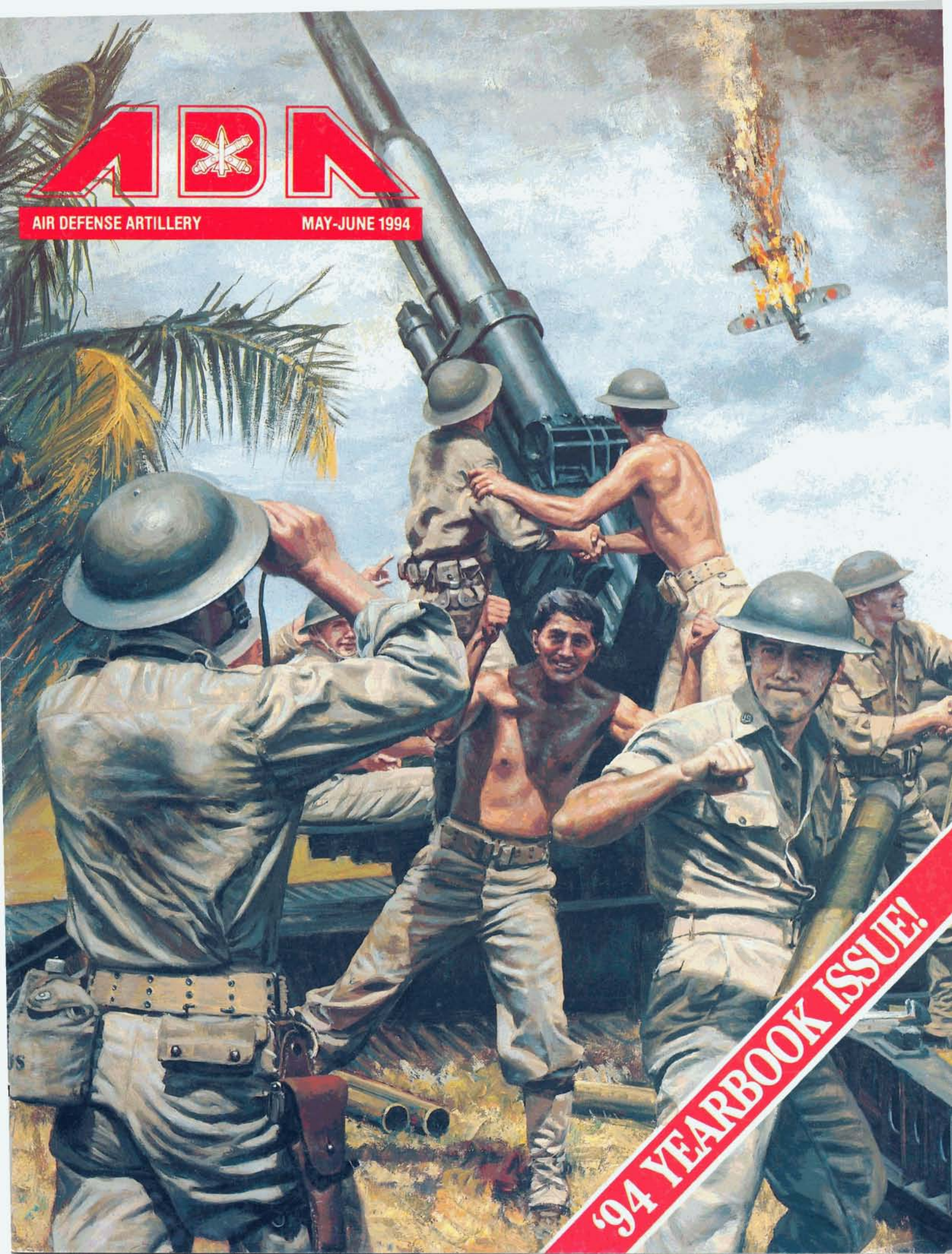
# ADA

AIR DEFENSE ARTILLERY

MAY-JUNE 1994



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BOMBARDIER **SHORTS**

# 1994 Air Defense Artillery Yearbook

El Paso artist John Paul Jones, left, interviewed veterans to create the series of WWII illustrations that appear throughout this edition of the *ADA Yearbook*. ADA Historian Lt. Col. Thomas E. Christianson looks on as Arthur E. Alarcon, who, on June 6, 1944, led a platoon of M-16 half-tracks onto Omaha Beach, points to himself in one of Jones' canvases.


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**On the Cover**

A segment of Don Stivers' "First to Fire," which shows the 200th Coast Artillery (AA) in action at Clark Field, is reprinted with permission. See page 63 for the entire painting and a fuller description of the action depicted.


*ADA* is a professional journal devoted to the advancement of the art and science of Air Defense Artillery and the U.S. Army. The *1994 ADA Yearbook* supersedes the May-June issue of *ADA* and serves as the showplace publication of the ADA Commanders Conference. Articles appearing in the *1994 ADA Yearbook* do not necessarily reflect the official opinion of the Department of Defense. **RATES:** Subscriptions (payable in advance): domestic, $16; foreign, $36. **POSTMASTER:** Send address changes to Image/Southwest, 517 Main, Texarkana, TX 75501 (903-793-5528).

# *1940s antiaircraft artillerymen teach today's air defenders the true meanings of "duty," "honor" and "sacrifice."*

By MG James J. Cravens Jr.

More than three hundred thousand American soldiers, sailors and marines marched away to World War II and never came back. They died and others lived and nobody knew why it was so, but only knew that those who died made it possible for the living to go on.

For the most part, the millions of World War II veterans who did return to march in victory parades were civilian soldiers. In later years, many would look back on their service time as the best years of their lives, but in 1945, they were eager to reenter civilian life. Relatively few stayed in the Army. Instead, they got their old jobs back, working in the oil fields, farms, mines, factories and assembly plants. Some went to college on the GI Bill. They married the girls they had left behind, created the Baby Boom, ran for public office, picked up their tool boxes or briefcases and went to work each morning. They made the 1900s the "American Century."

The World War II veterans who stayed in the Army served as role models for younger generations of soldiers. Recruits shivering in Korea's frozen foxholes, waiting for Chinese bugles to signal the next assault, took comfort in knowing the platoon sergeant had been through it before. Soldiers who fought in Vietnam were also exposed to them, albeit in much fewer numbers. The most famous role model was General Creighton Abrams, who led the armored spearhead of Patton's army.

Today, World War II veterans still constitute a sizable portion of the population, an immense reservoir of knowledge, experience and inspiration, but a reservoir that is rapidly shrinking.

> *We had a certain type of antiaircraft gun, mounted on a half-track, which required two men to fire. The gunners sat in two metal bucket seats just back of the guns. [An infantry lieutenant named Lennie Bessman] was lying near this ack-ack outfit during a terrific dive-bombing and strafing, and he kept his eyes on those two special gunners as the Stukas came down right upon them.*
>
> *The two never wavered. They sat there firing until suddenly and in unison they toppled sideways out of their seats — dead. And all within the same instant two more Americans rose like twins from the bed of the half-track, took the seats just vacated by death, and went right on with the firing. Lennie was terribly moved by that little drama of duty automatically performed, and he almost choked up when he told the story.*
>
> *— Ernie Pyle, War Correspondent*

A 17-year-old who signed up, with parental permission, the day after Pearl Harbor would be 71 today. Most World War II veterans are older. They are fathers to a few of us "old soldiers" who still wear the uniform, and they are grandfathers or even great grandfathers to younger soldiers who fought in Operation Desert Storm. Within a decade or two, all but a very few will be gone. Meanwhile, air defense artillerymen of the 1990s still have a chance to learn from the antiaircraft artillerymen of the 1940s about what it takes to win and the true meaning of words like "duty," "honor," "country," "sacrifice" and "hardship."

This edition of the ADA Yearbook, which appears as part of the Army's 50th Anniversary Commemoration of World War II, is dedicated to the antiaircraft artillerymen who fought and won that war. The U.S. Army Air Defense Artillery School has invited a contingent of veterans to represent the antiaircraft artillerymen in 50th Anniversary commemoration ceremonies scheduled for the Air Defense Artillery Commanders' Conference in June. The occasion will give today's air defense leaders a chance to meet a group of soldiers with wonderful and awe-inspiring stories of conflict five decades ago. Some often-heard phases regarding them and their exploits follow:

— They started out, like their counterparts in other branches, poorly trained, ill-equipped, outnumbered and terribly green. Being Americans they were a cocky bunch — still are — and, at first, made up with bravery what they lacked in experience.

— They fought to the last ditch on Bataan; then, racked with malaria and dysentery, marched off to one of the hellholes the Japanese called prisoner of war camps.

— When enemy planes came roaring down North Africa's "Stuka Valley" or "Messerschmitt Lane," scattering infantrymen to the shelter of foxholes, they ran to man their 40mms.

— They could never stop V-2 rockets, but, toward the end of the "robot blitz," they shot down better than 80 percent of the V-1 "buzz bombs" launched across the English Channel before they could hit London.

— They saved the beleaguered beachhead at Anzio by shooting down so many enemy planes that the Germans suspended daytime air raids.

— They drove M-16 half-tracks onto bloody Omaha Beach and shot up German pillboxes and gun emplacements instead of aircraft (General Omar Bradley said his troops would have never made it off the beach without them).

*Antiaircraft artillerymen march in a victory parade held at Fort Bliss, Texas, to celebrate the end of World War II.*

— They defended the seaports, airfields and railheads that sustained Allied armies in their drive across Europe. In an article published just after the war, one of them tried to describe a flak-filled night sky:

*The city air raid sirens, with their mournful, ear-shattering howls, signal the approach of enemy bombers. Minutes later, when the last throbbing roar of the sirens dies, a deep silence falls on the port and city. People scurry into shelters. The lights in the ports go out by areas, leaving large patches of blackness.*

*After a short period of waiting and growing tension, a thin curving stream of brilliant red dots rises into the night sky. Another stream of red rises beside it, then another and another — nearer now. Seconds later a distant chattering of rapidly firing guns is borne in. Now the volume of sound grows as other antiaircraft guns spring into action. Soon the whole port area is jarred by fire of all types of antiaircraft, from the rapid staccato of machine guns and the beating cough of the 40mms to the heavy thunder of the 90mms. A fantastic number of rounds from hundreds of hot gun barrels hurtle toward enemy raiders. In the tracer-filled sky, two flaming planes fall to earth. A terrific concussion signals the collision of a fully loaded bomber into a mountainside.*

*Now the surviving enemy planes are speeding off out of range. The gunfire dies down, then stops. Silence settles once more, only to be broken again by the steady, unwavering howl of the city sirens signaling "All Clear."*

— When the chips were down at the Battle of the Bulge, they used their 90mms to stop onrushing Tiger tanks.

— They shot the Luftwaffe out of the sky above the Bridge at Remagen.

— They went "island hopping" across the Pacific from Guadalcanal through the Philippines to Okinawa with MacArthur and Nimitz, repelled banzai charges and shot down kamikazes a split second before they crashed into U.S. battleships.

— They rapidly became the world's best antiaircraft force, more than capable of handling anything the Axis could throw against them. U.S antiaircraft artillerymen who had a chance to compare captured German 88mm antiaircraft guns — the war's most renowned weapon — were convinced their own 90mms were better. But as one of them explained: "No antiaircraft artilleryman will ever be satisfied until he has a missile with a muzzle velocity equal to the speed of light, with an accuracy of 100-percent hits and with the ability to engage targets that travel at speeds in excess of 5,000 miles an hour. He will demand that this missile have a lethal range from a few hundred feet to the outer limits of the stratosphere."

A few AAA soldiers were poets like Lieutenant Jack Spear, whose poem appeared in the *Coast Artillery Journal* (predecessor of the *Antiaircraft Journal* and *ADA* magazine) after he was killed during the Battle of the Bulge.

*If you keep faith with me you need not weep*
*If I am killed, for I will not complain*
*Of any death if by it others gain*
*The things I think are worth my life to keep;*
*The right to have, to know, to love, to speak.*
*If all win these, I will endure my pain*
*And on the battlefront, where I have lain,*
*Will find an honored place in which to sleep.*
*But if when peace returns to you once more*
*You break the word you gave humanity*
*By keeping not the pledge to which you swore,*
*Then carve in stone this epitaph for me:*
*"Here lies a fool who placed his hope in war*
*And gave his faith to insincerity."*

Lieutenant Spear sent the poem to his mother, who sent it to the *Coast Artillery Journal* editors, but the message is directed to all of us, particularly those of us who are responsible for nurturing the traditions he helped establish.

This year's ADA Commanders' Conference, with its ceremonies honoring the antiaircraft artillerymen of World War II, comes too late for two of the "First to Fire" branch's most admired heroes, Brigadier General (Retired) Stephen Michael Mellnik and Major General (Retired) Eugene F. Cardwell.

In quick succession, the black stallion with empty saddle and stirrups led two sad processions onto Fort Bliss' Memorial Circle. Like Eisenhower, MacArthur, Bradley and Patton, these two ADA heroes stand in the giant shadow of the common soldier who, ignorant of grand strategy and schemes of maneu-

ver, kept moving ahead — no matter what the dangers or hardship — one step at a time toward ultimate victory. Still, their lives and careers serve as shining examples, and we shall not forget them.

A few generations ago, history called forth men like General Mellnik and General Cardwell to keep a date with destiny. They did just that. They, and soldiers like them, propelled the United States into a position of world leadership that we have not relinquished since their magnificent feats resulted in the surrender of our adversaries. All Americans owe them a deep debt of gratitude. If you see one in the future, thank him or her for their contribution to our nation long ago. They are like bright stars gradually fading away.

*MG James J. Cravens Jr. is the Chief of Air Defense Artillery.*

# TAPS

## *Air Defense Artillery bids a final farewell to two of its most cherished heroes*

**BRIGADIER GENERAL STEPHEN M. MELLNIK**
November 22, 1907 - January 1, 1994

Stephen Michael Mellnik believed people possess a reservoir of strength and endurance that few ever tap, except in times of hardship or danger. It was something he learned the hard way in Japanese prisoner of war camps. He thought each of us should do our best to reach down inside, harness our hidden potential and put it to work in everyday life.

Born in Russia in 1907, he emigrated to the United States with his parents. He enlisted in the Army in 1925 at Scranton, Pa., won a competitive appointment to West Point in 1928 and was commissioned a second lieutenant in 1932. After a brief tour of flight training, he joined the Artillery and spent the next seven years with "guns, powder, shells and men."

*(continued)*

**MAJOR GENERAL EUGENE F. CARDWELL**
December 29, 1904 - March 10, 1994

Eugene F. Cardwell was a World War II antiaircraft artillery officer, but his greatest achievement was accomplished amid the roar of diesel engines and gnashing of gears rather than the thunder of 90mm guns. After the breakout from Normandy, he organized the first truck convoys that moved ammunition, gasoline, rations and just about everything else imaginable from the Channel ports to U.S. units racing across Europe. The around-the-clock convoys became known as the "Red Ball Express," a unit renowned for its esprit and as famous as any infantry or armored division.

General Cardwell was born in Noblesville, Ind., on Dec. 29, 1904. He graduated from the University of Michigan in 1926. He was commissioned a second lieutenant of Infantry

*(continued)*

**(Mellnik continued)**

General Mellnik arrived in the Philippine Islands in October 1939. He was assigned to Corregidor, the island bastion in Manila Bay, and commanded a battery of Philippine Scouts until mid-1941, when he was transferred to General Douglas MacArthur's headquarters in Manila. After three hectic weeks, General MacArthur ordered Manila evacuated and American forces began their retreat into the Bataan peninsula.

General Mellnik returned to Corregidor with General MacArthur on Christmas Eve, 1941. During the grim last days of Corregidor, General Mellnik commanded a battalion and fought courageously until he was captured by the Japanese in May 1942. He was always convinced that, if the U.S. regulars had had a few more precious months to whip the Philippine Scouts battalions into an efficient fighting force, they could have held out against the Japanese much longer than they did.

General Mellnik escaped from a Japanese POW camp with nine other Americans in April 1943, eluded Japanese search parties and made contact with Filipino guerrilla units operating in the mountains. He spent the next five months organizing guerrilla units to harass the enemy, established radio contact with Australia and arranged for a submarine rendezvous off Zamgboanga.

He arrived in Australia in August 1943. From Mellnik and his fellow escapees, the world first learned of the infamous Bataan Death March and the inhumane treatment accorded U.S. POWs. Their revelations hardened the resolve of the American public. For his actions during the Philippine period, General Mellnik was awarded the Distinguished Service Cross and the Silver Star.

General Mellnik returned to the United States in May 1945 and was assigned to the Far East Branch of G-2, War Department General Staff until mid-1949. Following a year as G-3, Third Army, he attended the Army War College. He later commanded a Nike Air Defense Group in Pittsburg and went on to serve as J-2 of the U.S. European Command in Paris.

In July 1956, he was promoted to brigadier general and assumed command of the 34th Air Defense Brigade in Mannheim, Germany. General Mellnik returned to the United States in November 1958 and was assigned to Fort Bliss, Texas, as the Assistant Commandant of the United States Army Air Defense School. He also briefly served as the U.S. Army Air Defense School Commandant and Post Commanding General.

General Mellnik retired from active duty in May 1963 and resided in El Paso until his death on Jan. 1, 1994. He frequently visited Fort Bliss, and continued to serve as a role model and an inspiration to ADA soldiers of all ranks. He challenged them to make the most of their abilities and cautioned them always to urgently prepare — mentally, physically and professionally — for the day when war would come again.

General Mellnik is survived by his wife, Nonnie Kolliner Mellnik, and daughters, Thelma Wesner, Stephanie Richards and Mary Alice McQueen.

**(Cardwell continued)**

in the Regular Army on June 30, 1926, and was assigned to the 10th Infantry, Fort Hayes, Ohio.

He resigned his commission on July 5, 1928, and settled in Chicago, Ill. He was commissioned a first lieutenant in the Coast Artillery (CA) Corps of the Illinois National Guard on July 5, 1929, and commissioned a captain in the CA Corps of the National Guard of the United States on Jan. 6, 1931. He was assigned to the 202nd CA Corps (AA), Illinois National Guard in Chicago from 1929 to 1940.

In September 1940, he was called to active duty at Fort Bliss, Texas. In June 1941, he was promoted to major and transferred to Headquarters, Third Army, San Antonio, Texas, and assigned to the Antiaircraft Section. In August 1941, he was promoted and transferred to the Iceland Base Command where he served successively as assistant G-4 and Deputy Chief of Staff; he was promoted to lieutenant colonel in February 1942 and to colonel in November 1943.

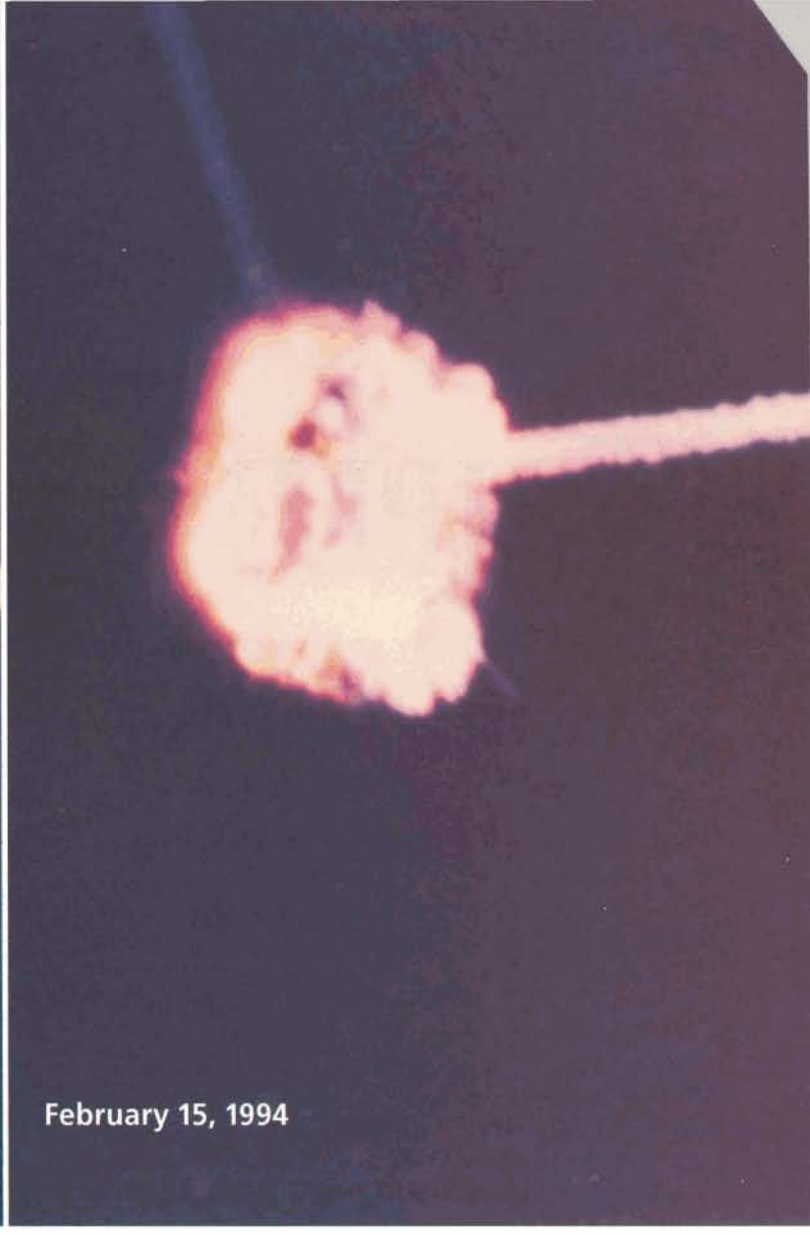
In January 1944, he was appointed Assistant G-4, Headquarters, European Theater of Operations. The following month he was transferred to the Advance Section, Communications Zone, European Theater of Operations, where he served successively as G-4, Deputy Chief of Staff and Executive Officer, Motor Transport Brigade. He was transferred to Supreme Headquarters, Allied Expeditionary Force, in October 1944 and appointed Deputy Chief, Enemy War Materials Branch, G-1-4. In August 1945, he was appointed Chief, Supply Branch, G-4, Headquarters, United States Forces European Theater.

He returned to the States in November 1945, and in February 1946 became Assistant G-4, Panama Canal Department. He was appointed G-4 in April 1946 and, in November, appointed G-4, Caribbean Army. On Aug. 24, 1946, he was integrated into the Regular Army. In August 1948 he entered the Industrial College of the Armed Forces, Washington, D.C. He graduated in June 1949 and was transferred to Fort Bliss to command the 12th Antiaircraft Artillery Group. In July 1950, he was assigned Deputy Chief of Staff, Antiaircraft and Guided Missile Center and Fort Bliss, and in October 1950 was named Chief of Staff of that command.

