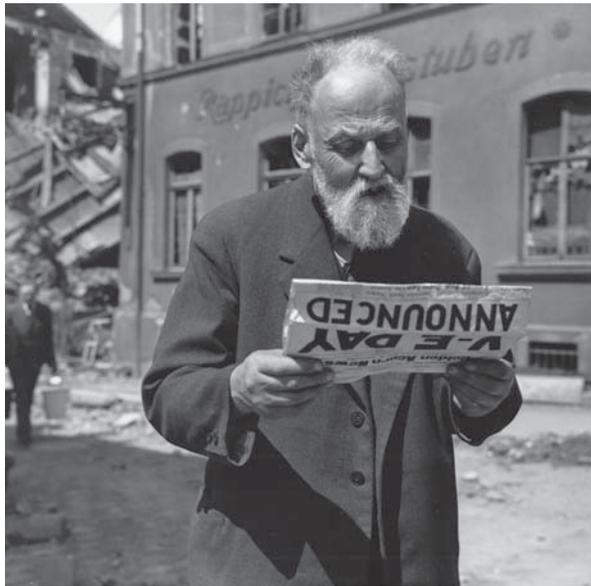
Prisoners reach through the fence of their concentration camp for food prior to being liberated.

Military government and civil policy guidance instructions from London and Washington, up until this point somewhat vague in nature, became more plentiful as the Rhine was crossed and the spring campaign progressed. The exception to this guidance regarded the existence of a French military sector for occupation. The Combined Chiefs had passed no guidance to General Eisenhower regarding this issue which reflected American and British uncertainty as to the nature of a future French government. In the 6th Army Group, General de Lattre, whose ability to demand French honor be respected was second only to de Gaulle's, was emphatic that France had earned a place at the table. The other Allies, less certain of the French political situation, preferred to kick the issue down the road.

The Allied final offensive in the south played out with far less resistance than it did in the north. Few units faced organized resistance and the cities of Munich and Nuremburg which had fostered the Nazi Party surrendered without significant city fighting. The cities themselves were mostly destroyed anyway, the result of heavy bombing at the hands of the Royal Air Force during the course of the night bombings and then daylight strikes by the Eighth Air Force. The *Wehrmacht* had little left to fight for in the city's ruins.

On April 4th, U.S. soldiers liberated the first of many concentration camps to be discovered in the end days of the war. The Ohrdruf camp, one of eighty-eight satellite camps of Buchenwald, lay ten miles south of Gotha. Soldiers of the 4th Armored and 89th Infantry Divisions stumbled on the camp as they followed a grim trail of bodies of prisoners who had failed to keep up as they were being marched by their SS guards from the camp towards Buchenwald. Left behind at Ohrdruf was a work camp of approximately 30 acres of barracks and ramshackle factories. About half the prisoners were Jews, the rest Poles, Russians, French, Belgians, or other Europeans captured along the way. They were laying track and digging tunnels for a massive communications center that was unfinished. The camp was later visited by Generals Eisenhower, Bradley, Patton and others and filmed. Buchenwald itself fell to soldiers of the 6th Armored Division and 80th Infantry Division on April 11th. The world was soon to see in newsreels details about the true horrors of Nazism.

Other camps were soon encountered. As the Seventh Army moved into southern Germany it discovered other German concentration camps for the first time. These camps, as with the one at Dachau, were established mainly for political prisoners in the early days of Nazi rule and were not the more gruesome “death factories” such as Auschwitz and Treblinka that were built mostly in the east. The liberated camps in the American sector were mostly filled with political prisoners, some prisoners of war, and other miscellaneous “enemies of the state”. The prisoners did not face gas chambers but were either worked to death or starved until malnutrition or disease claimed them. XV Corps’ 42d and 45th Divisions liberated Dachau on 29 April and found perhaps 40,000 survivors.



A German citizen reads of his country's surrender.



American and British soldiers, sailors, airmen and civilians celebrate the end of the war in Europe.

The discovery of concentration camps was not the only surprise to befall Allied troops as they penetrated deeper into Germany. At the salt mines in Altaussee and the Kaiseroda complex near Merkers, American soldiers discovered tunnels holding priceless collections of artwork, weapons, gold coin, and libraries stored there for safe-keeping by the Nazi regime. At Altaussee the Germans had hidden such looted treasures as Jan van Eyck's *Ghent Altarpiece*, Vermeer's *The Astronomer*, and Michelangelo's *Madonna of Bruges*. Over 4,700 pieces of stolen art were eventually recovered by American military government personnel. At the salt mine near Merkers on April 6th, soldiers from the 90th Infantry Division found over thirty miles of underground galleries holding 250 tons of German gold reserves in coins and bars along with 400 tons of looted art and two million books. So impressive was the find that late that month General Eisenhower and other senior Allied commanders were compelled to tour the site and marvel at the scale of German depredations on the cultural treasures of Europe.