He was assigned to Army Headquarters, Washington, D.C., in December 1950 for duty as Assistant Chief, Services Division, in the Office of the Assistant Chief of Staff G-4. In August 1952 he was promoted to brigadier general, transferred to Fort Lewis, Wash., and assumed command of the 31st Antiaircraft Artillery Brigade. He was transferred in April 1954 to command the 40th Antiaircraft Brigade, concurrently serving as Antiaircraft Officer, Far East Command. In June 1956 he was transferred to Fort Sheridan, Ill., to command the 5th Region, Army Air Defense Command.

He was promoted to major general April 23, 1956, and transferred to Heidelberg, Germany in June 1958 as Deputy Chief of Staff for Advanced Weapons and Guided Missiles, U.S. Army Europe. In November 1960 he took command of the Southern European Task Force, Verona, Italy.

On July 31, 1962, in Verona, Italy, General Cardwell retired from active service to settle in El Paso. He was preceded in death by his wife, Elizabeth, and his son, Richard.

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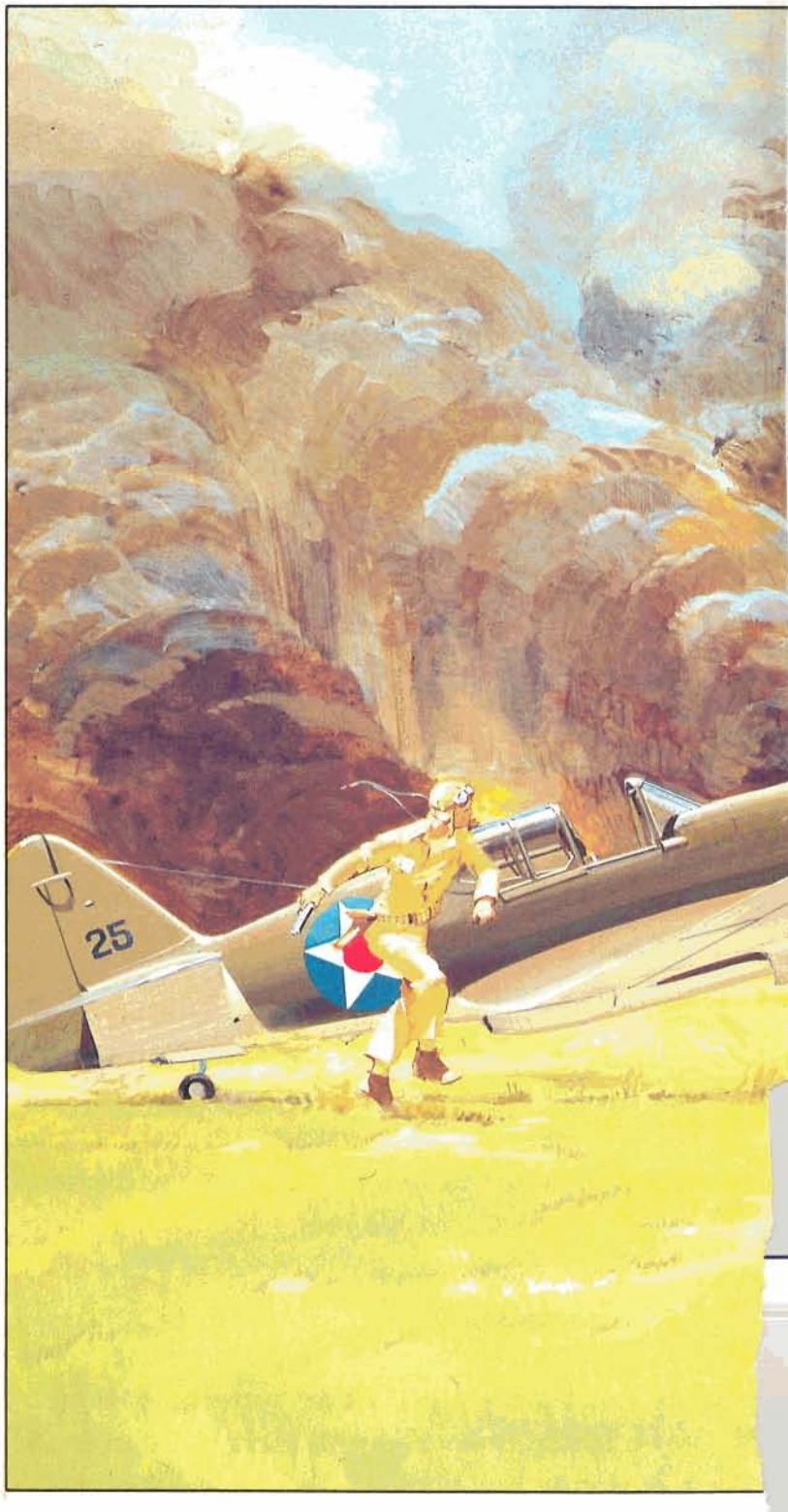
# TRIPLE A

## Battling their way across the European and Pacific theaters of war, AAA units were an integral part of the combat arms team

*by Lt. Col. Thomas E. Christianson*




Ten hours after Japanese planes dived on battleship row at Pearl Harbor, American soldiers and airmen strolled to lunch at Clark Field in the Philippines. Members of the 200th Coast Artillery lounged near their three-inch and 37mm antiaircraft guns, eating their lunch in the noonday sun. Someone noticed a string of planes coming in fast from the northwest. Some took pictures of the approaching "Navy aircraft." Reality took hold in seconds, as tinfoil-like objects, dropping from the planes, exploded with deadly precision on the rows of neatly parked aircraft on the runway. Men of the 200th immediately began shooting at the enemy formations streaking past. For some, it was their first live-fire "exercise." Somehow this was too real, a far cry from hours spent practicing on wooden models, boxes and broomsticks that resembled guns, back in the States.

Though America was certainly at war, our nation and air defenders were not prepared. The challenges ahead were enormous. The obstacles were not only a determined enemy but outmoded thinking by senior military leaders who ignored the theories and admonitions of Emilio Douhet and Billy Mitchell in the '20s and '30s. The fruit of that neglect now lay rotting on the bottom of Pearl Harbor and along the runways of Clark Field.

World War I witnessed the birth pangs of aerial warfare. Army leaders gave the air defense mission to the Coast Artillery because it was the only branch that practiced the art of firing at moving targets. However, air defense's success in the Great War was limited by the crude technol-

*Armed with obsolete antiaircraft guns, the men of the 200th Coast Artillery mounted a gallant but futile defense when Japanese warplanes attacked Clark Field in the Philippines on Dec. 8, 1941.*

ogy of the time. Most of the infantry-oriented military leaders who dominated the key Army staff positions following the war thought of air power as a trendy but insignificant aberration in the minds of radicals like Douhet and Mitchell. To them, the latter's demonstration of air power sinking a battleship seemed nothing more than grandstanding for the press.

That the antiaircraft artillery was a stepchild of the Coast Artillery did not help matters. Col. E. Paul Semmens asserts in his book, *The Hammer of Hell*, that by the 1930s "Coastal Artillery men were separated mentally and physically from the rest of the Army." They were not accepted partners in any combined arms packages under discussion and development.

Though Command and General Staff College students talked about the importance of defending forward maneuver units from potential air attack, most agreed with the Infantry School's 1933 proclamation that front-line units could provide most of the air defense themselves, without "special troops" (antiaircraft artillery). Besides, as was pointed out, Coastal Artillery men did not understand the way regular infantry units maneuvered, and air defenders generally lacked initiative. Most "real Army men" called the Coast Artillery "the Red Comforter Corps."

*After the German blitzkrieg rolled across Western Europe, Adolph Hitler visited Paris and posed triumphantly in front of the Eiffel Tower.*

Within such an environment, recommendations by three successive Coast Artillery chiefs that antiaircraft artillery units be made organic to the division went unheeded. These prejudices were further strengthened by the most important single reality — lack of resources. Demobilization following the massive war effort meant that priority for personnel resources would be allocated to the maneuver units. Incredible fiscal constraints during the late twenties and early thirties, when America languished in the depths of the Great Depression, meant that development of expensive new air defense guns was on "permanent hold."

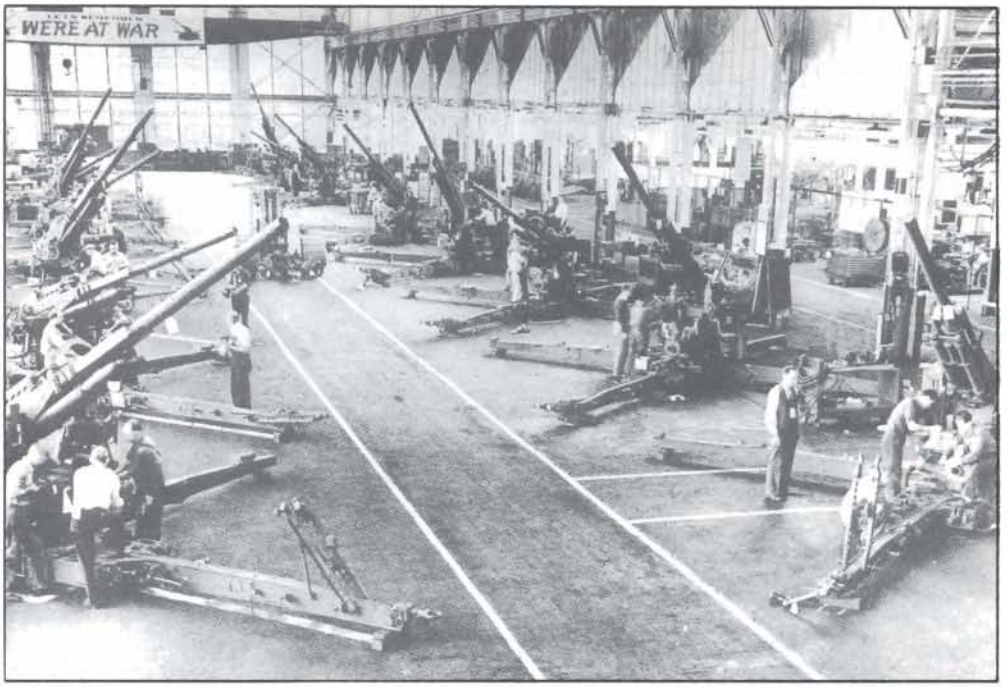
The inertia in air defense weapons development can only be brought into proper perspective in light of the quantum improvements in aircraft technology during the same period. Airplanes continued to set new speed records, doubling them between 1920 and 1939. Fire control devices for air defense systems could not keep pace. By 1933 the main air defense weapon system, the three-inch AAA gun, was obsolete. In January of that year, Adolf Hitler came to power.

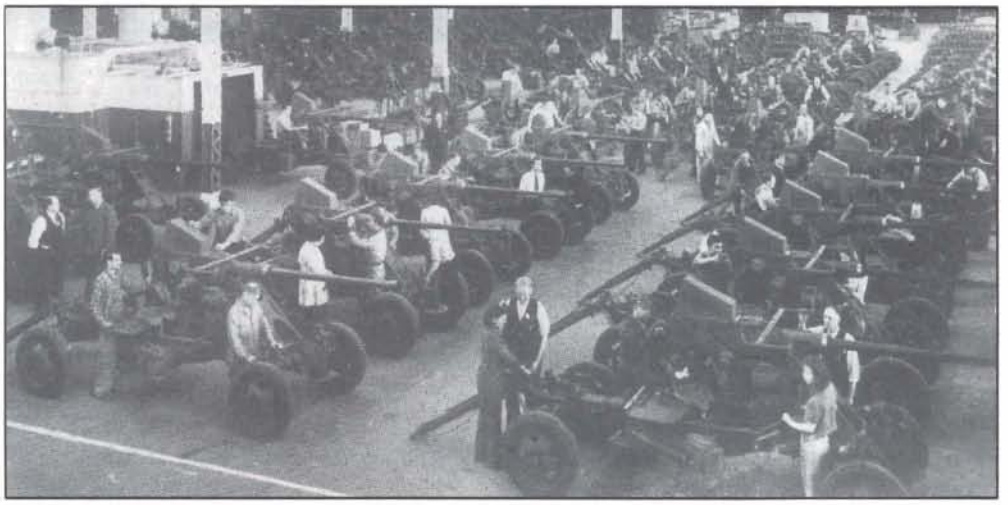
During the Spanish Civil War of 1936-39 the Germans, Italians and Russians used Spain as a "national training center." Uneasy American military leaders and congressmen began to call for improvements to antiaircraft systems. As Americans today are stirred by television images of the war in Bosnia, Americans in the 1930s reacted strongly to artist Pablo Picasso's powerful painting "Guernica," which depicted the German bombing and total destruction of a small Spanish town. Public pressure did much to free Congress' purse strings. By the end of the decade, appropriations for the Coast Artillery (AntiAircraft) had increased 12 times over the annual average for the previous 17 years.

The War Department had repeatedly rejected the Coast Artillery's recommendation for organic divisional air defense. The air defense mission centered on protection of the corps rear area. For this reason, and because the Coast Artillery was the most technically advanced branch in the Army, the budgetary increases of the late '30s were steered to the development of a new 90mm M-1 gun to replace the obsolete three-inch gun. The new gun fired to an altitude approaching 40,000 feet, a tremendous improvement over its predecessor, and was guided by a director that computed altitude and direction of an acquired target. Production of the 90mm began in earnest in 1940. Unfortunately, there was no time to put the gun through extensive field and maneuver tests that might have demonstrated its most serious shortcomings: lack of mobility and long emplacement times. The Battle of Kasserine Pass would too clearly point out these problems. German antitank use of their 88mm flak cannon, particularly by Rommel, would later influence further changes to the 90mm. The original 90mm M-1 gun could not fire in the depressed mode below zero degrees, sometimes essential in antitank combat. The new 90mm M-2 that would be fielded in 1943 corrected these deficiencies and added four road wheels to increase mobility.

American military observers watched in awe as Hitler's legions swept into Poland in September 1939, and then were stunned by the fall of France in May of 1940. Borrowing largely from foreign thinkers like Fuller, Liddell Hart and Tuckechevsky, German General Heinz Guderian had

forged a combined arms package that maximized the principles of war — mass, maneuver and offense. The extensive use of close air support in the form of Stuka dive bombers and ME-109 fighters was an integral part of the German doctrine. Luftwaffe operations were closely tied to maneuver ground troops. It was obvious that antiaircraft units would have to be deployed in the forward area, as German doctrine called for air attacks to rupture defensive lines in the way that artillery had done for centuries. German aircraft were called in by Luftwaffe liaison officers at division level to break and eliminate strongpoints, and German aircraft were used to fight the deep battle, attacking command and control centers and logistics depots.



*Thousands of 90mm (top) and 40mm antiaircraft guns (bottom) began pouring off American assembly lines as the United States, stunned by the sudden fall of France, geared up for the coming struggle.*

The Germans also demonstrated the importance of divisional antiaircraft artillery. The most critical point in the battle for France was the crossing at the Meuse River. Resistance was heavy as German units fought their way across and struggled to build pontoon bridges for the hundreds of panzer and motorized infantry bottlenecked for 30 miles to the rear. The British and French quickly recognized that attacking the lucrative target could halt the German spearhead. Within a day a massive air attack of more than 100 planes attacked the bridgehead. But the Germans were not caught sleeping; Guderian ordered all vehicles off the road to make way for divisional air defense weapons. Some arrived just minutes before the attack. French and English bombers flew into a wall of steel. More than 40 percent of their planes were destroyed, while damage to the pontoon bridges was negligible. German units continued to cross and within days swept across France.

Although the Germans gave the world clear lessons with their blitzkrieg successes, American military leaders were slow to act. In early 1941 Chief of Staff George C. Marshall directed the Operations Division at the Pentagon to study the creation of mobile antiaircraft and antitank units, but the man he had chosen to create the American Army of World War II, Gen. Leslie J. McNair, was less than enthusiastic about the forward role of antiaircraft artillery.

McNair epitomized the prejudices of the Army prior to the war and largely ignored the German approach to maneuver warfare. McNair wanted an Army based on 10,000-man light infantry divisions. Armor, antiarmor and air defense units would be posted at corps and used forward as the situation dictated. His was largely a reactive philosophy, certainly defense-oriented and based on World War I experiences. He firmly believed that air defense artillery needed to be concentrated in the corps rear and that the protection of forward combat units would most likely be an exception rather than the rule. He clung to this belief in spite of German doctrine. McNair demonstrated his opinion, and that of many other military leaders, about the Coast Artillery and antiaircraft artillery men when he warned Army commanders to keep the AAA men away from the infantry so as not to diminish the infantry's fighting spirit.

Notwithstanding McNair's problems with the antiaircraft artillery, the German air threat created an urgent need for short-range weapons to complement the 90mm M-1, about to be fielded. By 1939, .50-caliber automatic weapons battal-

*Antiaircraft Artillery officer candidates fire 37mm guns at Camp Davis, N.C. The 12-week course trained lieutenants-to-be on antiaircraft guns, automatic weapons and searchlights.*

ions were part of the AAA regiment. The following year, one study admitted that these antiaircraft units might be capable of protecting point targets in the division rear.

The effectiveness of the Stuka dive bomber in close air support operations prompted developers to search for additional gun systems. An intermediate gun, the 37mm Browning, first tested in 1924, was accepted, then replaced by the British Bofors 40mm, which the United States was already producing for the British under the Lend-Lease Act. The AntiAircraft Artillery School at Camp Davis, N.C., suggested that the 40mm would be excellent at protecting point targets.

By 1940, the creation of separate battalions that could be attached to divisions was approved. This event occurred, surprisingly, over the vehement objection of the Coast Artillery, again giving ammunition to those in the Army who didn't consider troops of the Coast Artillery as combat soldiers. The Coast Artillery School did not publish doctrine on separate battalions until late 1943. This resulted in continued confusion throughout the war, as relationships varied depending on each division. Theoretically these air defense units were under the divisional commander's operational control but not part of his permanent organization. Later, during the fluid situation that followed the breakout from Normandy, this lack of doctrinal base resulted in confusion. Most units established their own doctrine based on their combat experiences.

As the AAA men reacted to the threat in Europe and the Pacific with new and untested weapons systems and a doctrinal vacuum, they suffered from the military biases of leaders like McNair. They now had the enormous task of fielding units and training the men who would man those new systems. In 1939 there were only nine AAA regiments; by the end of 1942, there were 154 battalions. This was but one part of the total mobilization that briefly preceded, and then followed, Pearl Harbor. Admirable though this mobilization achievement was, the units that were activated and counted combat capable were in some respects a paper force that would suffer both from lack of training and lack of equipment. Many units received equipment just prior to deployment, and many soldiers fired their first rounds at enemy aircraft strafing their positions. How was this possible?

The architect for the training and fielding of World War II antiaircraft artillery units, Maj. Gen. Joseph A. Green, became Chief of Coast Artillery in 1940. Green's mission was to expand the number of antiaircraft units by 500 percent within 30 months. This required the construction of training centers, the development of antiaircraft training programs and the requisite equipment for training and fielding the hundreds of AAA battalions that would fight in the Pacific, Africa and Europe. Green's greatest challenge was to locate, assign and organize a cadre of experienced officers and noncommissioned officers to train, and then head, the activating units.

Green approached these challenges with uncommon vigor, recognizing that with a nation at war, his constant enemy would always be time. He needed to get the units to the field quickly. Within 19 months, seven antiaircraft training centers were established: Fort Bliss and Camp Hulen in Texas, Camp Haan in California, Camp Stewart in Georgia, Camp Davis in North Carolina, Fort Sheridan in Illinois and Camp Edwards in Massachusetts. Eventually Green's training centers had the capability to train up to 76 battalions simultaneously.

In March 1942, Green was selected to command the Anti-Aircraft Artillery Command, now separate from the old Coast Artillery. Green's headquarters was in Richmond, Va., and he reported to the Army Ground Forces commander, McNair. Green's staff wrote the antiaircraft programs of instruction, formulated doctrine (virgin territory) and recommended weapons research and development.

With so few experienced NCOs and officers, Green's training task was formidable. Ideally, one-third of the cadre of trainers would come from the old Coast Artillery tactical units already in place. Though some of the key NCOs had a wealth of experience, with 10 to 20 years time in grade, many NCOs had joined in 1939 and 1940. Often the NCOs and officers had only a few more months of Army experience than the recruits they were charged to train.

Green's new units always suffered from a lack of experienced officers. This quickly became a training priority. The Officer Candidate School at Camp Davis provided the antiaircraft artillery officers for the new units. The 12-week course, required of all officers assigned to AAA units,

stressed the new Army equipment and familiarization with guns, automatic weapons and searchlights. Although familiarization gave them a little knowledge, it did not result in technical proficiency. Later, based on input from the field, officers would concentrate on a single weapons system to spend more time on the limited training equipment. Tactics, doctrine and leadership were not part of the course. The Officer Candidate School produced more than 25,000 antiaircraft junior officers during the war.

The senior officers in charge of training recruits and activating battalions were often National Guardsmen or Army Reservists. It was the norm for the battalion commander to command with no prior antiaircraft experience and no tactical or doctrinal manuals to assist him in preparing himself or his staff to fight. These officers were assigned not because of their air defense knowledge, but rather because of their overall Army experience; it was hoped that they would prove to have the acumen for training the thousands of raw recruits pouring into the mobilization stations.

In late 1940 more than 100 National Guard companies were converted to Antiaircraft Artillery. They would form the nucleus that would result in the first 20 regiments and 10 separate battalions cycled through Green's new training centers. Though they were not experienced air defenders, their common soldier skills knowledge made the transition to active military antiaircraft units much easier. The officers and NCOs quickly adapted the training programs developed by Green's staff, though they suffered from a lack of training equipment. The training battalions were often reduced to one 37mm gun per battalion, as the 40mm Bofors was still not available in sufficient quantity and was reserved for units that were to deploy. Units seldom fired, and firing at real aerial targets was almost unheard of. Crew drills were sometimes conducted on plywood box models.

The Army Ground Forces training plan was ideally a 12-week program. The first four weeks consisted of basic training, while the final eight weeks were dedicated to equipment and unit training. Units were seldom filled when training began, and were sometimes activated at 50 percent of their authorized strength. This meant that recruits continued to arrive to fill the unit in the middle, or even at the end, of the training cycle. If a recruit missed training it was up to the cadre to get him up to speed. Commanders often complained to Green that this plan made no sense. Green was sympathetic and recommended to the Army Ground Forces Command that the cycle be extended to allow for make-up training. Again, the problem was time. America was at war, and the rush to deploy units to the Pacific, as well as the proposed invasion of North Africa, precluded changes to the original training plan.