The end of the war moved closer as the Red Army closed on Berlin taking horrendous casualties and meting out death and destruction in return. Adolf Hitler, with the Soviet troops closing in on his bunker under the German Chancellery, committed suicide on April 30th rather than allow himself to be captured. He was succeeded as President, at his request, by Grand Admiral Karl Donitz, head of the German Navy. Even after Hitler's death, the Germans refused to surrender. There is no doubt that Hitler intended his own death would drag Germany down with him, and that his successors would have little left to surrender. Admiral Donitz directed his men to fight on, but to conduct offensive operations in the east and delaying operations to the west, hoping to avoid surrendering to the vengeful Russians. This action may have saved a number of his troops from capture by the Russians, but thousands more on all sides died as the fighting continued.

Bowing to the inevitable, President Doenitz ordered General Alfred Jodl, Chief of Operations Staff of the OKW, to surrender to the Allies on May 7th. However, the initial offer proposed by Doenitz was a separate peace with only the western Allies which was summarily rejected. Doenitz gave in and later in the day on the 7th, General Jodl met Allied representatives at SHAEF headquarters in Reims, France, and signed the instruments of capitulation. A separate surrender ceremony was held in Berlin, but the documents were not signed until early in the morning of the 9th of May. Still, the effective date of the surrender was May 8th, which was celebrated as Victory in Europe Day. While the war in the Pacific continued, and many American units were slated to be transferred to that theater for the final invasion of Japan in late 1945 and 1946, the great struggle in Europe was at an end. The mission of SHAEF was completed. Winning the war in the Pacific, and "winning the peace" in Europe, was still to come.

U.S. Army soldiers licked their wounds, secured prisoners, thanked their God for their own survival, and fervently counted their overseas points, based on numbers of decorations, wounds suffered, and time in service, to see when they could go home. Some stayed for a while as part of the occupation army. Others were sent home as soon as the transport ships began returning. If soldiers were late comers to the war, they received transfer orders to a unit with a through ticket to the states to go fight in the Pacific. But, for a time, the guns were silent in Europe as the Allied Army viewed the wreckage of a country destroyed more thoroughly than any other in modern times. German lay in ruins and divided into four occupation zones. Its recovery, and eventual reunification, would take decades.

Epilogue

After the brief surrender ceremony at the schoolhouse in Reims, a much-relieved Eisenhower dispatched the following message to the Combined Chiefs: “The mission of this Allied Force was fulfilled at 0241, local time, May 7th, 1945.” It had been a long and costly struggle from the initial landings in North Africa through the landings in Sicily, the difficult march up the Italian peninsula, the failed “end run” of Anzio, the dramatic landings in Normandy and southern France, the race across northwestern Europe, the surprising German counterattack in the Ardennes and the final push across the Rhine into the heart of Germany. As the Russians pushed west to capture Berlin in a final, destructive assault, the western Allies rapidly pushed east. Together they triumphed over still potent German armies to liberate Europe and finally bring peace to a shattered continent.



Europe lay in ruins. Germany suffered a level of destruction unprecedented in the modern era. Allied bombing had hit German and Italian cities and industry most heavily but had not spared cities and infrastructure occupied by the German Reich in France, Belgium, the Netherlands, and throughout eastern Europe. In the struggle, millions of civilians were killed and millions more became refugees and “displaced persons”. Included in this carnage would be approximately 6 million Jews and 11 million other ethnic, religious, and gender-based minorities and political prisoners exterminated in massive death camps. These ghastly crimes called into question the very humanity of the perpetrators. It would take decades to recover physically, and even longer psychologically, from the terrors of this greatest war in human history.

While it is almost impossible to count the civilian deaths, especially on the Russian front, military casualties were soberingly clear. An estimated 4.5 million men and women served in the Armed Forces of the Western Allied nations in the European Theater of Operations (ETO), of which over 3 million were American. At war’s end, the total number of military dead for the United States in the ETO from all causes was 186,902. Other casualties including missing in action and wounded totaled 842,294. As awful as these numbers were, the toll taken on the people of the Soviet Union was far worse. The Soviet Union suffered an estimated 30 million civilian and 7.5 million military deaths. When one adds in the staggering number of deaths from the still unfinished war in China and the Pacific, anywhere from 50 to 60 million people perished in this massive conflagration. Exact totals are impossible to determine.