It should be emphasized that, with just a few exceptions, combined arms training was non-existent. Junior officers had no idea how to support an armor and infantry unit, nor did they expect to do so. Defense of point targets like bridges, corps rear supply points and ports was generally considered a likely antiaircraft mission. Most units did go to the field; many, in fact, lived in the field while the AAA centers were under construction and barracks space was at a premium. Field skills had to be honed in that brief 12 weeks. Field training almost always meant hours of marching with pack and weapon; however, this varied according to the commander and his cadre of officers and NCOs. It was common for one unit to march 15 miles a day while another unit at the same training center never marched except on parade. Standards in all training varied greatly. Green recognized this problem and, in June 1942, created inspection teams to certify units after inspecting both individual and collective training.

Though the training shortcomings and lack of equipment seem obvious today, we must remember that the mobilization of hundreds of thousands of soldiers had occurred literally overnight. Our Allies were barely holding on. With England on its knees, Russia poised on the brink of collapse and the Japanese empire spreading across the Pacific from China to Australia, the United States had to take the pressure off and offer some real combat contributions. Today we might think it criminal to send troops into combat as poorly trained as those we sent forward in 1942, but the situation at that time demanded haste. Although most Americans believed that the eventual outcome of the war was not in doubt, they understood that it would be a tremendous struggle that would have a horrific cost. The American public was mobilized in every way — resources, spirit and the sure determination to see it through.

*Civilian auxiliaries atop New York City's Empire State building watch for hostile aircraft as the American homefront mobilizes for war.*

**Combat Operations: North Africa and Mediterranean**

American forces landed on the beaches of North Africa on Nov. 8, 1942. Operation Torch was a success, as Vichy French forces quickly capitulated. The few enemy air attacks caused little damage. However, as American forces moved inland, enemy air activity increased. Attacks on forward air bases were particularly frequent. The Luftwaffe at this time was still a potent force that caused the Allies great concern. Immediately following the assault phase of Operation Torch, the G-3 of the Allied force headquarters headed an Antiaircraft and Coastal Defense Committee to work out the roles and missions of air defense among the Naval, Army Air Force and Army Antiaircraft forces.

Gen. Jimmy Doolittle, Twelfth Air Force commander, and other senior Army Air Force officers insisted that all air defense weapons, including antiaircraft guns, come under Army Air Force command. The Army Air Force petitioned Washington, arguing that, to organize the defense and ensure safety for all crews, all air defense operations should be placed under a single command — the Twelfth Air Force. The Army countered that this might mean that the maneuver forces and the forward logistics bases that served them would be without adequate assets. The Pentagon sided with the ground forces, and antiaircraft assets remained under control of the ground force commander.

During December 1942 there was an ongoing argument on how and where to deploy AAA assets. Decisions were often made only to be changed after the next large German raid. When the Germans bombed the port of Algiers in early December, Gen. Eisenhower immediately charged a joint Twelfth Air Force, Navy, British and Army Antiaircraft committee to determine the allocation of assets. The ground forces were represented by Col. Aaron Bradshaw, who recommended the increased assignment of antiaircraft assets to the forward corps. His recommendation was overruled by the Air Force, Navy and British, who feared that port facilities might be damaged and entire operations postponed if the Luftwaffe broke their logistics capability.

Eisenhower became increasingly inclined to redistribute more antiaircraft assets forward to the corps as reports of Luftwaffe strafing and bombing attacks on forward units became more and more frequent. Rommel's known priori-

*With the Luftwaffe still a potent threat, U.S. 40mm Bofors antiaircraft gun crew "covers all bets" outside the Municipal Casino in Algiers.*

*German warplanes swooping down North Africa's "Stuka Alley" send a 40mm Bofors antiaircraft gun crew rushing to battle stations.*

ties included the destruction of forward artillery and command posts. In a memo to the Pentagon, dated Dec. 19, 1942, Eisenhower proposed that an antiaircraft artillery unit be an organic part of every division, corps and army. But McNair did not agree, reiterating that pooling those assets at the corps was more than adequate. He also was convinced that there were more than enough AAA units in theater to protect the forward units. What he didn't understand was that the majority of AAA units were required to protect the ports. This issue was not resolved until after the February battle of Kasserine Pass.

American forces struck rapidly across Northwest Africa following their brief fight with the Vichy French. Hampered only by the terrain and a poor supply system, unable to keep up with the front lines, Eisenhower hoped to quickly pinch off Rommel's Afrika Korps by linking up with British General Montgomery approaching from the east. Woefully untrained and unprepared though the Americans were, the quick capitulation of the Vichy French lulled many GIs into believing that their next battle would be equally swift and easy. By late December Eisenhower's drive to the east was brought to a halt, stopped by German resistance, bad weather, sporadic Luftwaffe attacks and terrible roads. Mired down in the snow and mud, they dug in to wait out the winter, replenish supplies and prepare for a spring offensive.

German Field Marshall Erwin Rommel, the fabled "Desert Fox," had other plans. He realized that with the recent fall of the German 6th Army at Stalingrad, Hitler's priority would never be North Africa. Somehow he needed to strike by seizing the initiative to prevent the U.S. and British forces from joining. In a classic Napoleonic economy of force operation, he intended to leave a small screening force to face Montgomery on the Mareth line in South Tunisia, then strike and destroy the green Americans with the bulk of his seasoned veterans of the Afrika Korps. He would also use two new well-equipped Panzer divisions, the 21st and 10th, under the command of Col. Gen. Von Arnim. Once he had destroyed the Americans, he would shift back and deal with Montgomery. There was tremendous risk involved, but it was just this type of risk that Rommel relished, and his gambler's instinct had brought him success in the past.

The fighting around Sidi-Bou Zid, Sbeita, and in the mountain passes, known collectively as Kasserine Pass, was both bloody and costly to the Americans. The green Americans had met the "first team," Rommel's Afrika Korps, and had suffered accordingly. About 9,000 Allied forces, most of them Americans, had been killed or captured. The Germans captured or destroyed more than 200 tanks and 100 self-propelled guns. In the final analysis, Rommel was forced to withdraw, suffering himself from a ruptured chain of command and Von Arnim's failure to cooperate in a timely manner. The last T in the METT-T formula, time available, was working against him. Aided by ULTRA (the Allies top secret decoding machine), the Allies realized the Germans held the southern Mareth Line with just a token force and began to move. Rommel was forced to withdraw to meet Montgomery's threat. Rommel had won a tactical victory at Kas-

serine, but had not achieved his operational or strategic objectives. The Americans, on the other hand, had now gone through their "National Training Center experience," but at a bloody cost. There were immediate changes in commanders, with new leaders, George Patton among them, moving up. The American Army learned much from Kasserine. Lessons for the poorly trained, poorly deployed air defenders were now most clear.

The struggle for allocation and deployment of AAA assets continued throughout the battle itself. In early February 1943 more than 75 percent of U.S. antiaircraft units were deployed in the rear, with less than 25 percent forward to cover maneuver units. Col. James E. Harriman, the III Corps commander's antiaircraft officer, had a problem common to all air defenders — not enough AAA to cover everything. Prior to his attack at Faid Pass, Rommel had directed numerous Luftwaffe attacks on the allied forward supply center at Tebessu. Youks-les-Bain and Le Covif were also pounded by the Luftwaffe. The Twelfth Air Force, whose airfields were under constant Luftwaffe attack, insisted that more antiaircraft be assigned to the rear, pushing the issue in Eisenhower's Antiaircraft Artillery and Coast Defense Committee. This remained an interservice political issue under constant review. Harriman's dilemma resulted in scant assets deployed forward. When the Kasserine campaign opened, Harriman had a meager one-and-a-half automatic weapons battalions and one 90mm AAA gun battalion directly assigned to the II Corps. Adjustments would be made as the battle unfolded, but it was often a case of too little, too late.

To anyone familiar with their doctrine and their successes in Poland, France and North Africa, the German method of attack was predictable. Their armored forces moved forward along with motorized infantry. Artillery fire and engineer support organic to their divisions was well coordinated and effective. Most significant, though, was the extensive use of close air support for maneuver forces, provided by the Luftwaffe. As ME-109 fighters provided cover, Stuka dive bombers could operate with near impunity against frontline American troops. Hit by this veteran enemy force, the American ranks began first to fall back, then to break, as aircraft machine gunned retreating columns. American soldiers simply broke ranks and ran. Whole companies surrendered en masse.

American Maj. Gen. Lloyd R. Fredendall ordered counterattacks from his bunker 70 miles in the rear. As American columns reorganized and moved forward at Dizbel Hamra, 12 enemy fighters and nine bombers broke up the counterattacking force. An hour later another German air attack finished off the force. U.S. Army antiaircraft had not been included in the task force; in fact, no one would have considered it. After Kasserine they would.

It should not be inferred that all Americans, or all AAA soldiers, did not fight. They did fight, sometimes well. Members of the 443rd Coast Artillery, defending a field artillery battalion, engaged and destroyed several Stukas and drove off the rest. The cost was heavy, though, as the G-3 situation report for Feb. 14 reported 19 of 31 AAA systems destroyed or captured. Confusion hampered all efforts at resistance. Most infantry and armor units would break and move to the rear without notifying the few antiaircraft units around them. Coordination among the units did not exist, and no doctrine or technical SOP had ever covered working with air defense units.

At one point in the battle, Harriman ordered some 90mm guns forward to shore up crumbling defenses and fire in the much-needed antitank role. Unfortunately, the unit was never able to contribute due to the extraordinary time needed to emplace. The huge outriggers made movement painfully slow and emplacement sometimes took hours, depending on the terrain. This was completely unsatisfactory when reacting to a fluid battlefield dominated by Rommel's mobile Panzer units. Eventually most of the 90mm guns were withdrawn from the front and relegated to airfield defense.

One significant doctrinal problems that emerged from the battle of Kasserine Pass was the lack of coordination between Army Air Force and antiaircraft artillery. The sad truth is, more American planes fell to friendly fire than did German planes to our defenses. The fruit of interservice politics and rivalry was unnecessary fratricide. Many antiaircraft artillerymen had never before seen friendly aircraft, let alone German aircraft. Flash card training, though helpful, was never institutionalized. The 443rd Coast Artillery, which performed superbly protecting artillery from Stuka aircraft, also engaged and damaged seven friendly aircraft, five of them beyond repair. Another unit shot up five double-fuselage P-38s, a design unique to the Allies. The infantry undoubtedly contributed to the high fratricide rate. These mistakes were perhaps understandable: after continued pounding by the Luftwaffe, any airplane was first considered hostile and was engaged. Further, AAA soldiers believed in early engagement to protect themselves and to allow for a longer coverage of the target. Incredibly, AAA gun crews did not have binoculars or designated observers. The situation became so bad that antiaircraft units finally were ordered not to fire at any aircraft until after the aircraft attacked. Obviously, this order prevented the antiaircraft artillery from performing its mission.

On the positive side, many isolated platoons of antiaircraft contributed to the battle not only by protecting units from air attack but also by providing ground support fire for the infantry. This was the beginning of a change in the antiaircraft deployment philosophy. The infantry, armor and artillery wanted AAA units with them. In Sicily and then in Italy, artillery units would not move unless antiaircraft artillery was with them. One of the rising stars after Kasserine, General Patton, recommended after that debacle that an

*(continued on page 31)*

# *War correspondent Ernie Pyle's excerpt is probably the best description of life in a World War II AAA battery.*

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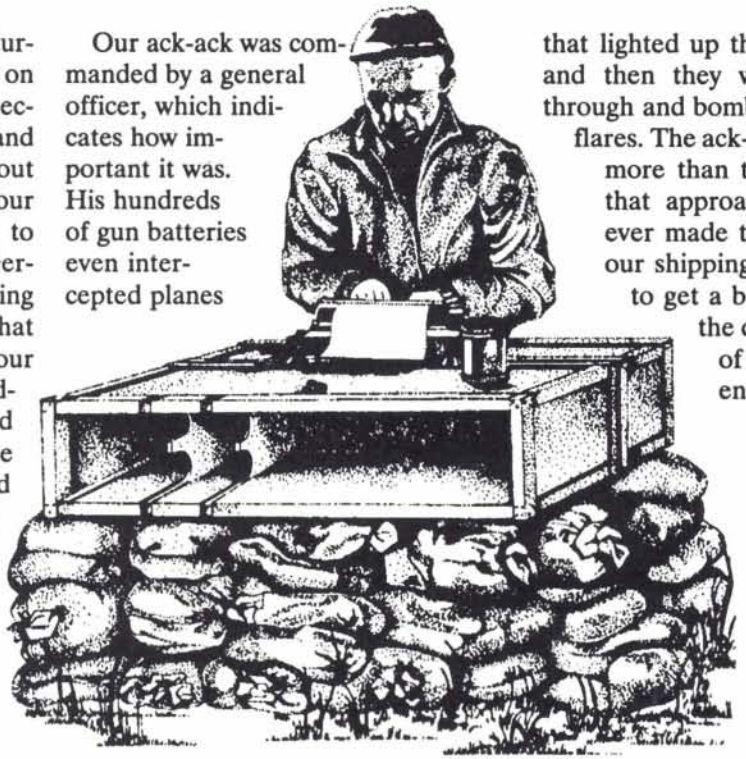
One of the vital responsibilities during those opening weeks of our war on the continent of Europe was the protection of our unloading beaches and ports. Over and through them, without interruption and in great masses, our buildup of men and material had to pass in sufficient masses to roll the Germans clear back out of France. Nothing could be allowed to interfere with that unloading. Everything we could lay our hands on was thrown into the guarding of those beaches and ports. Allied ground troops policed them from the land side. Our two navies protected them from sneak attacks by sea. Our great air supremacy made daytime air assaults rare and costly. It was only at night that the Germans had a chance. They did keep pecking away at us with night bombers, but their main success was in keeping us awake and making us dig our foxholes deeper.

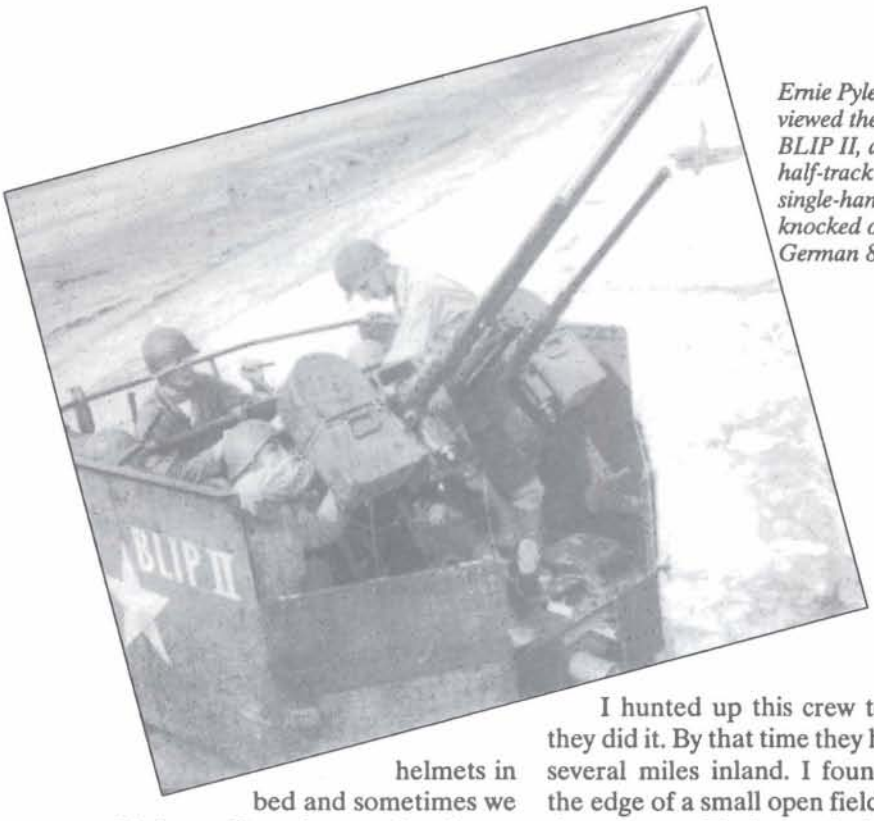


The job of protecting the beaches at night was given to the antiaircraft artillery, or ack-ack. I heard that we had there on the beachhead the greatest concentration of antiaircraft guns ever assembled in an equivalent space. After three solid weeks of being kept awake all night long by the guns, and having to snatch a little sleep at odd moments during the daytime, that was not hard for me to believe. The falling flak became a real menace — one of the few times I've known that to happen in this war. Every night for weeks, pieces of exploded shells came whizzing to earth within 50 yards of my tent. Once an unexploded ack-ack shell buried itself half a stone's throw from my tent. A good portion of our army on the beachhead slept all night in foxholes, and some of the troops swung over to the Anzio beachhead custom of building dugouts in order to be safe from falling flak.

Our ack-ack was commanded by a general officer, which indicates how important it was. His hundreds of gun batteries even intercepted planes before they neared the beaches. The gun positions were plotted on a big wall map in his command tent, just as the battle lines were plotted by infantry units. A daily score was kept of the planes shot down — confirmed ones and probables. Just as an example of the effectiveness of our ack-ack, one four-gun battery alone shot down 15 planes in the first two weeks.

The Germans couldn't seem to make up their minds exactly what they wanted to do in the air. They wandered around all night long, usually in singles though sometimes in numbers, but they didn't do a great deal of bombing. Most of them turned away at the first near burst from one of our 90mm guns. Our ack-ack men said they thought the German pilots were yellow, but I had seen the quality of German fighting for nearly two years, and I could hardly believe that. Often, the enemy dropped flares that lighted up the whole beach area, and then they would fail to follow through and bomb by the light of their flares. The ack-ack men said that not more than two out of 10 planes that approached the beachhead ever made their bomb runs over our shipping. But we were liable to get a bomb anywhere along the coastal area, for many of the Germans apparently just jettisoned their bombs and hightailed home.

It was a spectacle to watch the antiaircraft fire when the Germans actually got over the beach area. All the machine guns on the ships lying off the beaches cut loose with their red tracer bullets, and those on shore did too. Their bullets arched in all directions and fused into a sky-filling pattern. The lines of tracers bent and waved and seemed like streams of red water from hoses. The whole thing became a gigantic, animated fountain of red in the black sky. And above this were the split-second flashes of big-gun shells as they exploded high up toward the stars. The noise was terrific. Sometimes low clouds caught the crack of those many guns and scrambled them all into one gigantic roar which rolled and thundered like the blood-curdling approach of a hurricane. Our tent walls puffed from the concussion of the guns and bombs, and the earth trembled and shook. If we were sleeping in a foxhole, little clouds of dirt came rolling down on us. When the planes were really close and the guns were pounding out a mania of sound, we put on our steel




*Ernie Pyle interviewed the crew of BLIP II, an AA half-track that single-handedly knocked out a German 88.*

helmets in bed and sometimes we would drop off to sleep and wake up with them in the morning and feel very foolish.

American antiaircraft gunners began playing an important part in the Battle of Normandy right on D-day and also shortly after H-hour. Ordinarily you wouldn't think of the antiaircraft coming ashore with the infantry, but a little bit of everything came ashore on that memorable day — from riflemen to press censors, from combat engineers to chaplains — and everybody had a hand in it.

The ack-ack was given a place in the very early waves because the general in command felt that the Germans would throw what air strength they had onto the beaches that day, and he wanted his men there to repel it. As it turned out, the Germans didn't use their planes at all, and the ack-ack wasn't needed to protect the landings from air attack. So, like many other units, they turned themselves into infantry or artillery and helped win the battle of the beaches. They took infantry-like casualties too. One unit lost half its men and guns. I ran into the story of a crew of ack-ackers who had knocked out a German 88 deeply ensconced in a thick concrete emplacement — and did it with a tiny 37mm gun, which is somewhat akin to David slaying Goliath.

I hunted up this crew to see how they did it. By that time they had moved several miles inland. I found them at the edge of a small open field far out in the country. Their gun had been dug into the ground. Two men sat constantly in their bucket seats behind the gun, keeping watch on the sky even in the daytime. The others slept in their pup tents under the bushes, or just loafed around and brewed an occasional cup of coffee. The commander of this gun was Sgt. Hyman Haas of 1620 Ocean Avenue, Brooklyn, an enthusiastic and flattering young man who was practically beside himself with delight when I showed up at their remote position, for he had read my column back in New York but hadn't supposed our trails would ever cross. When I told him I wanted to write a little about his crew, he beamed and said, "Oh, boy! Wait till Flatbush Avenue hears about this!"

The outfit had landed behind the first wave of infantry. A narrow valley leading away from the beach at that point was blocked by the German 88, which stopped everything in front of it. So driver Bill Hendrix, from Shreveport, La., turned their half-track around and drove the front end back into the water so the gun would be pointing in the right direction. Then the boys poured 23 rounds into the pillbox. Some of their shells hit the small gun slits and went inside. At the end of their firing, what Germans were left came out with their hands up.

Our ack-ack can be divided into three categories. First there are the machine guns, both .50-caliber and 20mm. Airplanes have to be fairly low for these to be effective. The ack-ack branch has thousands of such guns, and so does every other fighting unit. When a low-flying strafer comes in, everybody who has anything bigger than a rifle shoots at him, whether he is an ack-ack man or not. In the second big category of ack-ack is the Bofors, a 40mm long-barreled gun which can fire rapidly and with great accuracy at medium altitudes. Our ack-ack is equipped with thousands of these, and although they can't see their targets at night they put a lot of shells into the sky anyway. The big gun, and the elite, of our ack-ack is the 90mm. This is for high-altitude shooting. It is the gun that keeps most of the planes away, and has such a high score of planes shot down.

I spent two days and nights with one of these 90mm gun crews there on the Normandy beachhead. They were having their first taste of war, but already after three weeks or so of it they felt they were the best gun crew in the best battery of the best ack-ack battalion. It was close to impossible for a German bomber to pick out their position at night, yet the crew felt that the Germans had singled them out because they were so good. As far as I could learn, practically all the other gun crews felt the same way. That's what is known in military terms as good morale.

My crew consisted of 13 men. Some of them operated the dials on the gun, others loaded and fired it, others lugged the big shells from a storage pit a few feet away. The big guns usually operate in batteries, and a battery consists of four guns and the family of technicians necessary to operate the many scientific devices that control the guns. The four guns of this particular battery were dug into the ground in a small open field, about 50 yards apart.

The gunners slept in pup tents or under half-tracks hidden under trees and camouflage nets. The boys worked all night and slept in the daytime. They hadn't dug foxholes, for the only danger was at night, and they were up all night firing. The guns required a great deal of daytime work to keep them in shape, so half the boys slept in the forenoon and

half in the afternoon while the other half worked. Their life was rugged, but they didn't see the seamiest side of the war. They stayed quite a while in one place, which makes for comfort, and they were beyond enemy artillery range. Their only danger was from bombing or strafing and that was not too great.

They were so new at war that they still tried to keep themselves clean. They shaved and washed their clothes regularly. Their service section had not arrived yet from England, so they had to cook their own meals. They were pretty sick of that and said they would be glad when the service boys and the field kitchens caught up with them. They ate ten-in-one rations, heating them over a fire of wooden sticks in a shallow hole in the ground. The battery commander was Capt. Julius Reiver of Wilmington, Del. He stayed up all night too, directing their firing from his dugout, where information was phoned to him.

On my second day with the battery, the boys asked their officers if it would be all right for them to write in their letters home that I was staying with them. The officers said yes, so the boys all got out paper, and since it had turned warm for a change, we sat and lay around on the grass while they wrote short letters home, using ammunition boxes for writing boards. When they got through, all of them had me sign their letters.

The boys said they didn't choose ack-ack but were just automatically put into it. They did like it, however, as long as they had to be in the Army. They were all over being gun-shy, and since they had been through their opening weeks of war they weren't especially afraid. They had been overseas more than six months, and like everybody else they were terribly anxious to go home. They liked to think in terms of anniversaries, and much of their conversation was given to remembering what they had been doing "a year ago today" when they were in camp back in America. They all hoped they wouldn't have to go to the Pacific when the European war was over. Although the noise and concussion of their gun was terrific, they had gotten used to it and no one wore cotton in his ears. They said the two best morale boosters were the *Stars and Stripes* and letters from home.

The boys were proud of their first night on the soil of France. They began firing immediately from a field not far from the beach. The snipers were still thick in the surrounding hedges, and bullets were singing around them all night. The boys liked to tell over and over how the infantry all around them were crouching and crawling along while they had to stand straight up and dig their guns in. It takes 12 hours of good hard work to dig in the guns when they move to a new position. They dug in one gun at a time while the three others were firing. My gun was dug into a circular pit about four feet deep and 20 feet across. This had been rimmed with a parapet of sandbags and dirt, so that when a man stood on the floor of the pit he could just see over the top. The boys were safe down there from everything but a direct hit.

The gun was covered in the daytime by a large camouflage net. My crew fired anywhere from 10 to 150 shells a night. In the early days on the beachhead they kept firing one night until they had only half a dozen shells left. But the supply had been built up, and there was no danger of their running short again. The first night I was with them was a slow night and they fired only nine shells. The boys were terribly disappointed. They said it would have to turn out to be the quietest and also the coldest night they had ever had. Just

*Fire Mission! A 90mm antiaircraft gun on Omaha Beach fires at approaching German aircraft.*

because of that, I stayed a second night with them.

The Germans were as methodical in their night air attacks on our positions in Normandy as they were in everything else. We began to hear the faint, faraway drone of the first bomber around 11:30 every night. Our own planes patrolled above us until darkness. It was dusk around eleven, and we were suddenly aware that the skies which had been roaring all day with our own fighters and bombers were now strangely silent. Nothing was in the air.

The ack-ack gunners, who had been loafing near their pup tents or sleeping or telling stories, now went to their guns. They brought blankets from the pup tents and piled them up against the wall of the gun pit, for the nights got very cold and the boys wrapped up during long lulls in the shooting. The gunners merely loafed in the gun pit as the dusk deepened into darkness, waiting for the first telephoned order to start shooting. They smoked a few last-minute cigarettes. Once it was dark, they couldn't smoke except by draping blankets over themselves for blackout. They did smoke some that way during the night, but not much.

In four or five places in the wall of the circular pit, shelves had been dug and wooden shell boxes had been inserted to hold reserve shells. It was just like pigeonholes in a filing cabinet. When the firing started, two ammunition carriers brought new shells from a dump a few feet away up to the rim of the gun pit and handed them down to a carrier waiting below; he kept the pigeonholes filled. The gun was constantly turning in the pit and there was always a pigeonhole of fresh shells right behind it. The shells were as long as a man's arm, and they weighed better than 40 pounds. After each salvo the empty shell case kicked out onto the floor of the pit. They lay there until there was a lull in the firing, when the boys tossed them over the rim. Next morning they were gathered up and put in boxes for eventual shipment back to America to be retooled for further use.

Each gun was connected by telephone to the battery command post in a dugout. At all times one member of each gun crew had a telephone to his ear. When a plane was picked up within range, the battery commander gave a telephonic order, "Stand by!" Each gun commander shouted the order to his crew, and the boys all jumped to their positions. Everybody in the crew knew his job and did it. There was no necessity for harshness or short words on the part of the gun commander. When a plane either was shot down or went out of range, and there was nothing else in the vicinity, the command was given, "Rest!" and the crews relaxed and squatted or lay around on the floor of the pit. But they didn't leave the pit.

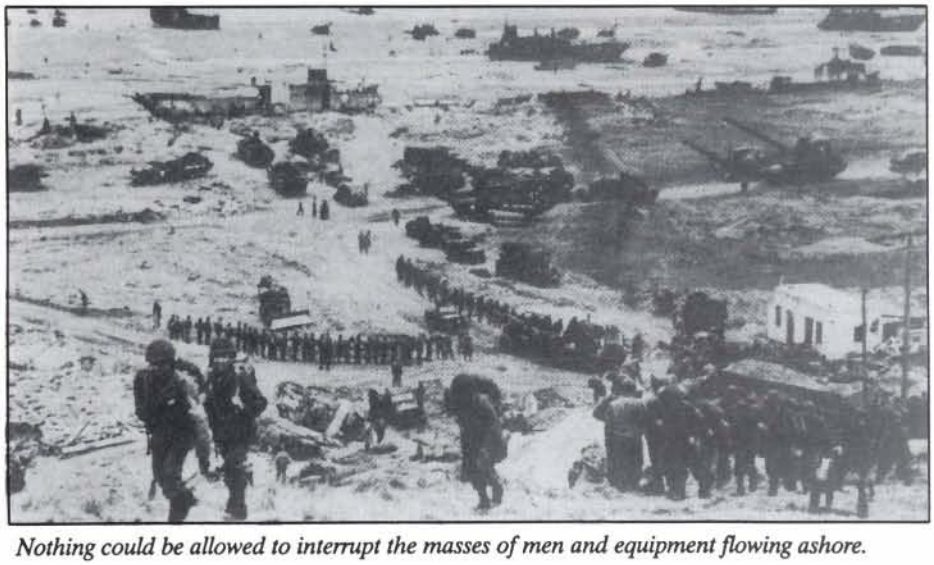
Sometimes the rest would be for only a few seconds. Other times it might last a couple of hours. In the long lulls the gunners wrapped up in blankets and slept on the floor of the pit — all except the man at the telephone. It was the usual German pattern to have a lull from about 2 to 4 a.m., and then get in another good batch of bombing attempts in the last hour before dawn. The nights were very short then — from 11 p.m. to 5 a.m. — for which everybody was grateful. Dawn actually started to break faintly just about 4:30, but the Germans kept roaming around the sky until real daylight came.

Our own patrol planes hit the sky at daylight and the Germans skedaddled. In the first few days, when our patrol planes had to come all the way from England, the boys told of mornings when they could see our planes approaching from one direction and the Germans heading for home at the opposite side of the sky.

As soon as it was broad daylight, the boys cranked down the barrel of the gun until it was horizontal, and then took a sight through it onto the stone turret of a nearby barn — to make sure the night's shooting hadn't moved the gun off its position. Then some of them gathered up the empty shells, others got wood fires started for heating breakfast, and others raised and tied the camouflage net. They were all through by 7 o'clock, and half the shift crawled into their pup tent beds while the other half went to work with oil, ramrod and waste cloth to clean up and readjust the gun.

It was 11:15 at night. The sky had darkened into an indistinct dusk, but it was not yet fully dark. I could make out the high hedgerow surrounding our field and the long barrels of the other ack-ack guns of our battery poking upward. We all leaned against the wall of our gun pit, just waiting for our night's work to start. We had plenty of time. The Germans wouldn't be coming for 10 or 15 minutes. But no. Suddenly the gun commander, who was at the phone, yelled "Stand by!" The men jumped to their positions. The plane was invisible, but we could hear the distant motors throbbing in the sky. Somehow a man could always sense, just from the tempo in which things started, when it was going to be a heavy night. We felt that this would be one.

A gunner turned a switch on the side of the gun, and it went into remote control. From then on a mystic machine at the far end of the field handled the pointing of the gun, through electronic cables. It was all automatic. The long snout of the barrel began weaving in the air and the mechanism that directed it



*Nothing could be allowed to interrupt the masses of men and equipment flowing ashore.*

*Without interruption and in great masses, the Allied buildup of men and material crosses the invasion beaches.*

made a buzzing noise. The barrel went up and down, to the right and back to the left, grinding and whining and jerking. It was like a giant cobra, maddened and with its head raised, weaving back and forth before striking. Finally the gun settled rigidly in one spot and the gun commander called out, "On target! Three rounds! Commence firing!" The gun blasted forth with sickening force. A brief sheet of flame shot from the muzzle. Dense sickening smoke boiled around in the gun pit. I heard the empty shell case clank to the ground. Darkly silhouetted figures moved silently, reloading. In a few seconds the gun blasted again. And once again. The smoke was stifling. I felt the blast sweep over me and set me back a little. The salvo was fired. The men stepped back. We took our fingers from our ears. The smoke gradually cleared. And then once more the gun was intently weaving about, grinding and whining and seeking for a new prey.

That's the way it was all night. We never saw a thing. We only heard the thump, thump of motors in the sky and saw the flash of guns and the streaking of red tracers far away. We never saw the plane we were shooting at unless it went down in flames, and "flamers" were rare.

I found out one thing being with the ack-ack at night. A man is much less nervous when he's out in the open with a gun in front of him than when he's doubled up under blankets in a tent, coiled and intent for every little change of sound, doubtful and imagining and terrified.

We shot off and on, with rest periods of only a few minutes, for a couple of hours. The Germans were busy boys that night. Then suddenly a flare popped out in the sky, out to sea, in front of us. Gradually, the night brightened until the whole universe was alight and we could easily see each other in the gun pit and everything around us in the field. Everybody was tense and staring. We all dreaded flares. Planes were throbbing and droning all around in the sky above the light. Surely the Germans would go for the ships that were standing off the beach, or they might even pick out the gun batteries and come for us in the brightness. The red tracers of the machine guns began arching toward the flares but couldn't reach them. Then our own "Stand by!" order came, and the gun whined and swung and felt its way into the sky until it was dead on the high flare. Yes, we were shooting at the flare. And our showering bursts of flak hit it, too.

Flares are seldom completely shot out, but they can be broken into small pieces, and the lights dimmed, and the pieces come floating down more rapidly, and the whole thing is over faster. Flares in the sky were always frightening. They seemed to strip us naked and make us want to cower and hide and peek out from behind an elbow. We felt a great, welcome privacy when the last piece flickered to the ground and we could go back to shooting at the darkness from out of the dark.

The six hours of nighttime went swiftly for our ack-ack battery, which was a blessing. Time raced during the firing and in the long lulls between the waves of enemy planes we dozed and catnapped and the hours passed away.

During a lull long after midnight, half a dozen of the boys in our gun pit started singing softly. Their voices were excellent. Very low and sweetly, they sang in perfect harmony such songs as "I've Been Working on the Railroad" and "Tipperary." There wasn't anything forced or dramatic about it. It was just a song some young fellows were singing because they like to sing — and the fact that they were in a gun pit in France shooting at people, trying to kill them, was just a circumstance.

*(continued on page 30)*

# D-DAY

## June 6th, 1944

## Antiaircraft Artillerymen fight their way off the invasion beaches

*by Col. E. Paul Semmens*

The Allied invasion of the Normandy peninsula in early June 1944 rightfully ranks as one of the great accomplishments in American military history. It was a statement of the inevitable, the beginning of the end of World War II. This operation overcame years of frustration; it represented a victory over Allied indecision, turf battles and strategic proliferation. In the end, it was a joint, coalition victory. It was American warfare at its best — the direct approach — the massing of combat power at a decisive point to achieve a measurable result. It was the beginning of American military leadership in Europe.

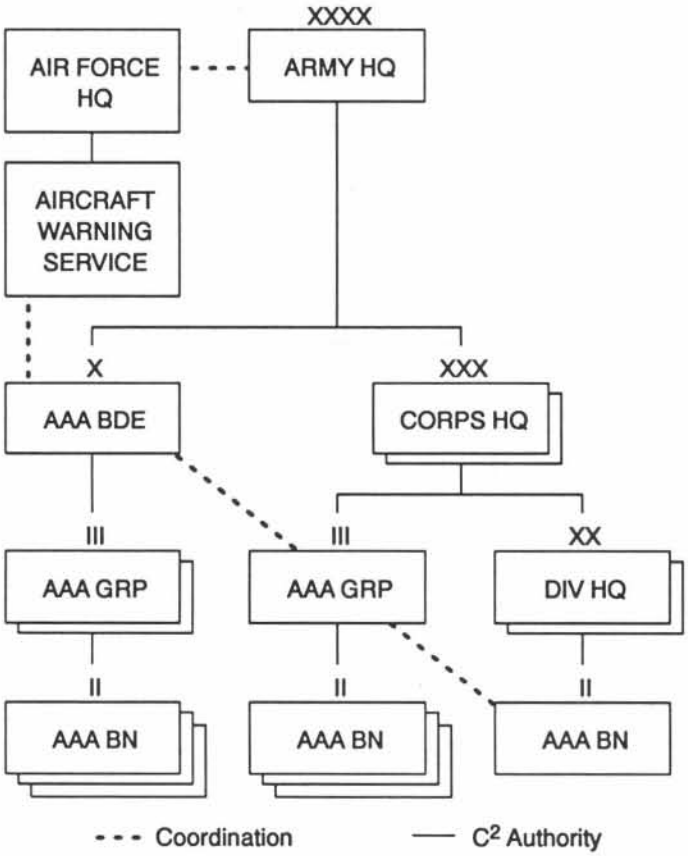
It was also a very human victory. The hard-earned victory at Normandy was the product of a doctrinal, training and leadership evolution that had been ongoing since the onset of World War II. It was not just a great victory for the American Army, it was also an accomplishment for its antiaircraft artillery. The invasion of Normandy would become the largest American AAA operation in history.

The Allied plan was for Gen. Bernard Montgomery to command the 21st Army Group, which had the First Army under Gen. Omar Bradley, which would land at Omaha and Utah Beaches, and the 2nd British Army under Lt. Gen. Sir Miles Dempsey, which would land at Gold, Sword and Juno Beaches. The German plan had been to deploy poorly trained, third-class infantry units all along the heavily obstacled beachline, and then to position armored divisions in the rear, and to react as necessary. Since May 1944 the Allies had been conducting an aggressive counterair campaign against the Luftwaffe. By D-Day, the Allies had air supremacy. Even with that, the Allied planners believed the Germans could pool their aircraft and generate as many as 2,200 sorties on D-Day.

During World War II, all AAA units, with the exception of a AAA group headquarters (no battalions) in each corps, were assigned to the field army. Each army had a AAA

*Battery A, 197th AAA (AW) Battalion came ashore in the Easy Red sector of Omaha Beach. The antiaircraft artillerymen backed their M-16 half-tracks onto the fire-swept shale to deliver fire against enemy strongpoints on the bluffs overlooking the invasion beaches.*

## World War II Antiaircraft Defense Structure




brigade, which was commanded by a brigadier general. This brigade commander allocated battalions to the corps groups, usually one 90mm gun (the high-altitude air defense of World War II) battalion and two automatic weapons (AW) battalions (the short-range air defense of World War II) to each group. Several AAA groups were retained under Army control to defend assets in rear areas. By 1944, it had become standard practice for one or more additional AW battalions to be chopped to each corps, which were further attached to the divisions.

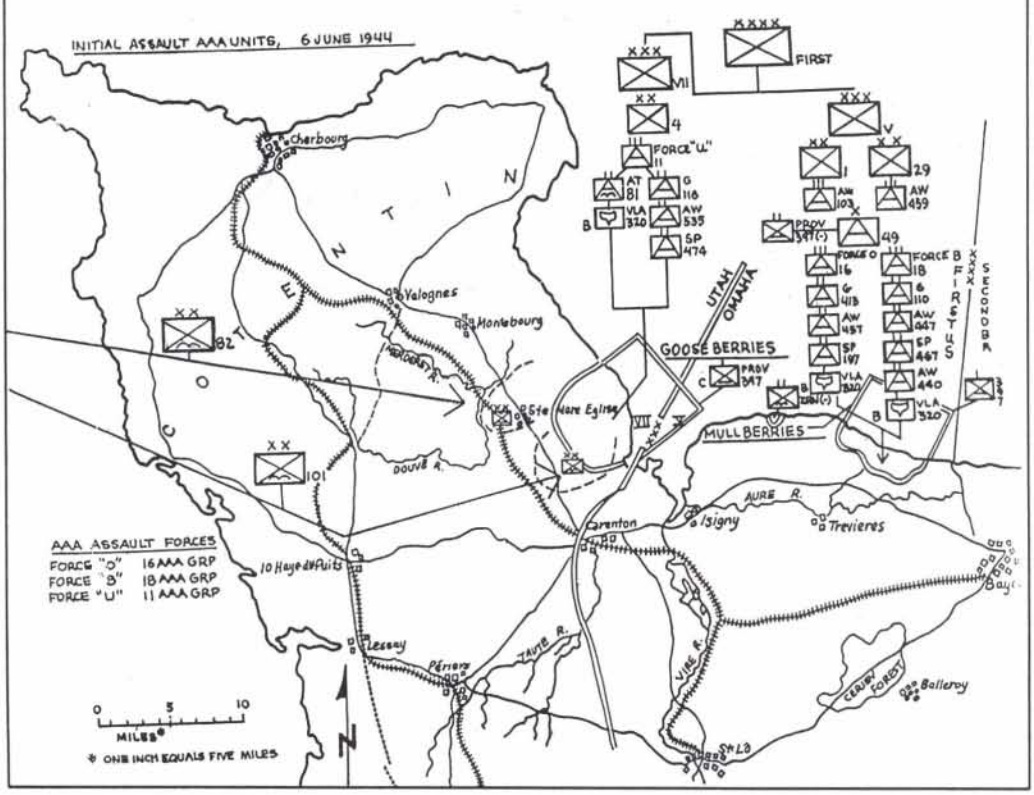
First Army planners expected the invasion force to advance inland as much as 200 miles on the first day of the invasion. The air defense concept, therefore, was to send Army air defense units ashore with the initial landings to defend the beachheads. Corps AAA units were to come ashore with the second wave, move inland and establish defenses in areas that would eventually become the corps rear areas. Divisional units would then land in the third increment and join their divisions and accompany them forward.

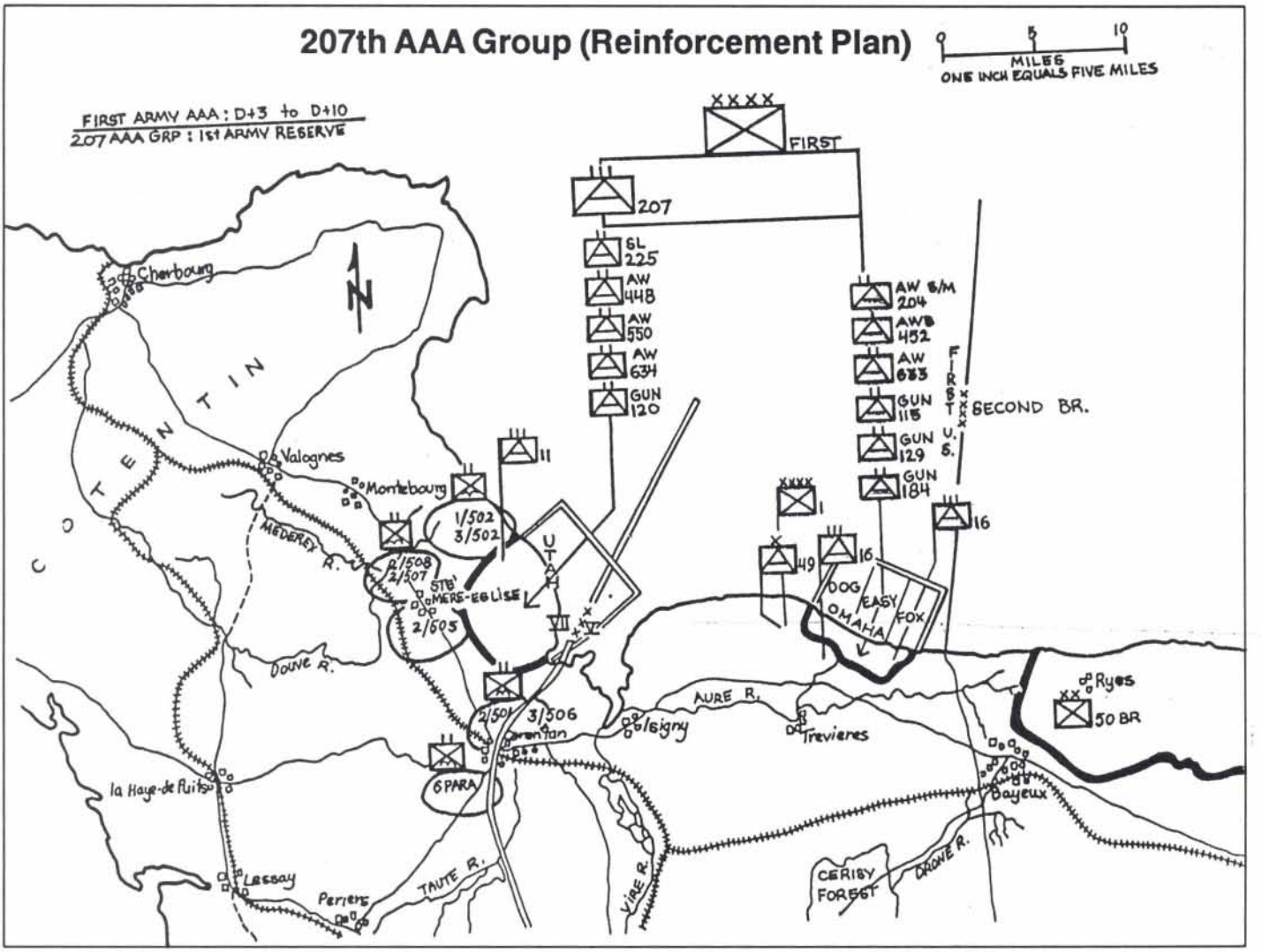
The landings on Omaha Beach were conducted by the V U.S. Corps with its two organic divisions: the 1st and 29th Infantry Divisions. The First Army's 49th AAA Brigade orchestrated the protection of the landings. The 49th was commanded by one of the great men in air defense history, Gen. "Big Ed" Timberlake. He planned for the initial air defense forces that came ashore on Omaha Beach to be balanced, half AW battalions and half 90mm battalions (see map, this page).