After the signing of the instruments of surrender brought peace to the shaken continent, the Allies moved their forces into agreed upon zones of occupation. American forces at war's end were concentrated in the south of Germany but had advanced into the province of Thuringia. This was to be handed over the Russians. U.S. forces had to withdraw so that Soviet forces could move into their occupation zone. U.S. forces also withdrew from Czechoslovakia as it too was to be in the Russian sphere of influence, and the Allies shared an uneasy joint occupation of Austria. Issues quickly arose among the Allies concerning political parties, black market operations, repatriation of Russian prisoners of war, settlement of refugees, reparations (a thorny issue with the Russians) and methods for enforcing order. These confrontations were especially acute in Berlin, where the four main powers shared the running of the city as part of a joint *Kommandatura*. United States Military Government teams set up rudimentary local governments by decree and began trying to feed the population, deal with liberated prisoners and refugees, control outbreaks of disease in the absence of a working public health system, and re-establish basic infrastructure such as electricity, water, and sewage. As occupying powers, the Americans, British, French, and Russians were responsible for the well-being of the civilian population from the moment of surrender. They were also responsible in the long-term for the “denazification” of Germany and its rehabilitation so that it could re-enter the community of nations.

While the occupation in Germany was getting underway, the war in the Pacific continued. Fighting was still raging on the island of Okinawa and on the islands of the Philippines, where soldiers and marines fought against the still-tenacious and well dug-in Japanese Army. The Navy suffered some of the heaviest ship losses in its history at Okinawa from a relatively new phenomenon, the suicide bombers called *kamikaze*, or “divine wind.” Russia, true to its promise made at Yalta, attacked the Japanese in Manchuria in a massive blitzkrieg-style attack codenamed AUGUST STORM. Invasions of the home islands of Japan, planned for late 1945 and 1946, were predicted to be costly in the extreme to both the Allied invaders and the Japanese. Estimates as high as one million American and several million Japanese casualties were considered by some to be conservative, given the stubborn defense of Okinawa. Only the dropping of two new weapons, bombs that unleashed the power of atomic energy with devastating results, on Hiroshima and Nagasaki in August finally brought home to the Japanese leadership the hopelessness of their position. Their final surrender on September 2, 1945 brought an end to World War II. The people of the world could at last take a momentary “breather” and savor the costly but total victory of the Allied forces over the forces of tyranny and Fascism. There was also the hope that the great powers would implement the ideas expressed in the Atlantic Charter and at Yalta and establish a new and more peaceful international order. That remained to be seen.

Afterword

The American Battle Monuments Commission (ABMC) was established in 1923 as an enduring expression of America's desire to recognize the service of the American Expeditionary Forces, the veterans who returned, their comrades in arms interred overseas and at home and those who went missing. General of the Armies John J. Pershing became the first Chairman of the ABMC. Under his leadership American cemeteries and monuments were created in Europe. Great care was shown in the design of these sites. The architects created, in stone and earth, fitting memorials to service and sacrifice that are national treasures for all Americans. The World War I and World War II cemeteries and monuments of the ABMC also inspire European families who frequent the sites, some of whom have worked for and supported the ABMC for generations.

The monuments and cemeteries of the ABMC are as essential to the national story as those in the United States. Visiting the final resting places of these American men and women, we are inspired by their service and indebted to their sacrifice. Standing on the battlefields of American armies we sense the drama of the history they made and appreciate their endurance and achievement.

David J. Urban

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AMERICAN BATTLE MONUMENTS COMMISSION

“Time will not dim the glory of their deeds.”

GENERAL OF THE ARMIES JOHN J. PERSHING

The American Battle Monuments Commission—guardian of America’s overseas commemorative cemeteries and memorials—honors the service, achievements and sacrifice of the United States armed forces. Since 1923, ABMC has executed this mission by (1) the erection and maintenance of suitable memorial shrines, in the U.S. when authorized by Congress and where U.S. forces have served overseas since April 6, 1917; (2) designing, constructing, operating, and maintaining permanent American military burial grounds in foreign countries; and (3) supervising the design and construction on foreign soil of U.S. military memorials, monuments, and markers by other U.S. citizens and organizations, both public and private, and encouraging their maintenance.

In performance of its mission, ABMC administers, operates, and maintains 26 permanent American military cemeteries; 30 federal memorials, monuments, and markers, and eight nonfederal memorials. Three memorials are located in the U.S.; the remaining memorials and all of ABMC’s cemeteries are located in 17 foreign countries, the U.S. Commonwealth of the Northern Mariana Islands, and the British dependency of Gibraltar.

In addition to grave sites, the World War I and II cemeteries and three memorials on U.S. soil commemorate, on Walls of the Missing, U.S. service members who went missing in action or were lost or buried at sea during World War I and II, and the Korean and Vietnam Wars.