On Utah Beach, the 11th AAA Brigade would support the assault with a much smaller force, including Battery B of the 320th Barrage Balloon Battalion. The troop list also included the 81st Antitank/AAA Battalion, which was the organic air defense antitank capability in the 101st Airborne Division. The airborne divisions had one battalion with six batteries, three of which were antitank, three of which were air defense. AAA planners needed light air defense units to support the initial landings, and the 81st AAA filled the bill. The 82nd Airborne Division's air defense battalion, the 80th Antitank/AAA, jumped in with the 82nd behind enemy lines.

On Omaha Beach, the 207th Group was to come ashore with the second wave, and it consisted of more 90mm than short-range air defense units (shown in the map on facing page). Their mission was to expand the

### Initial Assault AAA Units, June 6, 1944






beachhead and allow the 49th AAA Brigade and others to move inland.

One of the important things to realize about D-Day is that only one AAA battalion of the 31 involved in the Normandy invasion had previous combat experience. When Timberlake and the 49th Brigade arrived in England in late 1943, they immediately began an intensive in-country training program. The brigade dictated that all the air defenders who participated in the invasion conduct amphibious training with the units they would support on D-Day. This was important not only because it was good physical training, but also because it developed a habitual association with the maneuver units the air defenders supported. The physical training was based on road marching, sometimes 20 to 25 miles a day, as well as the physical exertion from manhandling the equipment on and off the landing craft during the amphibious training. All the air defenders that went ashore on D-Day were in excellent physical condition.

Most importantly, as soon as he arrived in England, Timberlake linked up with a British air defense brigade that had fought in the North African campaigns. He had a long conversation with them about how they did their reconnaissance, selection and occupation of positions (RSOP). The British believed in a simultaneous reconnaissance and movement. The RSOP party would move out immediately after a mission brief with the main body. The main body would follow behind, not waiting for the RSOP body to return. The RSOP party left a series of color-coded cans by which the main body was guided into the objective. Timberlake commandeered a British training facility at Camp Blandford, England, and all the air defense units that participated in the invasion of D-Day went through Camp Blandford. They stayed there for about a month, moving three and sometimes four to five times a day. As a result, the antiaircraft artillerymen became very proficient at RSOP, but more importantly, movement and mobility became a mentality for air defenders in First U.S. Army.

Lastly, air defense units preparing for the invasion spent a lot of time shooting, sometimes 16 hours a day. The provisional machine gun battalion formed to support the 49th Brigade on Omaha Beach, the 397th Machine Gun Battalion, fired over half a million rounds of .50-caliber ammunition out of 36 machine guns to prepare for the assault.

**Omaha Beach**

The initial American forces hit the beach at 0630 on June 6, 1944. Omaha Beach is a narrow patch of sand with high hills and bluffs overlooking the beach. The Allied plan was

to come ashore and then capture the exits leading off the beach: Dog 1, Dog 3, Easy 1, Easy 3 and Fox 1, as quickly as possible. The initial assault concept was for the 16th Group to take the right hand, or southern side, of the beach. The 18th Group would be to the north (see map, below).

The 397th Provisional Machine Gun Battalion was the first American AAA battalion to land in France. It was supposed to land on Dog Red or Easy Green, names given to sections of the beach by Allied planners to enhance control. Instead, Battery C landed on Dog White and Battery A and Battery B were washed ashore on Fox Green. The battalion came ashore, hit the beach and encountered a withering rain of German antiaircraft and machine gun fire after negotiating mines and wire and obstacles to get the Rhinos and LSTs on the beach. The battalion, which had only existed for about three months and was commanded by a great soldier named Art Meyer, a captain, took 60 percent casualties in the first 15 minutes after landing.

The 462nd AW Battalion began coming ashore around 0900, and the 197th AW Battalion (Self-Propelled) started coming ashore on Easy Red about the same time. The 197th was one of the finest battalions the branch has ever seen. Battery A of the 197th, which began landing in increments at 0800 and was completely ashore around 1630 on D-Day, also fought in the Battle of the Bulge, drove all the way across Europe and helped defend the Remagen Bridge — and never lost a soldier.

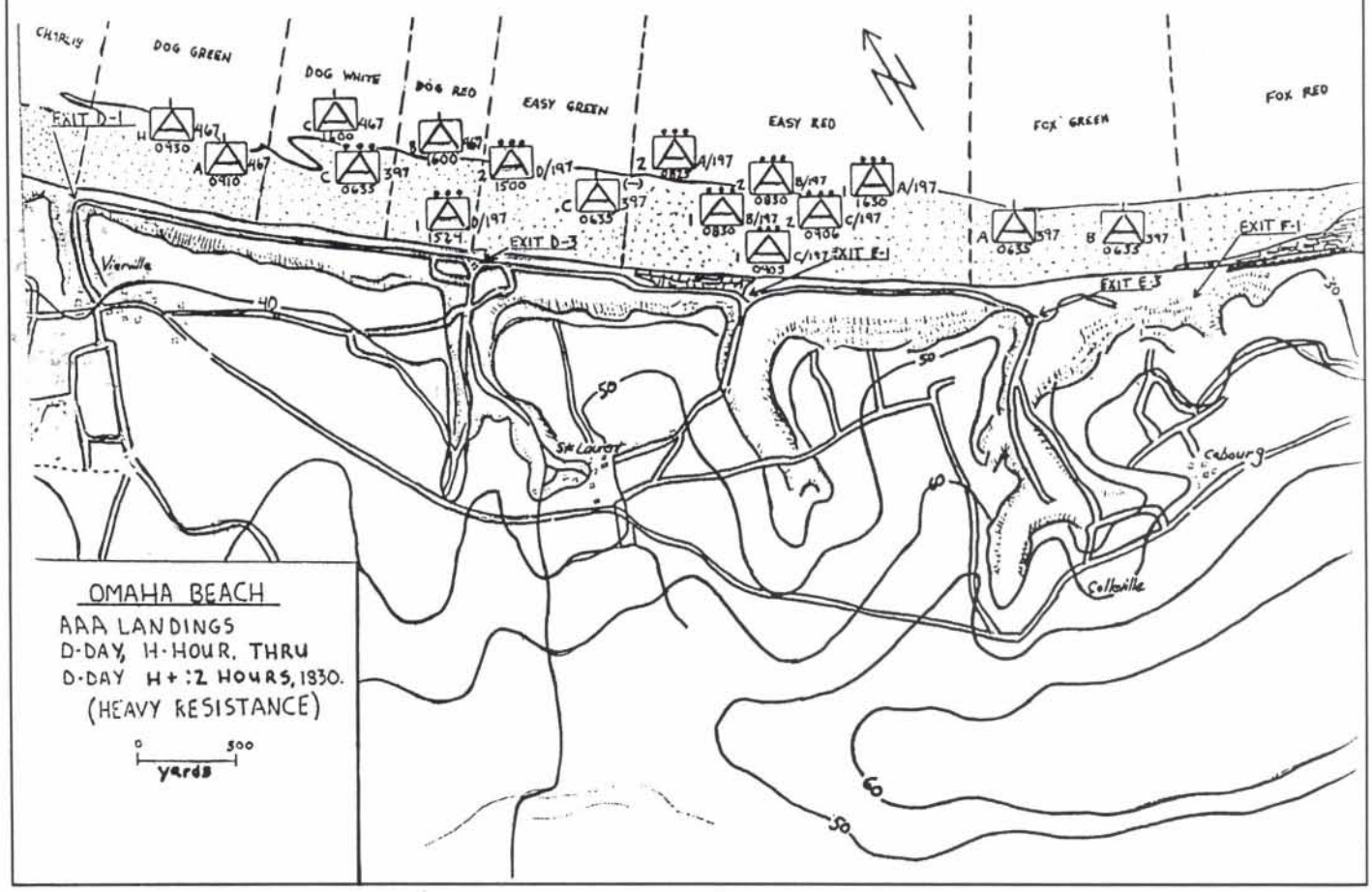
Battery A drove its M-16 half-tracks ashore in the Easy Red sector of Omaha Beach, a fire-swept beachhead upon which thousands of water-soaked men lay huddled, pinned to the rubble of the beach by small arms, mortar and 88mm fire. The fire, the rubble and minefields blocked all units from advancing. In the ships offshore, American commanders were considering evacuating the beachhead.

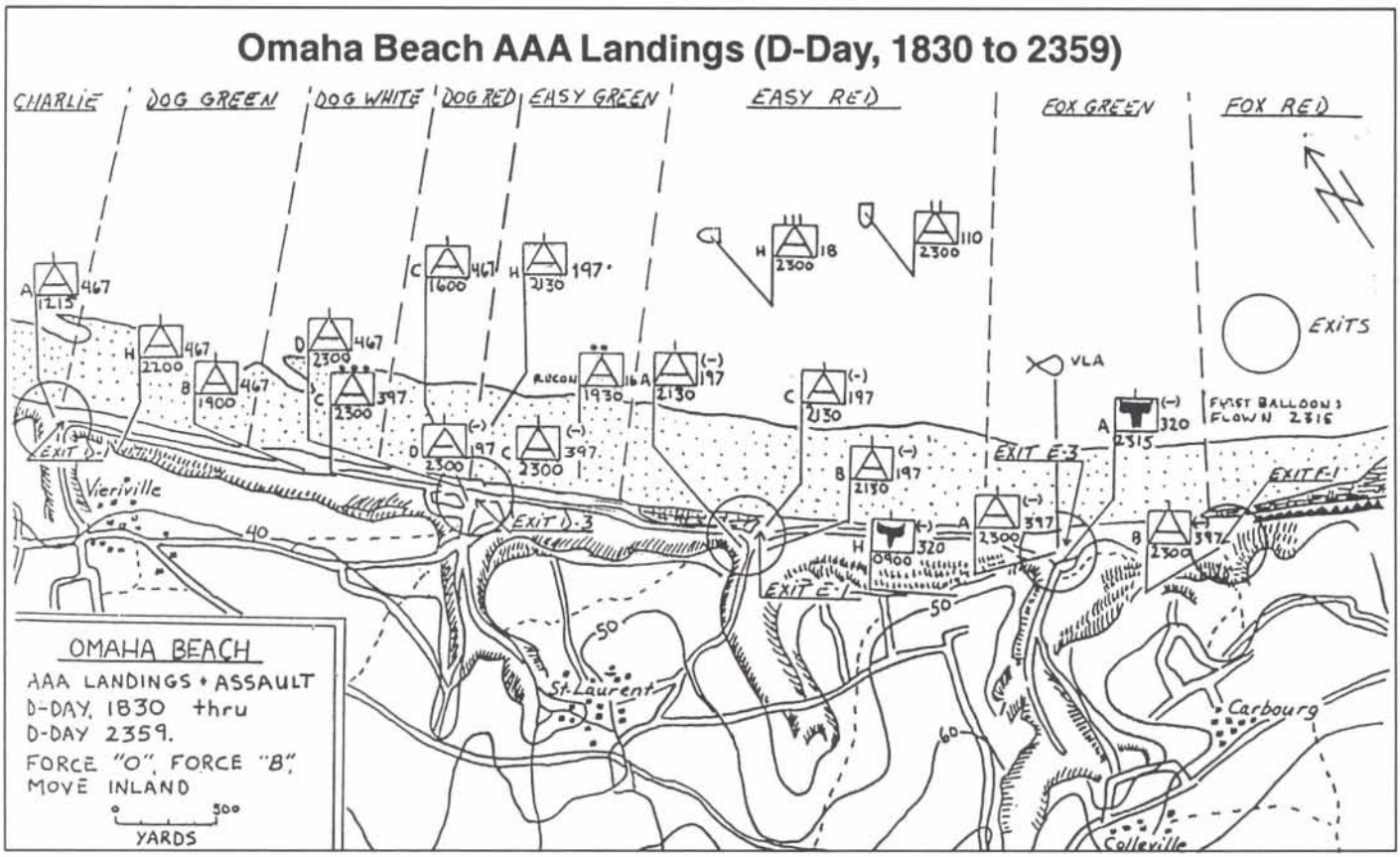
Since the beach exits were impassable due to intense enemy small arms, automatic weapons, mortar and artillery fire, Battery A's fire units at first dispersed along the beach. The low bluff at the edge of the beach made it impossible for most of the antiaircraft guns to fire in a ground support role. At two places where the terrain was more suitable, an M-16 and an M-15A1 were driven into the water and backed up the steep and rocky shale at the edge of the beach. The gunners on these tracks made every effort to direct fire at enemy strongpoints, but the slope of the beach was so steep that the mounts could not be leveled. Their fields of fire were limited to the highest points of the ridge overlooking the beach.

Battery A soldiers not actively occupied on the tracks directed small arms fire at pillboxes and at the origin of enemy tracers, pulled wounded and dead men from the surf and acted as litter bearers.

As artillery fire and sporadic machine gun fire swept the area, one M-16 squad crossed the beach and began clearing the first exit leading off Easy Red. Some crewmen filled in

## Omaha Beach AAA Landings (H-Hour to 1830)






a deep trench across the exit and removed barbed wire to form a path for the vehicle while others probed for mines with bayonets. They then moved the half-track through the exit and to a temporary position defending the beachhead. A bulldozer appeared later to complete the work. The M-16 was the first combat vehicle to leave Easy Red and the exit Easy One was the only exit used by V Corps during the first 48 hours of the invasion.

While the initial landings were ongoing, Timberlake, who had commandeered a boat for himself and a few members of his staff, was driving up and down the coast trying to find a place to come ashore. Finally about 1700, Timberlake landed down on Fox Red, on the northern edge of Omaha Beach. He walked off the end of his LST, six-foot four-inches tall, pure white hair, wearing an oversized silver star that he had been told to cover up. Air defense doctrine at that time prescribed that a brigade commander came ashore when the defenses on the beach were established. The AAA brigade commander at the Leyte invasion a few months after Normandy came ashore on D+8 days, which was doctrinally correct. Timberlake wanted to be ashore on D-Day, and he had stolen a boat for that purpose.

All around him, infantry soldiers pinned to the ground with their feet in the water begged the general to get down. Ignoring their pleas, he found an infantry battalion commander and then pointed down the beach and told him everybody else was moving out. When the incredulous infantryman looked down the beach, Timberlake admonished him to get his soldiers moving toward the bluffs. The battalion commander rallied his men and began moving off the beach. Timberlake then walked down the beach, yelling at soldiers, "Go get the bastards! Go get the bastards!" By the time he got to the far end of Omaha Beach, he could legitimately tell the soldiers there that everybody else was indeed moving out. For his heroism on D-Day, Big Ed Timberlake was nominated for the Distinguished Service Cross.

The landings continued, and by 1830, the antiaircraft artillerymen began concentrating on the exits from the beach. The 18th Group began coming ashore and, by the end of the day, the air defenders had defenses established around all the key exits (see map above).

The first barrage balloons began flying around 2300 on D-Day. On D+1, the 413th Gun Battalion, the equivalent of a high-altitude air defense battalion, came ashore at 0230, dragging their 90mm guns, radars and fire control equipment through the surf.

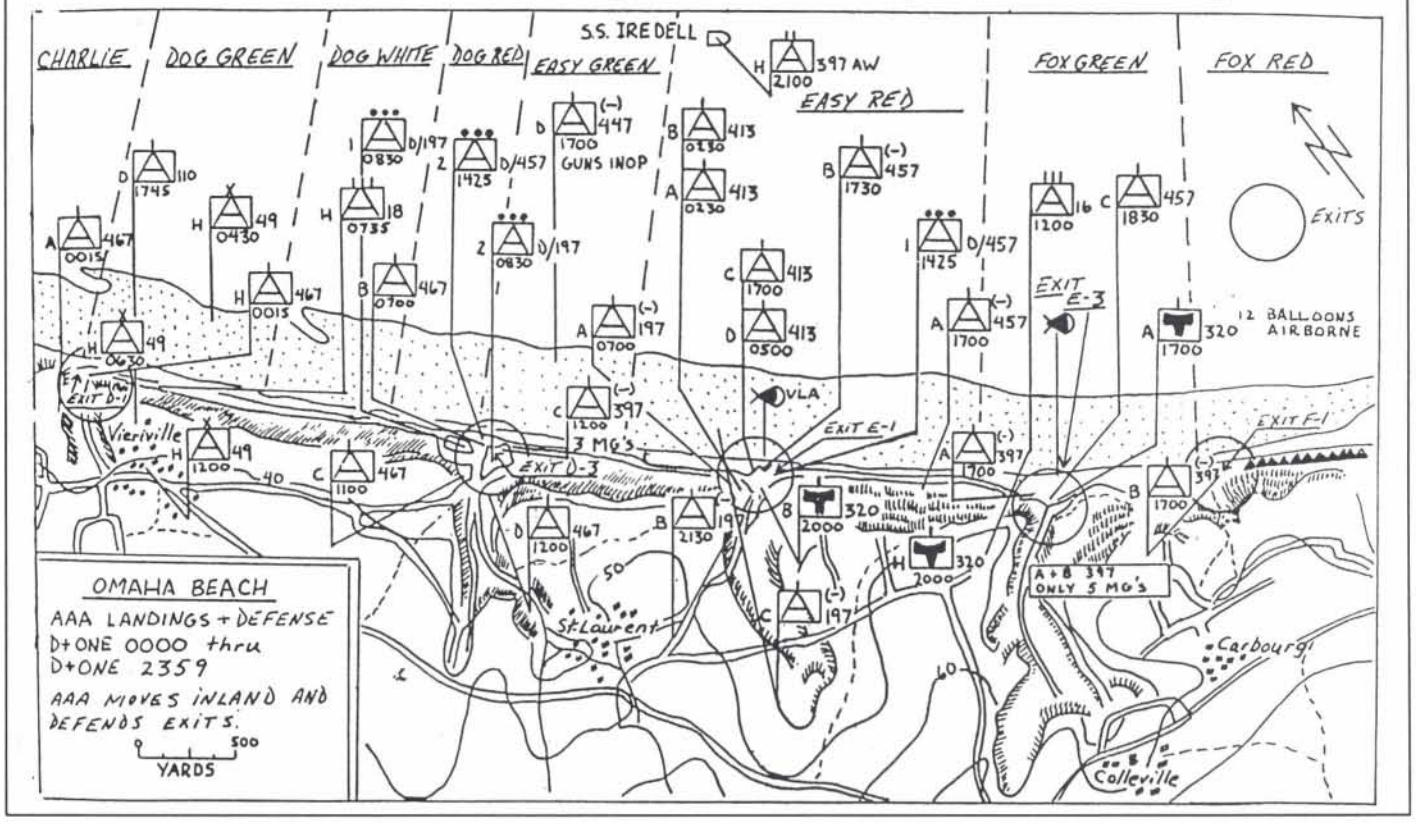
Early on the morning of June 7, the remaining members of the 49th AAA Brigade staff who did not accompany Timberlake joined an infantry unit in an assault up exit Dog 1 into Vieriville, secured the town and set up shop.

The air defenses around Omaha Beach continued to grow and the Luftwaffe seemed complacent with the situation (see top map, next page).

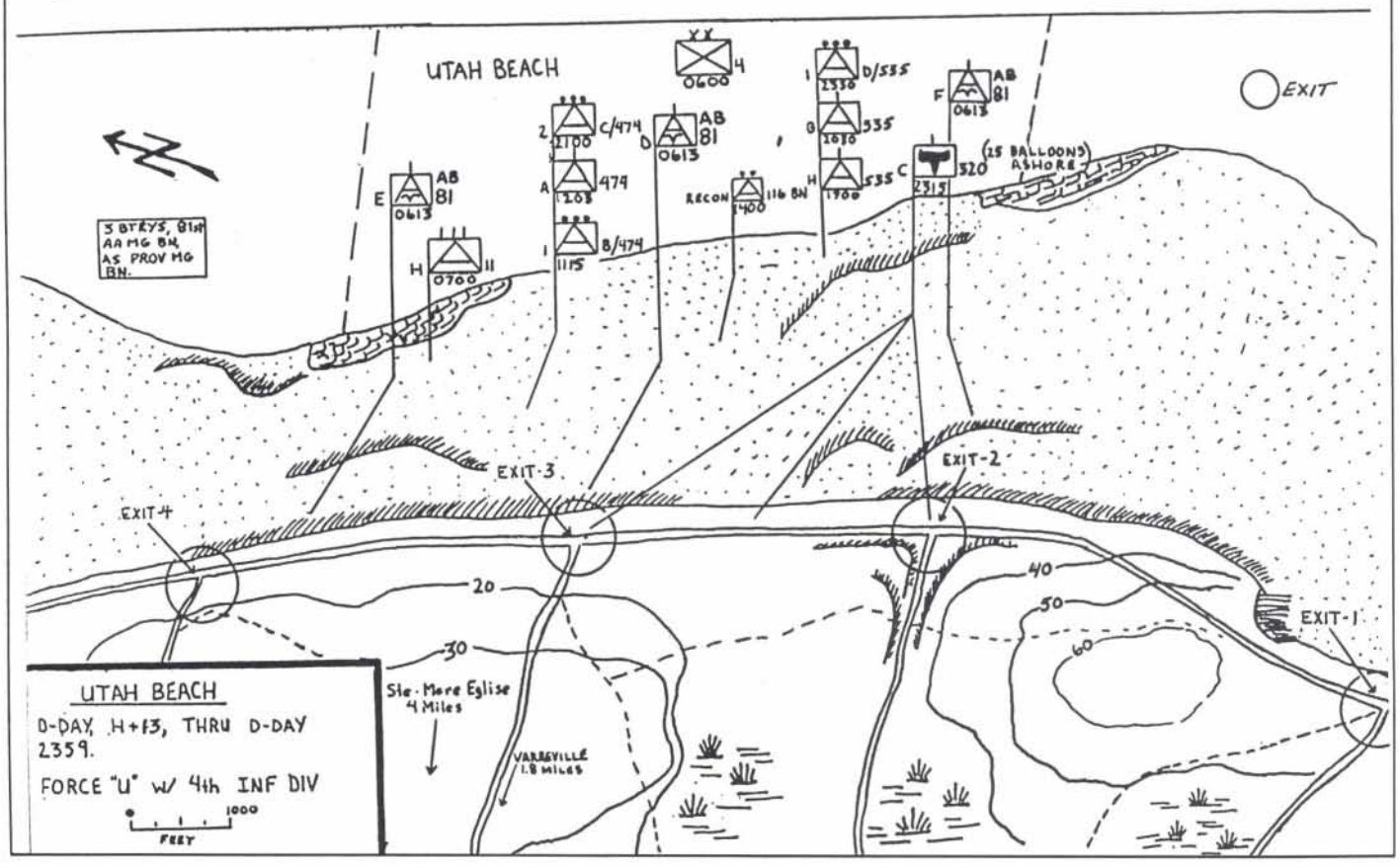
**Utah Beach**

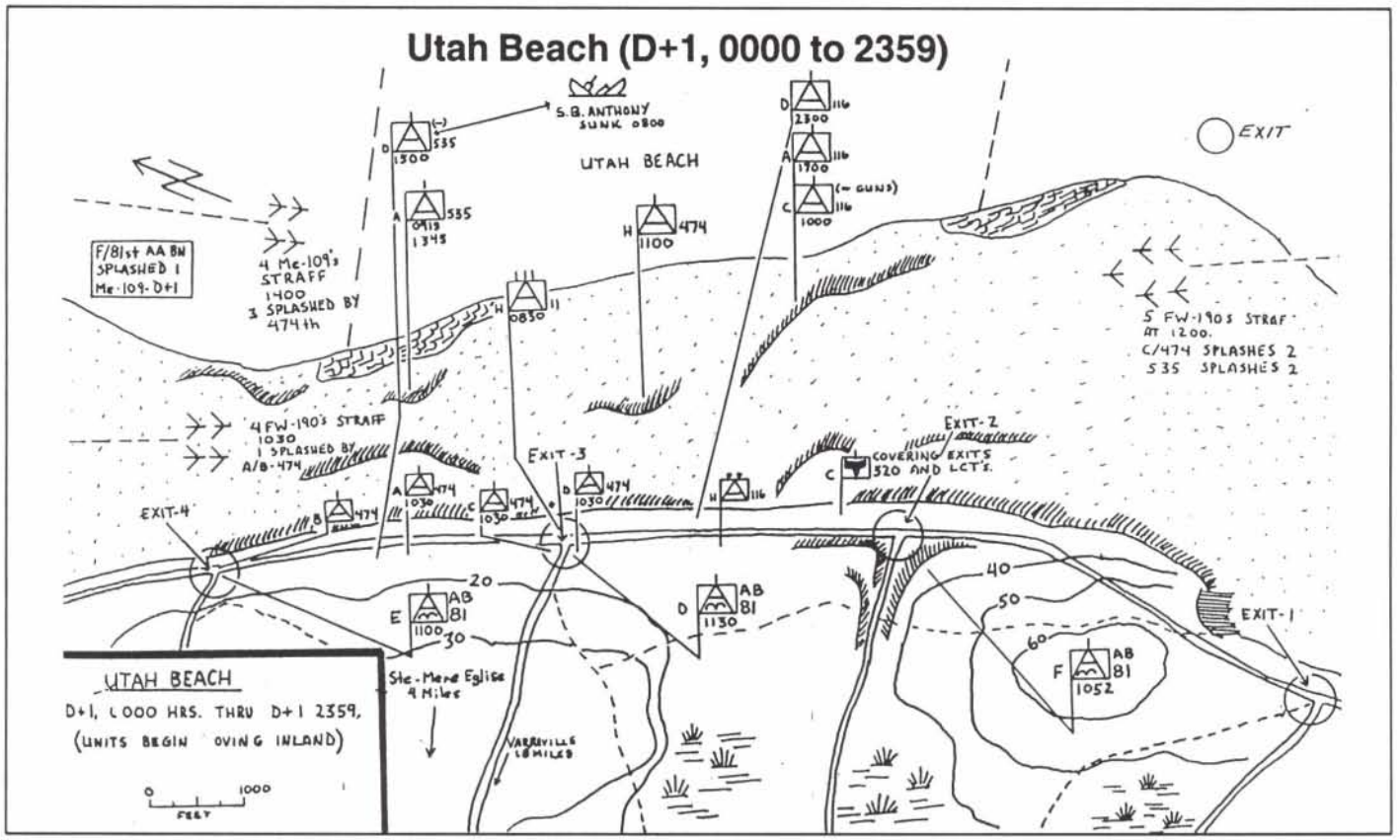
On Utah Beach, the 81st AAA Battalion (-) landed on D-Day and immediately began moving toward the exits from the beach. The 474th, a short-range air defense battalion, was the second unit ashore around noontime and it was followed by elements of the 535th AAA Battalion (AW), another short-range air defense battalion, around 1700 (see bottom map, next page).

## Omaha Beach AAA Landings and Defense (D+1, 0000 to 2359)




## Utah Beach (D-Day, H+13 to 2359)






Around 1400, the reconnaissance party from the 116th AAA Battalion (90mm) arrived on the beach. They charged off the LST, which was commanded by an infantry colonel, but took such heavy fire that the colonel ordered them back onto the LST. His intent was to go back out to sea and land again when the situation calmed. The soldiers eagerly agreed, and they went out to sea, got caught up in the traffic offshore and ended up going back to England. The next day the rest of the battalion landed, and the unit history would report that the reconnaissance of the 116th Gun Battalion was the worst in the history of air defense.

As the 81st consolidated its positions around the exits, the barrage balloons came ashore at 2315. The balloons had been inflated in England and tied to the ships as the armada sailed across the Channel. Each barrage balloon had a crew commanded by a sergeant. One balloon section sergeant, after seeing the Germans shoot down several balloons, decided the best way to enhance his balloon's survivability was to grab it by the tether and run up and down the beach, despite heavy artillery and small arms fire. He did just that, and won a Silver Star. By the morning of June 7, the Allies controlled the exits from the beaches. The 11th AAA Group landed at 0830, and the 116th AAA Battalion (90mm) began arriving ashore an hour-and-a-half later without their reconnaissance party, which was still out to sea.

The rest of the 535th AAA Battalion (AW), which came ashore throughout the day, probably conducted the quickest offloading of a ship in history. While transferring their equipment from the *Susan B. Anthony* to a landing craft, the ship struck a mine and began to sink. The soldiers quickly completed the transfer and brought the equipment ashore.

The Germans did attack Utah Beach. At 1030 on June 7, four Folke-Wulf 190s strafed the beach. The 474th shot down one aircraft. Around noontime, five more FW-190s attacked from the east, and the antiaircraft artillerymen destroyed four. At 1400, the Germans attempted a third attack, this time with four ME-109 fighters. All the German fighters were destroyed by the 474th.

This recollection has not done full justice to the AAA's participation in the D-Day invasion. By D+3, there were 53,000 AAA soldiers in France. They had fought alongside their infantry, engineer and armor counterparts and had done what was necessary to establish a lodgement. It was a desperate, heroic struggle that almost failed. Men like Sgt. John Kelly from the 459th AAA Battalion won the day. He quickly organized and led an attack party through a minefield and, despite a serious wound, advanced to the head of the party and killed an entire enemy machine gun crew with a hand grenade. For his heroics on D-Day, John J. Kelly won the Distinguished Service Cross.

It's hard to appreciate the panic and fear that gripped everyone on Omaha Beach, particularly during the early stages of that invasion. But the accomplishments of the air defenders on D-Day are summed up by the motto of the 397th, a unit which existed for just three short months and won a Presidential Unit Citation: "No challenge too tough, no mission unchallenged."

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*Col. E. Paul Semmens, author of* The Hammer of Hell *and a former brigade commander, is assigned to Headquarters, USAREUR and 7th Army and is the Assistant Deputy Chief of Staff for Operations, Headquarters, USAREUR and 7th Army.*

*(continued from page 21)*

The night grew bitterly chill. Between firings every man draped an army blanket around his shoulders, and sometimes up over his head. In the darkness they were just silhouettes, looking strange and foreign like Arabs. After 2 o'clock there was a long lull. Gradually the boys wrapped up in their blankets and lay down on the floor of the pit and fell asleep. Pretty soon I heard them snoring. I talked with the gun commander for a few minutes, in low tones. Then my eyes got heavy too. I wrapped a blanket around me and sat down on the floor of the pit, leaning against the wall. The night became as silent as a grave. Not a shot, not a movement anywhere. My head slacked over to one side. But I couldn't relax enough to sleep in that position. And it was so cold. I was so sleepy I hurt, and I berated myself because I couldn't go to sleep like the others.

But I was asleep all the time, for suddenly a voice shouted, "Stand by!" — and it was as shocking as a bucket of cold water in my face. I looked quickly at my watch and realized that an hour had passed. All the silent forms came frantically to life. Blankets flew, men bumped into each other. "Commence firing!" rang out above the confusion, and immediately the great gun was blasting away, and smoke again filled the gun pit. Sleep and rouse up. Catnap and fire. The night wore on. Sometimes a passing truck sounded exactly like a faraway plane. Frightened French dogs barked in distant barnyards.

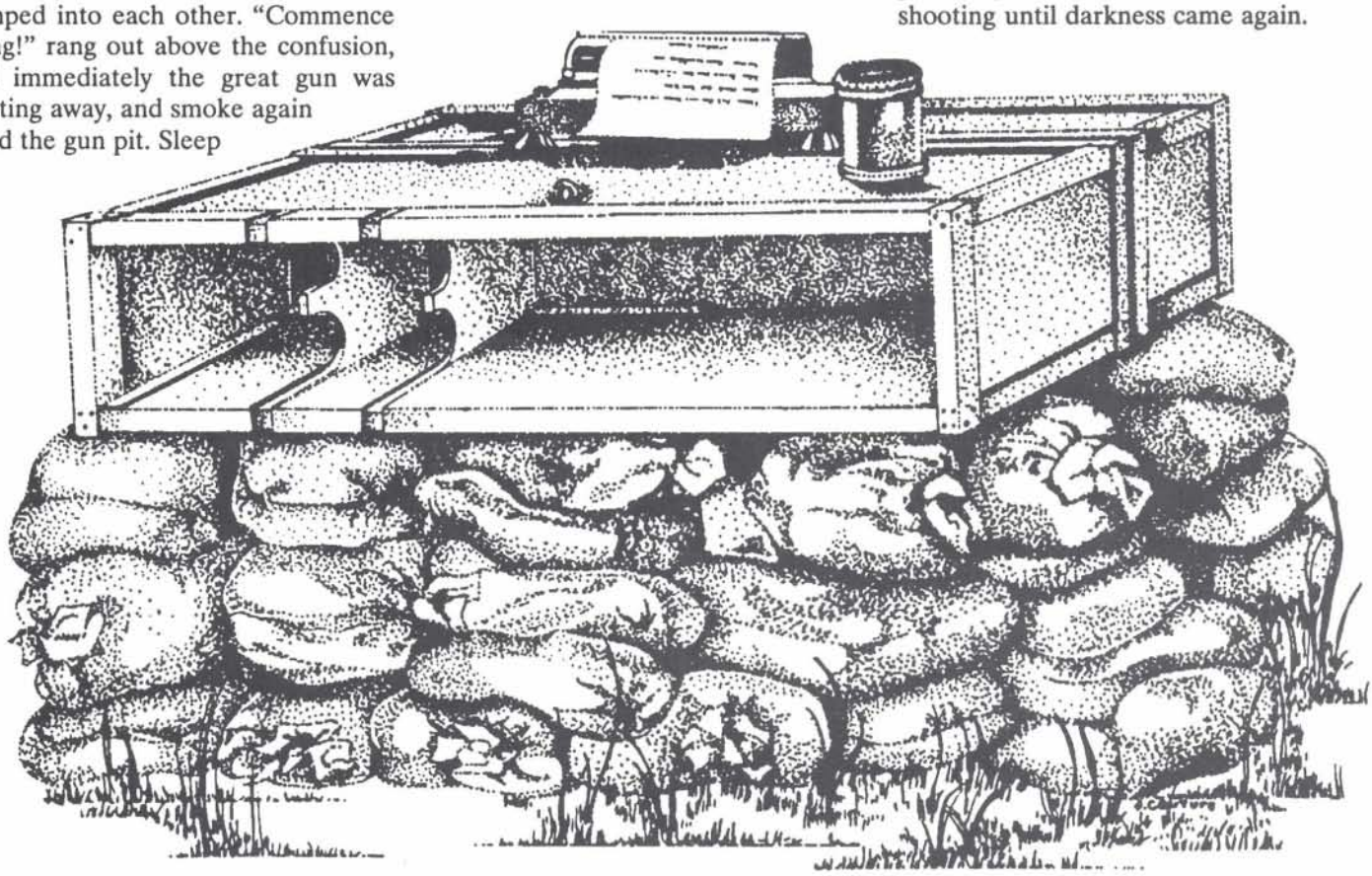
Things are always confusing and mysterious in war. Just before dawn an airplane drew nearer and nearer, lower and lower, yet we got no order to shoot and we wondered why. But machine guns and Bofors guns for miles around went after it. The plane came booming on in, in a long drive. He seemed to be headed right at us. We felt like ducking low in the pit. He actually crossed the end of our field less than a hundred yards from us, and only two or three hundred feet up. Our hearts were pounding. We didn't know who he was or what he was doing. Our own planes were not supposed to be in the air. Yet if he was a German, why didn't he bomb or strafe us? We never did find out.

The first hint of dawn finally came. Most of us were asleep again when suddenly one of the boys called out. "Look! What's that?" We stared into the faint light, and there just above us went a great, silent, grotesque shape, floating through the air. It was a ghostly sight.

Then we recognized it, and we all felt a sense of relief. It was one of our barrage balloons that had broken loose and was drifting to earth. Something snagged it in the next field, and it hung there poised above the apple trees until somebody went and got it long after daylight.

As fuller light came we started lighting cigarettes in the open. Over the phone, the battery commander asked how many shells were fired, and told us that our tentative score for the night was seven planes shot down. The crew was proud and pleased. Dawn brought an imagined warmth and we threw off our blankets. Our eyes felt gravelly and our heads groggy. The blast of the gun had kicked up so much dirt that our faces were as grimy as though we had driven all night in a dust storm. The green Norman countryside was wet and glistening with dew.

Then we heard our own planes drumming in the distance. Suddenly they popped out of a cloud bank and were over us. Security for another day had come, and we willingly surrendered the burden of protecting the beaches. The last "Rest!" was given and the gun was put away. There would be no more shooting until darkness came again.



*(continued from page 16)*
antiaircraft artillery group be assigned to division and a AAA brigade to corps. The challenge to become a part of the combined arms team was cast.

The performance of antiaircraft artillery at Kasserine Pass was no better or worse than the rest of the Army at Kasserine. The recipe for disaster had been mixed months before. Untrained troops on new equipment, with rudimentary field skills and lacking doctrine on how to fight, did poorly. Coordination not only with Army Air Forces but also with the armor, infantry and artillery units they protected was lacking. Lessons learned at Kasserine caused an almost immediate reaction. In a report to the Army Ground Forces Command, written before Kasserine, Maj. George Croker commented on needed improvements in training, emphasizing that AAA should learn more infantry, armor and artillery tactics. Officers needed to be able to move quickly with the units they defended. Croker also stressed the need to conduct live fire exercises prior to deployment.

The fratricide problem was discussed at length but never satisfactorily solved. The Army Air Force continued to insist on centralized control (their control) of all antiaircraft artillery. The Air Corps would coordinate their close air support with the corps but no lower. Often the word never reached the trigger-puller in the forward area. American aircraft would often receive friendly fire while returning from missions. The Army ground commanders held firm in their resistance to Air Corps requests on centralization, fearing that maneuver units would never be protected adequately if the Army Air Force controlled assets. This remained a point of contention throughout the war. To prevent fratricide, local SOPs came up with innovative methods, including having friendly aircraft rock their wings upon returning, painting aircraft noses different colors and dropping smoke. These measures helped but were never standardized.

Though more AAA units would be assigned forward in the future, the ports and airfield defenses were never neglected. They continued to receive periodic Luftwaffe attention, and were defended by a combination of antiaircraft guns, 90mm and 40mm, searchlight battalions and barrage balloons. In darkness, the ports were defended exclusively by antiaircraft. Port and airfield defense continued in importance in North Africa, Sicily and, finally, in Italy.

**European Theater of Operations**

The landings at Salerno, and, later, even more significantly at Anzio, where Americans lingered on the beach, made antiaircraft artillery an integral part of the operation. Despite Italy's prompt surrender, Hitler's decision to commit crack German divisions to the southern front eliminated any possibility of a cheap Allied victory on the peninsula. The battles of the Volturno and Rapido Rivers and Monte Casino lay ahead on the long, hard road to Rome, but as Luftwaffe assets diminished, reductions in AAA were possible. This was particularly important in light of the pending invasion of Europe. In April 1944, and again in June, the Mediterranean Antiaircraft Artillery Committee approved transfer of numerous AAA units to England. By January 1945

*After liberating Rome, U.S. forces pushed north into the Italian Alps, where jagged peaks created a snowy backdrop for this M-15 crew.*

only two gun battalions and three automatic weapons battalions operated with the U.S. Fifth Army in Italy. Even though Italy was a sideshow, the scorecard for antiaircraft artillery was impressive. In two years in Italy, U.S. Army Air Forces claimed 125 enemy aircraft destroyed and 31 probably destroyed. U.S. Army AAA during the same period destroyed 1,127 enemy aircraft and 253 probably destroyed. American antiaircraft artillerymen had certainly learned how to shoot.

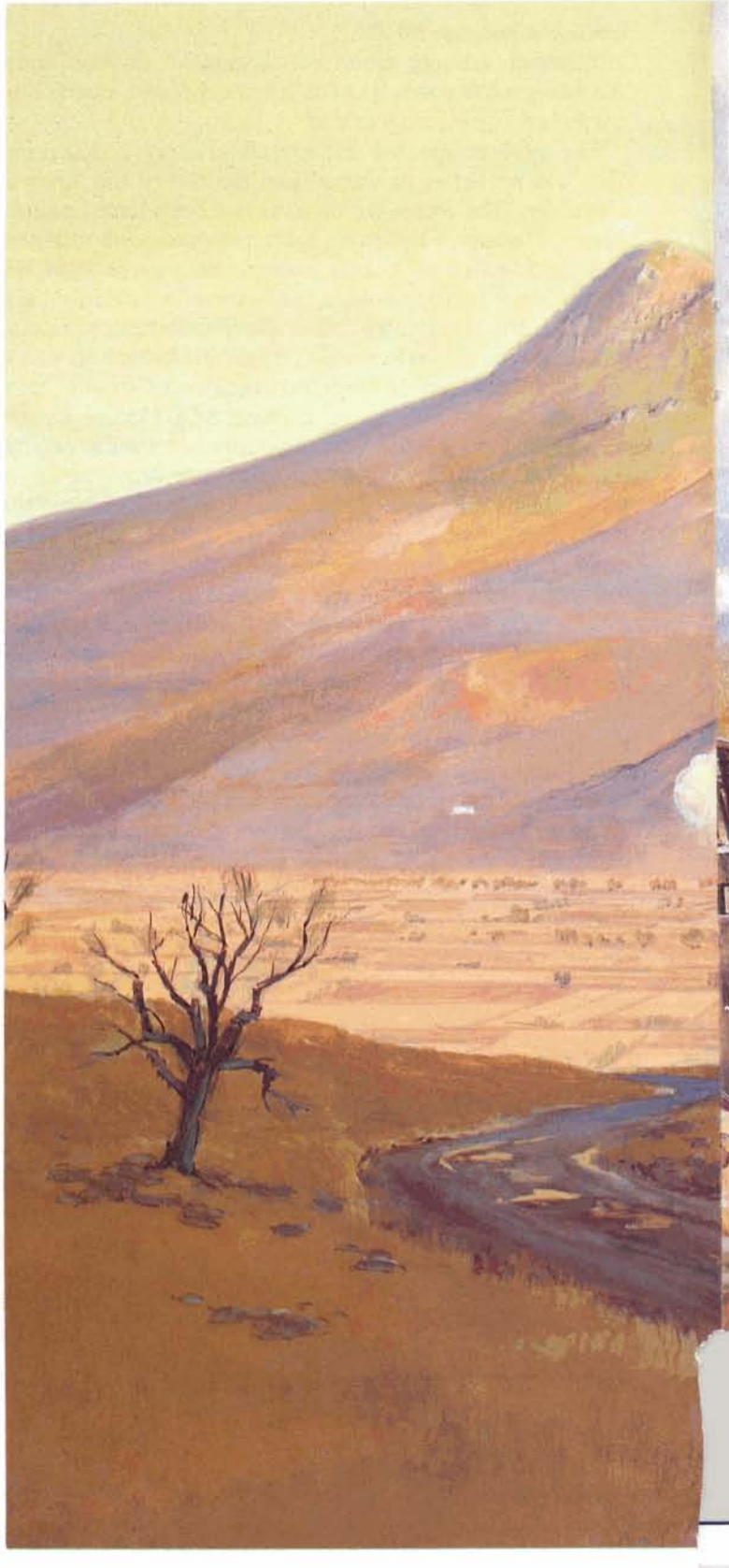
The Army and the antiaircraft artillerymen that landed on the Normandy beaches June 6, 1944, were very different from those that met Rommel in February 1943. Soldiers now received much better training in the States prior to deployment overseas. The training cycle had been extended from 12 to 22 weeks. Most units had participated as part of a combined arms package in the Louisiana or Tennessee Maneuvers. Units no longer trained on plywood or cardboard weapons facsimiles; ammunition and equipment for training were plentiful. Aircraft recognition was emphasized, and equipment maintenance was an integral part of the training plan. Mobility — the ability to move and protect armor, infantry and artillery units — was given high priority. The shortcomings that had hindered operations in North Africa had been identified, and training fixes were in place.

Innovative equipment modifications had also taken place. The cumbersome 90mm gun had been modified to cut down drastically on its emplacement time and to significantly increase its mobility. Quadruple .50-caliber machine guns on trailers were the standard. Col. Charles G. (Pat) Patterson, Omar Bradley's First Army Antiaircraft Artillery Officer, took the initiative, over the remonstrances of senior officers, and bolted Quad .50s to 700 excess half-tracks he had scrounged. The mobility offered by the half-tracks would pay handsome dividends later, when they campaigned in Europe.

American antiaircraft units in England trained under the aegis of Patterson and the commander of the First Army's 49th AAA Brigade, Brig. Gen. E. W. (Big Ed) Timberlake. Patterson and Timberlake stressed combat mobility. They borrowed combat-proven British procedures for reconnaissance and occupation of positions. AAA units stationed in the nine British camps assigned to them had plenty of time and adequate maneuver areas to perfect the skills that would become so important once they reached the continent. Throughout the training, an aggressive spirit and initiative permeated down to the lowest ranks, and would become the hallmark of antiaircraft units operating in Europe.

Each task force that landed in Normandy was assigned one antiaircraft group, consisting of one mobile gun battalion, one mobile 40mm battalion and one self-propelled automatic weapons battalion. An additional provisional machine gun battalion was assigned to the first two groups, two balloon batteries were added at Omaha Beach and one balloon battery was added at Utah Beach. Big Ed Timberlake, the 49th's commander, arrived on the beach at about 1700 hours on D-Day to help organize corps and divisional AAA units as they arrived.

The AAA units that hit the beach on D-Day did not find the skies full of German planes. Hitler had made a strategic decision that violated German maneuver doctrine, moving



*A U.S. 40mm Bofors gun crew stands by as Allied bombers pound Casino. The Benedictine monastery atop Monte Casino became the focal point of the Italian campaign's bloodiest battle. A massive bombing raid eventually turned the monastery into rubble but failed to dislodge German paratroopers who repelled assault after assault before finally being driven from the strategic peak.*

almost all fighters to the rear for defense of the Reich against Allied bombing attacks. Thus GI gunners saw very few enemy aircraft at the Normandy beaches. However, AAA men contributed greatly to the overall effort. Quad .50 machine gunners helped suppress enemy resistance, and leaders like Timberlake led by example, moving soldiers off the beach and encouraging them to close with and kill the enemy.

Antiaircraft artillerymen provided essential protection to the beaches and portable ports during the buildup phase from June 7 to June 30, 1944. The Germans realized that if they could destroy the Allied buildup, they could contain and then counterattack the Allied forces. Thus they flew more than 650 sorties. Antiaircraft artillery claimed 96 kills and numerous probables. The Luftwaffe failed to destroy the logistics necessary for the next part of the Allied European campaign.

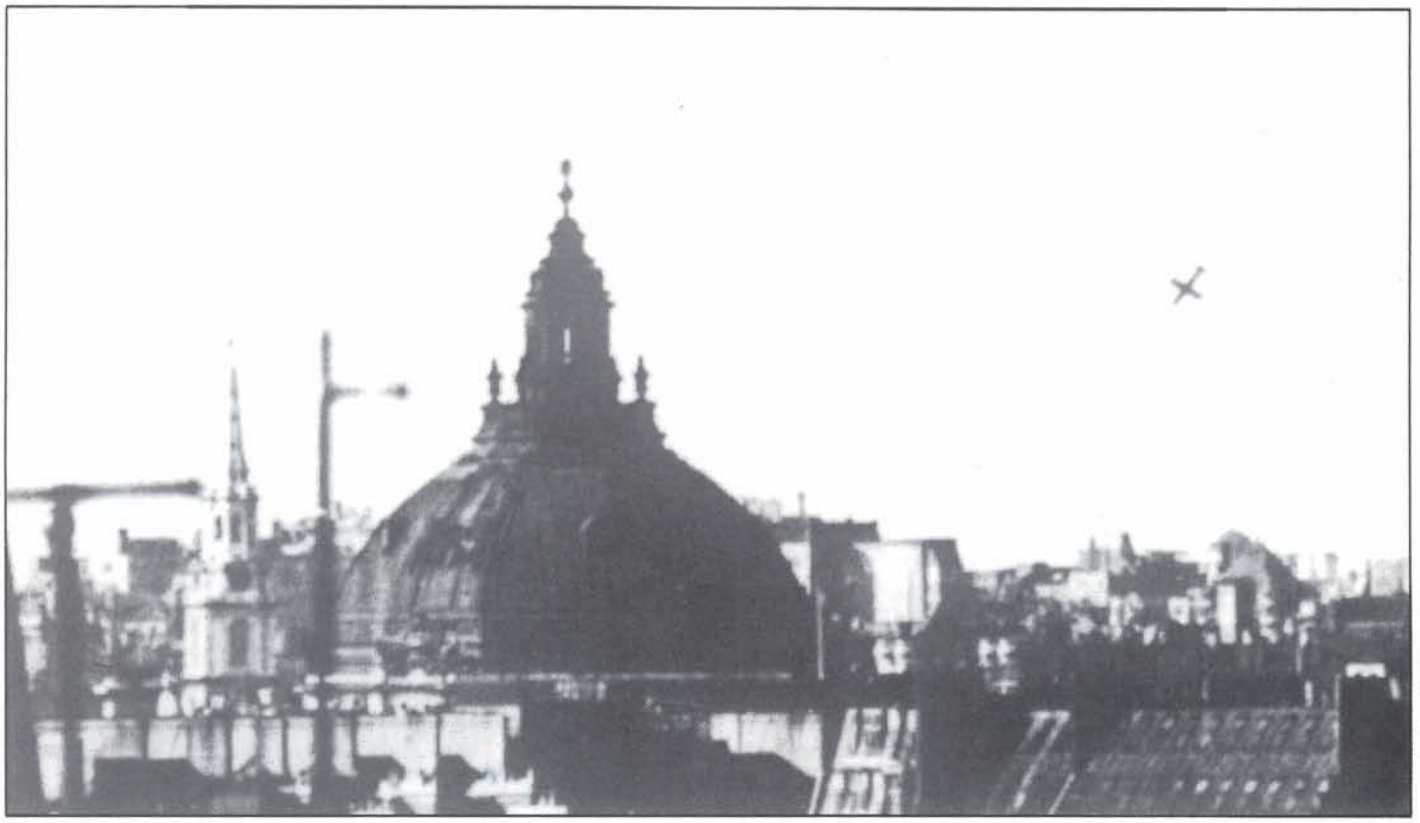
In the breakout that followed weeks of hedgerow fighting in Normandy, antiaircraft units made an impressive showing, shooting down 58 German aircraft during the most critical phase of the European campaign. The months of training that Patterson and Timberlake had engineered in England paid off as U.S. armor, artillery and infantry units broke out and swept across France. Antiaircraft units not only stayed with their supported units, but also provided an offensive punch when needed. The new 90mm gun proved to be as deadly an antitank weapon as its German counterpart, the famed 88. Infantry units loved the Quad .50, which they used to spray tree lines with armor-piercing rounds before moving forward in an assault. During this time the AAA units overcame much of the old prejudice against the Coast Artillery, and became an integral part of the combined arms team.

There were still problems with the Army Air Forces and the issue of fratricide. Patterson tried to remedy the situation by placing a AAA man in the IX Air Force's headquarters. Command and control of AAA units remained within the Army chain of command, but Air Force requests to hold fire were usually honored. Eisenhower's headquarters established antiaircraft zones to manage the airspace. These zones included an inner artillery zone, an unrestricted area and a gun-defended area. Aircraft were forbidden to fly in the inner zone, and AAA gunners were free to fire at all aircraft. In unrestricted areas, aircraft had to be positively identified as hostile before gunners could fire. The gun-defended areas were a compromise: sometimes fighters were given precedence, sometimes guns were. Zones could be established after a 96-hour notice. By the end of August, the Air Force complained that there were too many inner zones, claiming that their bombers had to fly long, circuitous routes to avoid friendly AAA fire. Corridors were established as an interim solution, with varying success. Fighter control centers did try to pass information to AAA units about flights, but the system broke down when planes did not return on schedule or did not fly in the proper corridors. Though antiaircraft units had improved immeasurably since Kasserine Pass, the recognition symbols between aircraft and antiaircraft had never been standardized, and fratricide remained a problem. It was not a one-way street, however; ground troops and AAA units were frequently strafed by U.S. aircraft, despite using yellow smoke and other signals. One division commander ordered his attached AAA unit to engage all aircraft, including and especially friendlies!

Just one week after D-Day, on June 13, 1944, Hitler launched his top secret Wunderwaffen (miracle weapon), the V-1 (Vergeltungswaffen, vengeance weapon). London, the primary target, suffered hundreds of V-1 attacks until March 29, 1945. Then, with the Allied capture of Antwerp, Belgium, this important logistics center became the favorite target. American AAA men provided half the assets defending London and almost all of those defending Antwerp. This early cruise missile type of defense, considering the relatively crude technology of the age, is one of the greatest achievements by antiaircraft in the Second World War.

The V-1 was an automatically-controlled, jet-propelled, pilotless monoplane carrying nearly a ton of high explosives. It could attain speeds of three to four hundred miles per hour, and had a range of up to 250 miles. It generally trav-

*American antiaircraft artillerymen were convinced that their own 90mm gun was better than the famous German 88mm.*



*A V-1 "buzz bomb," the ancestor of today's cruise missiles, plunges toward London. St. Paul's Cathedral is in the foreground.*

eled in a straight line, but could be set to make one 45-degree turn. The V-1 was often called the buzz bomb because of the strange sound it made in flight.

The V-1 attacks occurred in three distinct phases. The first phase lasted from June 13 until Sept. 5. Launches were made from the coast of France, directed mainly at London, and Hitler personally approved all attacks. The Commander in Chief West, Field Marshal Von Rundstedt, tried to obtain the Fuehrer's permission for an attack on the ports of Southampton and Portsmouth to destroy Allied troop concentrations on their way to the continent. Three such raids were actually conducted without Hitler's approval, and the 60 to 80 V-1s that were launched achieved considerable success. However, when this was reported to Hitler, he ordered that the responsible officer be reprimanded. He adamantly insisted that the V-1s were vengeance weapons, to be used only on population centers.

The Allies reacted quickly to the V-1 menace. They established a "gun belt" midway between the coast and London, made up of 192 British and American 3.7-inch and 90mm guns, 40mm and 20mm automatic weapons, and 480 barrage balloons. Another belt of 192 40mm guns and 368 20mm guns ran along the coast. London itself had a barrage balloon cover of more than 1,700 balloons. Within three weeks, the first belt grew to include 376 guns. The British early warning system was excellent, giving advance warnings of all V-1s to eight antiaircraft operations rooms throughout southern England. These centers then sent warnings to each individual fire unit.

During the first few weeks, problems with airspace management hindered AAA effectiveness. There were simply too many RAF aircraft inside the zone, and guns could not fire at the V-1s. During this period, the RAF destroyed three times as many enemy V-1s as did the AAA. On July 14, a decision was made to move the main belt of defense to the coast so the guns could achieve early engagement, preferably destroying the V-1s over water to keep the falling debris away from populated areas. Accordingly, 376 mobile AAA guns and 526 automatic weapons, with crews and support troops numbering over 23,000, moved to the coast; 8,000 trucks and 9,000 service troops assisted. Gun crews were ready for action in the new location within five days. The new defense had a forward and a rear fighter zone, with a gun zone in between. The results were predictably outstanding, as the effectiveness went from just 17 percent to 74 percent of targets shot down. The Allies continued to add more firepower, and by Aug. 7 employed 529 90mm AAA guns, 892 40mm guns and 405 20mm automatic weapons.

Upgrades in air defense technology and ordnance contributed greatly to the high kill ratios. The American SCR-584 radar and the new M-9 director, combined with the remote-controlled automatic loading guns, greatly improved accuracy to the point that the average expenditure per kill was 156 rounds. The single most important innovation, however, was the use of the proximity fuze. A sensing mechanism in each round set off a charge, causing the round to explode as it neared the target. These rounds proved five times more effective than conventional ordnance. Security required firing only over the sea, and the round was not authorized for use on the continent until months later, because Allied leaders did not want the secret to fall into German hands.

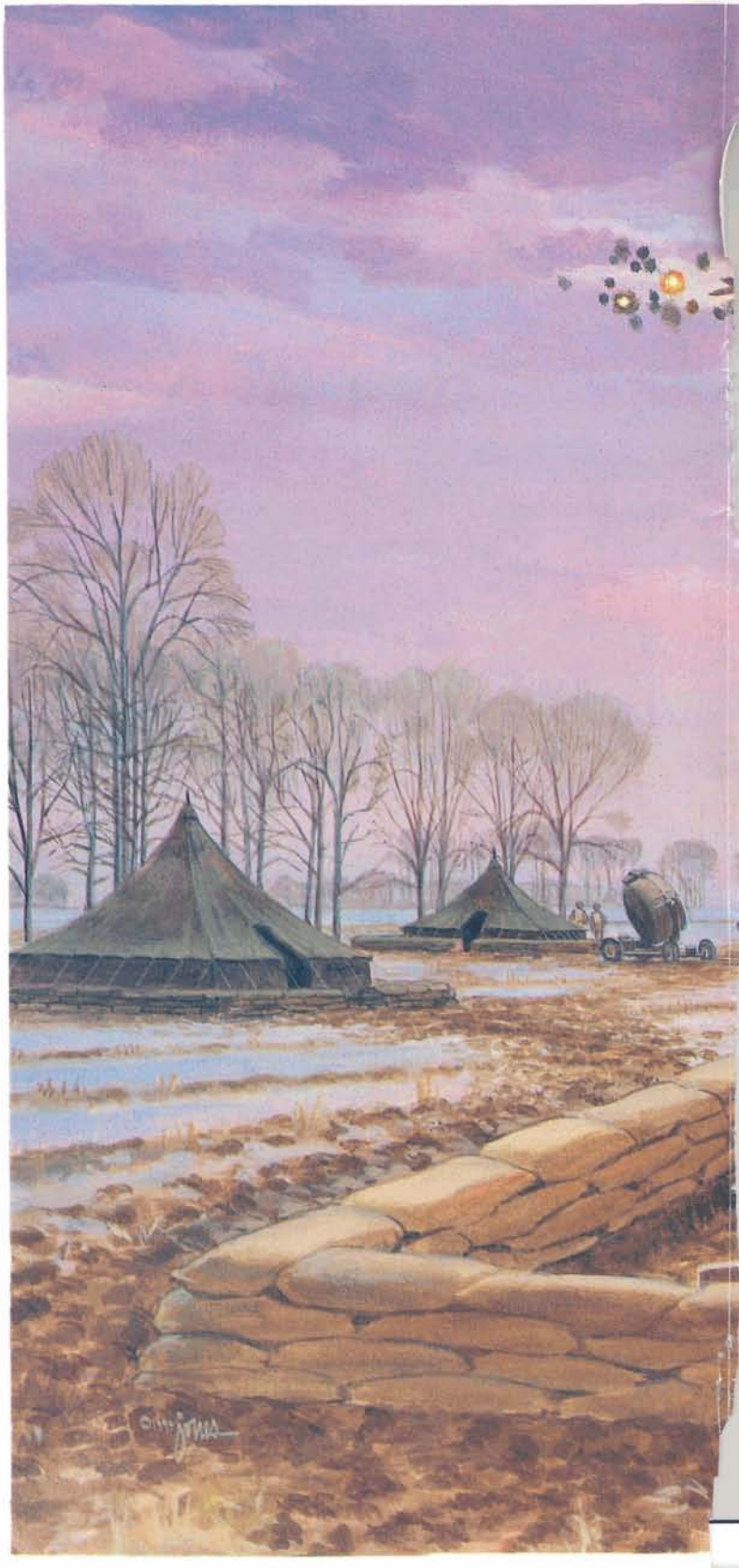
The second major period of V-1 attacks on London lasted from September 1944 until the middle of January 1945. As the Germans lost their launching areas on the French coast, they developed the means to launch V-1s by aircraft. They also changed their approach from the south to the east, so the Allied gun belt was adjusted accordingly. Allied gunners knocked down more than 80 percent of the V-1s, and there was little damage to London. The third and last phase of the attack on London commenced in March 1945. Missiles were launched from Holland and AAA gunners destroyed 92 of 158 V-1s launched.

The capture of Antwerp, Belgium, in late 1944 gave the Allies the capability to conduct sustained operations along the entire European front. The Allied offensive had ground to a halt; despite the tremendous effort of the Red Ball Express (the non-stop truck convoys that ferried supplies from the ports to the fighting front), forward units seemed always short of ammunition and fuel. Antwerp, an excellent port facility, changed all that. The Germans immediately recognized its importance to the Allies, so they sought to destroy the port with a V-1 air offensive. Later, Antwerp would be the objective of the German Ardennes offensive, which Americans called the Battle of the Bulge.

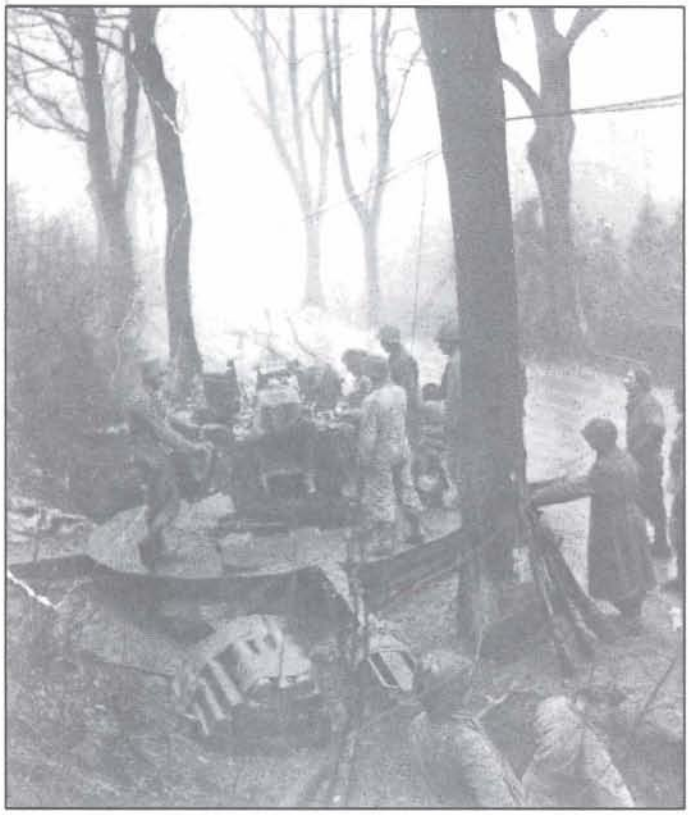
On Oct. 24, 1944, Germans began their V-1 campaign against Antwerp. This air attack was continuous until March 30, 1945. During that time the Germans launched thousands of missiles against the city. Only 211 of these reached their targets! The tremendous success that AAA men had achieved in defending London now continued around Antwerp. However, problems relating to airfields in the defense zone degraded operations in the early days, as had been the case in England. An inner artillery zone was set up immediately, but the Allied Air Forces largely ignored the zones. From Nov. 26 to Dec. 11, 1944, more than 325 aircraft violated the zone. After several were shot down by friendly fire, the violations quickly decreased.

More than 208 90mm guns equipped with the proximity fuze, 128 3.7-inch British guns and 188 automatic weapons, manned by some 18,000 AAA soldiers, participated in the defense. Planners were able to decipher avenues of approach and weight the defense accordingly. There were so many V-1s launched that fire control became necessary. If it was determined that a particular buzz bomb was not going to strike a vital area, it was not engaged. These were called flankers. Priority of fire went to those V-1s that posed a threat to the vital port area. By December 1944, more than 87 percent of the V-1s were engaged and destroyed. Of the hundreds launched, only 13 reached their targets! For the entire period of the Antwerp defense, antiaircraft artillerymen destroyed more than 1,766 of the 2,523 V-1s launched.

The military significance of the successful defense of Antwerp cannot be overemphasized. British Field Marshall Montgomery put it best in a personal letter of commendation to American Brig. Gen. C. H. Armstrong, commander of the 50th AAA Brigade, written on April 12, 1945: "Success of the defence kept in full operation the main supply base for the 12th and 21st Army Groups, has profoundly influenced the present battle, and made the success of present operations possible."



*One of more than 200 90mm guns employed in belts around the Port of Antwerp blasts away at an encroaching V-1. Antiaircraft artillerymen, who ignored V-1s whose trajectories did not endanger vital areas, destroyed more than 1,766 of the 2,523 V-1s launched.*



*Battle of the Bulge — AAA crews emplaced their 90mms at an important road junction (top) near Stoumont and stopped Kampfgruppe Peiper's Tiger tanks. At bottom, a 90mm gun crew defends Bastogne.*

Antiaircraft artillerymen, moving with maneuver units in late 1944, also enjoyed great success. For example, the Luftwaffe launched 100 aircraft against the U.S. First Army on Dec. 3, 1944. U.S. gunners knocked down 41 of those. For the antiaircraft artillery, there was no better way to bind themselves to their infantry, armor and artillery comrades. They were now an accepted member of the combined arms team, a relationship they cemented forever during the Battle of the Bulge.

Hitler launched his massive counterattack against the Allies on Dec. 16, 1944. The Germans who struck were combat veterans of the eastern front, freshly equipped units of the elite Waffen S.S. This was a last-ditch effort to relieve pressure in the west, and the attacks were carried out with the furor and determination that the situation dictated. Some of the Allied units they hit, like the 28th Infantry Division that had been recently mauled in the Huertgen Forest, were burrowed in the rough terrain of the Ardennes to recover. Other Allied units were brand new divisions that had never seen combat. Allied planners believed that the terrain was too difficult to conduct major operations, but their shortsightedness overlooked the fact that the major German attack against France in 1940 had followed a similar axis.

The Germans achieved a surprise attack out of the fog and snow. American lines were quickly ruptured and chaos became the rule, with hundreds of Americans cut off and hundreds more surrendering or streaming to the rear. The battle degenerated into scores of isolated fights conducted by brave men who were determined to stop the Germans and buy time for their leaders to stabilize the line. Antiaircraft artillerymen rose to the occasion and distinguished themselves in countless operations.

The situation report at Headquarters, First Army, was bleak. S.S. Panzer Grenadiers of Kampfgruppe Peiper (the soldiers responsible for the infamous Malmedy massacre) spearheaded the German attack. First Army's antiaircraft officer, Patterson, recognized the urgency of the situation and directed all available 90mm guns to the front to help stem the German tide. What these AAA men achieved cannot be overstated. At a small town called Stoumont, two 90mm guns from Battery C, 143rd AAA, reached a road junction, emplaced and waited. They had arrived from the States just two days earlier. Peiper's Panzers emerged from the fog and came under fire. The 90s scored again and again. As the German attack faltered, Peiper moved forward to assess the situation. To his amazement, his Tigers were withdrawing.

This story was repeated frequently, as antiaircraft artillerymen fought desperately, often while their infantry comrades fled to the rear. In the 28th Division sector, German Volksgrenadier infantrymen brought the 107th Field Artillery Battalion under fire. The men of the 107th had begun to stagger to the rear when two of the 447th AAA's halftracks raced down the road directly toward the Germans, spraying them with fire and rallying the field artillery troops behind them.

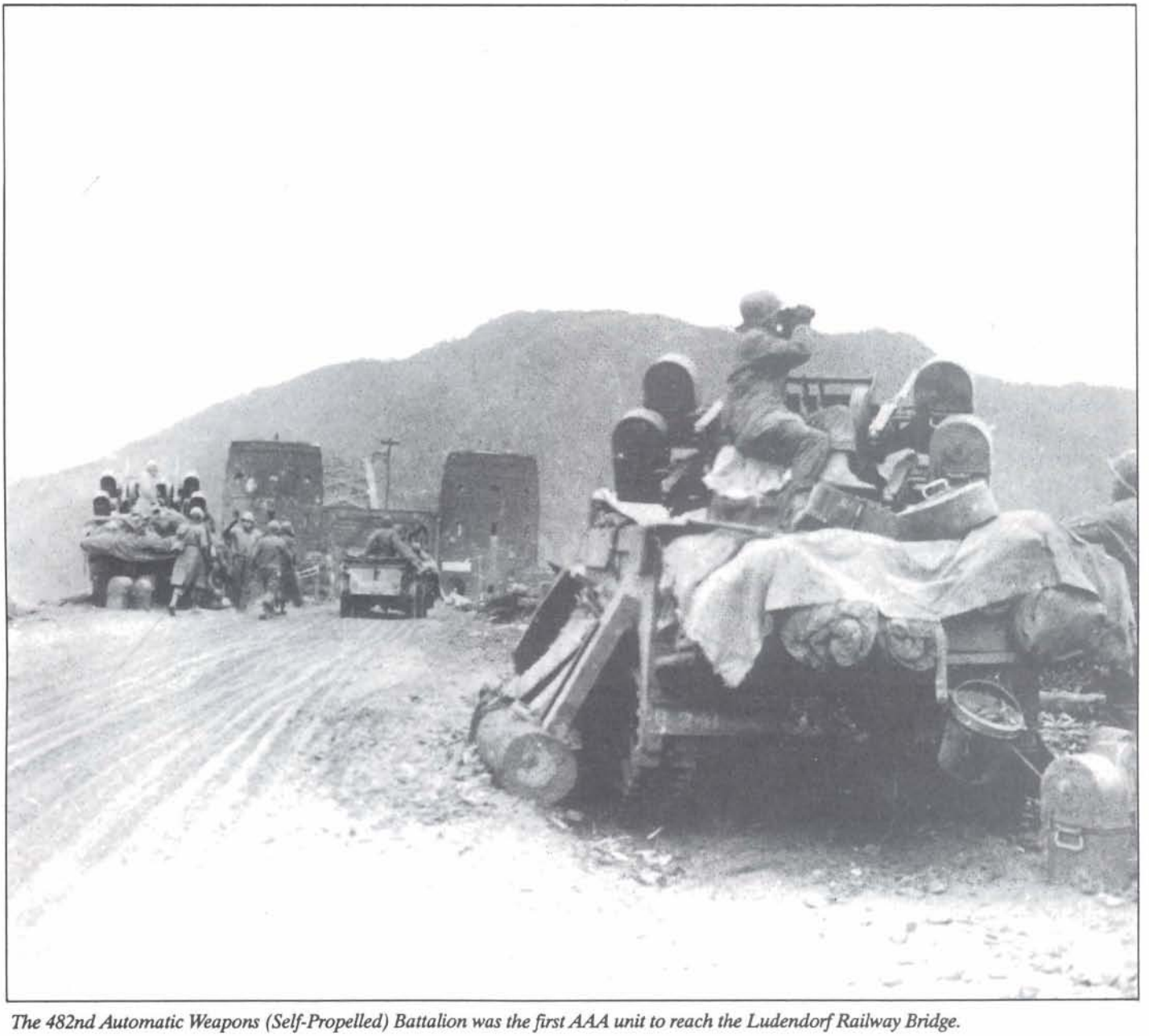
The spirit of the AAA soldiers is exemplified by the heroism of Lt. Col. Sandy MacGrain, commander of the 413th AAA Battalion. MacGrain's unit was engaged, cut off and then surrounded during fighting on Elsenborn Ridge. He was wounded while trying to reach Battery C, which had been isolated by the German attack. MacGrain was evacuated and put on a hospital train headed to the rear. When the train stopped to pick up more wounded, MacGrain jumped from the train and made his way back to his unit. The 413th then destroyed six German tanks and broke up several infantry assaults.

Antiaircraft artillerymen contributed immeasurably to slowly halting, and then counterattacking, the Germans in the Ardennes. The weather during this period precluded either friendly or enemy air activity. When the skies cleared

on New Years Day 1945, the Germans launched the most extensive single-day attack of the entire European Theater. Nine hundred ME-109s, FW-190s and JU-88s were thrown against the Allies. No one had ever seen so much air activity at one time, as the Luftwaffe generally conserved its aircraft to fight against Allied bombers. During that morning 16 Anglo-American airfields were suddenly attacked by German bombers flying below 200 feet. More than 250 Allied aircraft, almost all of them parked on runways, were destroyed or damaged. The attack lasted just three hours and was heaviest in the U.S. Third Army area.

Only a few of the German fighters fell to Allied aircraft. Most were shot down by AAA. Losses sustained by the already short Luftwaffe were disastrous. AAA gunners claimed 363 planes destroyed and another 102 probably destroyed. This was the Germans' last significant aerial offensive of the war. Parenthetically, German antiaircraft shot down another 90 to 100 of their own aircraft that were returning from bombing attacks. German pilots had failed to alert them about the air offensive.

As the Battle of the Bulge brought respect from their combined arms brethren to the AAA, the defense of the Remagen Bridge in March 1945 won them world acclaim and directly shortened the war in Europe. On the afternoon of March 7, elements of the 9th Armored Division found, to their amazement, that the Ludendorf Railway Bridge across the Rhine was intact. As the first GIs crossed the bridge, retreating Germans detonated explosive charges in an attempt to destroy the span. The bridge heaved into the air but did not fall, and Combat Command B of the 9th Armored soon had elements across. Gen. Omar Bradley, First Army commander, decided to exploit this bridgehead and gave orders to rush units forward to reinforce elements poised to withstand the expected German counterattack. The 482nd Automatic Weapons (Self-Propelled) Battalion was the first AAA unit to arrive at the bridge, around 2030 hours on



*The 482nd Automatic Weapons (Self-Propelled) Battalion was the first AAA unit to reach the Ludendorf Railway Bridge.*

March 7. Their commander, Lt. Col. Vincent Lupinicci, contacted his division commander, then called corps and pleaded for all AAA assets to be rushed immediately to the bridge. As other antiaircraft artillerymen surged toward the bridge, elements of Lupinicci's battalion arrived. A tank destroyer that had blocked access to the bridge was removed and the air defenders moved across. It was 0300 hours on March 8, 1945. The thirteenth vehicle across was a Quad .50 half-track. The same morning, MacGrain's 90mm Gun Battalion joined the defense. As hundreds of vehicles and thousands of men converged, racing toward the bridge, two AAA groups from the V and VII Corps moved toward Remagen. By now roads were clogged, and negotiations with Military Police became the norm as the antiaircraft artillery units pleaded for road precedence.

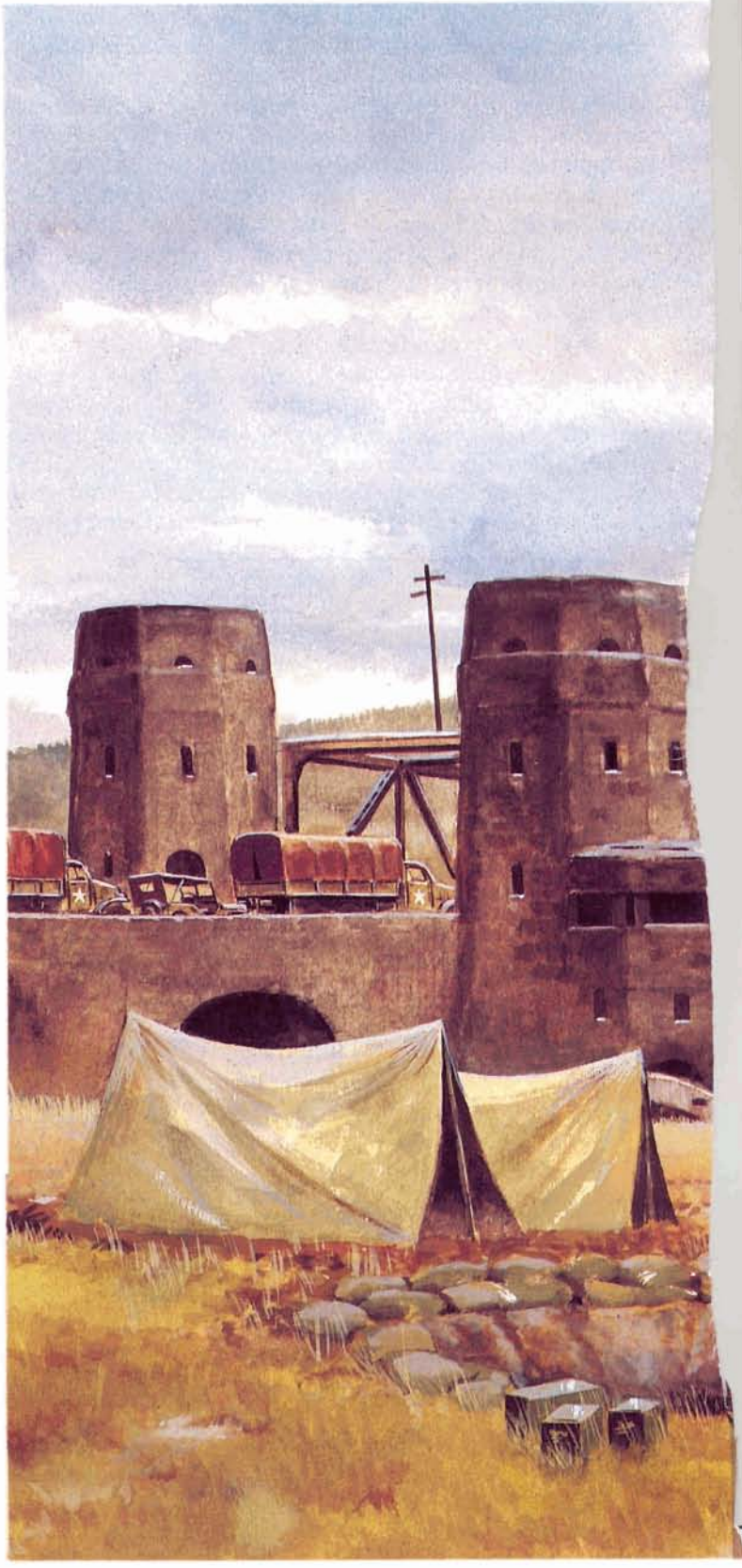
Finally, on the afternoon of March 8, the Luftwaffe came calling. Eight Stuka dive bombers went in to finish the job that demolition had left undone. None survived the wall of steel that rose to greet them. Enemy artillery continued to fire at the bridge throughout the first days. The 482nd suffered greatly in the attack, losing 10 fire units. The Americans continued to build their defense. By March 14, the gun defenses totaled 64 90mm guns; 128 M-51 Quad .50s (trailer); 100 M-16 Quad .50s (self-propelled half-tracks); 216 40mm guns; 24 M-15 35mm guns; and 140 .50 caliber machine guns.

German attacks continued even after the bridge collapsed on March 16. By that time, engineers had erected a pontoon bridge to carry thousands of GIs to the opposite bank. More than 400 German aircraft participated in the attacks. On one day, 67 new ME-262 jets led the German assault, but no bombs struck the bridge. More than 140 German aircraft were destroyed, and another 59 were probably destroyed.

By March 17 an inner artillery zone was declared. The number of air defense systems was so great that an umbrella barrage system was set up during the night. Once an airplane was detected, each gunner filled his sector of the sky with steel. The volume of fire was so intense that no Luftwaffe pilot was able to penetrate it.

After three weeks the Luftwaffe gave up their futile attacks on the bridge and abandoned their hopes of halting the flow of troops and supplies across the Rhine. The U.S. First Army G-3 had earlier estimated that a combat crossing of the river could cost the Allies 100,000 men. Remagen changed that. Antiaircraft artillerymen played a key role at Remagen from the first hours, ensuring that the bridge would carry thousands of GIs into Germany, where just weeks later they would deal the final blow. Germany surrendered the first week of May 1945.

No one called the AAA the "Red Comforter Corps" any longer. The men at Remagen would have scoffed at the operations conducted at Kasserine Pass two years earlier. When the war ended, antiaircraft artillery was an integral part of every maneuver operation. Though doctrine was sometimes fuzzy and local in approach, air defenders were looked upon as vital, contributing partners in the war effort. Their courage and determination were matched only by their ingenuity and flexibility. The aggressively mobile AAA moved with, fought with and protected the U.S. Army.



*An M-15 half-track engages a German Messerschmitt above the Bridge at Remagen, the only Rhine bridge captured intact. Antiaircraft battalions rushed to defend the bridge shot down the first 12 German planes to attack the bridge and successfully countered each successive attack as U.S. infantry and armor units poured into Germany. They set standards that still guide air defense artillerymen today.*

**Pacific Theater of Operations**

As the war opened for antiaircraft artillery men in the Pacific, the shortcomings in training and the lack of foresight concerning the air threat quickly became obvious. The 200th New Mexico National Guard exemplified how unprepared the Army really was. The 200th, an old cavalry unit, was converted to antiaircraft and included into Federal service in January 1941. Quartered at Logan Heights, Fort Bliss, Texas, the unit went through AAA training for eight months prior to deployment to the Philippines. Although a few officers were sent to the Coast Artillery School at Fortress Monroe, Va., the majority learned their new military occupational specialty on the job, albeit without real equipment. When the 200th arrived in the Philippines in September, then took up their combat positions around Clark Field in November, only a handful of soldiers had fired actual rounds in training, and most had trained on wooden facsimiles.

A month later the Japanese attacked. The weapons systems the 200th used against the first waves of enemy bombers were antiquated and generally ineffective. The Japanese soon discovered that the American three-inch rounds did not reach beyond 20,000 feet. Moreover, the ammunition, manufactured in 1932, was frequently unreliable because of its age. One soldier noted that four out of five rounds were duds. Despite inadequate training and poor equipment, the 200th fought courageously and learned quickly. They accounted for more than 86 Japanese planes destroyed.

As U.S. forces retreated from Clark Field through Manila and toward the Bataan peninsula, antiaircraft units were repeatedly tasked to hold key bridges and to defend against both air and ground attacks. Usually the air defenders were the last units to withdraw, blowing bridges in the face of the onrushing enemy. After several months in Bataan, living on greatly reduced rations and beset with illnesses, American forces on Bataan surrendered to the Japanese in April 1942.

The epic of the 200th reached its climax when the Battle of Bataan ended; the unit took part in the infamous Death March and 40 months of imprisonment. Only 900 of the 1,800 New Mexican antiaircraft artillery men who had come to the Philippines returned when the war ended. Lt. Gen. Jonathan M. Wainwright, commander of American forces in the Philippines at the time of the American surrender, later paid the 200th a lasting tribute. Remembering these brave air defenders, he said, "First to fire, and last to lay down their arms! A fitting epitaph for a valiant brigade, which died standing firmly in its appointed place, and facing the enemy."

Throughout the first Philippine campaign in 1941-1942, U.S. antiaircraft soldiers were constantly engaged in land and air defense combat. More than 2,000 Japanese sorties were directed against American defenses on the island of Luzon. Despite their limitations in training and equipment, American AAA men destroyed 173 enemy aircraft, with another 21 probably destroyed and 66 damaged.

Uncommon valor truly was common among antiaircraft artillery men during those early days of Philippine combat. As their weapons systems were destroyed or overrun by the advancing Japanese, AAA soldiers placed themselves alongside their combat arms comrades and continued to fight. A notable example of heroism occurred during the waning hours of the American resistance on Corregidor. Capt. William Massello, commander of a searchlight battery, had managed to flee from Bataan to Corregidor when Bataan fell. His searchlights had been abandoned, but Massello was determined to find a new mission for himself and the men he had brought with him to Corregidor. Because he had experience with mortars, he convinced his commander to let him take over some 12-inch mortars that seemed to belong to no one. The Japanese systematically destroyed mortars and guns as they prepared for their final assault on Corregidor. In the last days of the campaign, Massello and his men took over some 120mm guns and fought until the very end. Badly wounded, Massello could not stand up, but refused to retire for medical assistance. He had severe injuries to his arms and legs and was bleeding profusely, but he ordered his men to prop him up against the revetment so that he could continue to direct fire. Massello is said to have fired the last shot before the American capitulation. He subsequently survived the cruelties of more than three-and-a-half years in Japanese POW camps.

*Pacific amphibious assault SOPs required AAA units to hit the beach on D-Day.*

Within three months of Pearl Harbor, fresh AAA units boarded troop ships as part of the first wartime deployments to the Pacific. Most of them were sent to Australia, the Japanese having occupied nearly all the rest of the Pacific theater by that time. Units conducted training on their new equipment while they were in combat positions. Ad hoc instructor schools were set up, particularly when the new 40mm Bofors began to replace the 37mm antiaircraft gun in 1942. Austra-

*A 40mm Bofors crew defends a New Guinea airstrip. Airfield defense was a top AAA priority throughout the Pacific Theater of War.*

lians, already familiar with the Bofors, contributed to the local production of a field manual. The guns were engaging Japanese planes even before the official publications were ready.

The importance given antiaircraft artillery generally coincided with the importance of forward airfields. AAA's primary mission in the Pacific was the defense of landing strips on hundreds of islands. Defense of supply installations had second priority. Because there were so many airstrips, the AAA unit requirements were enormous. American mobilization efforts again rose to the challenge. Within one year, 187 batteries and 27,000 AAA men were sent to the Pacific.

Just as in Europe, antiaircraft artillery gunners endeared themselves to their combat arms brethren, becoming integral parts of combat assault forces all over the Pacific. In Burma, antiaircraft artillerymen defended airstrips, bridges and chokepoints along the treacherous Burma Road, the all-important lifeline that kept China in the war. The AAA men found themselves in the middle of ground support operations in the countless amphibious operations that were the hallmark of Gen. MacArthur's island-hopping campaign.

Antiaircraft weapon systems were often used against enemy ground targets as a matter of necessity. At Milne Bay, in August 1942, the airborne 709th Automatic Weapons Battery, providing airstrip defense, met and turned back an assault by Japanese marines with their .50-caliber weapons. This was the first in a series of AAA participation in key ground actions. When the famed 41st Infantry Division failed repeatedly to take Roosevelt Ridge at Nassau Bay, the 209th Antiaircraft Battalion moved forward and fired a barrage, allowing the 41st to overcome the stubborn defenders. More than once antiaircraft guns repelled enemy "banzai" charges, breaking up the suicide waves with antiaircraft automatic weapons fire. On one occasion in the Admiralty Islands, a Quad .50 cut down the top of a palm tree, quickly eliminating an enemy sniper's nest. The same battery repelled repeated Japanese night attacks against the airstrip it defended. Searchlight batteries also contributed immeasurably, illuminating the battlefield and preventing surprise Japanese night or banzai charges.

Though most antiaircraft ground operations were based on local necessity, during the second Philippine campaign AAA was purposely included in the overall ground opera-

*Triple "A" half-tracks, like this one on Luzon, blasted die-hard Japanese soldiers out of caves and bunkers.*

tions plan for Luzon. Maintaining close coordination with infantry forces, the 90mm antiaircraft guns fired in both the direct and indirect modes as artillery. They were especially effective against hard ground targets. After 22 days of combat, the detachment of 90s was credited with 75 caves closed, 40 pillboxes destroyed, 25 gun positions knocked out and seven machine guns destroyed. At Cebu, a detachment of 40mm Bofors knocked out 71 pillboxes, 29 machine guns and three mortars. The infantry commander credited the AAA with the ground victory.

As MacArthur's island-hopping campaign matured, AAA became an integral part of every operation. Each new amphibious operation became another force projection exercise. Antiaircraft artillery provided key air defense during the initial assault and lodgement phases of operations. Troop and supply ships made easy targets for Japanese aircraft, so air defense of the beach and port areas was essential for success.

The mission of the antiaircraft artillery was clear: "Assist in the antiaircraft defense while afloat and upon landing provide antiaircraft defense for landing beaches, airstrips, beached craft, bridges, troop concentrations, supply installations and other vital installations." Additional missions included "anti-mechanized defense, assault on pillboxes and anti-small boat defense." Though each amphibious operation differed in some respects, general guidelines were used to plan the AAA deployment. Antiaircraft machine guns landed first, with the initial assault prior to the beaching of LSTs. Gun systems were often wrestled ashore by hand. Next ashore were the 40mm Bofors units, usually attached to the infantry assault units, with a battery of AAA attached to each infantry battalion landing team. These units usually reverted to division or corps control, as part of the lodgement beach air defense, once the assault landing phase was successful. Then 40mm towed units were brought in, as needed, to augment the integrated defense as the self-propelled units moved inland. Finally, the 90mm guns landed along with their associated radars. This provided the defense with some early warning capability. The 90s and their radars were to be in place by dark of D-Day (day one of an assault). The AAA buildup was rapid: planners recognized the danger of air attack against the large concentration of follow-on ships, troops, vehicles and supplies.

Airspace management and control of antiaircraft artillery fires required extensive coordination between the Navy, Army maneuver and Army Air Forces. During amphibious operations the initial responsibility rested with the Navy. Officially, Army AAA units remained under the operational control of the Navy until land-based planes took over fighter responsibility. In practice, however, once the antiaircraft operations room was on shore and ready for operations, and with the approval of the attack force commander, the control passed from the Navy to the Army. This procedure was constantly refined, and after numerous island assaults, fratricide by AAA was almost nonexistent by 1944.

*A 90mm crew dug into Iwo Jima's black volcanic sand prepares to move to a new position.*

As noted above, the antiaircraft artillery provided key air defense to countless island airstrips and major troop and supply bases throughout the Pacific campaign. An excellent example of that contribution was the American air defense on an Indonesian island, Morotai. From Sept. 16, 1944, one day after American forces landed, until Christmas, Morotai suffered unabated Japanese air attack. The Japanese were determined that the Americans not build an airstrip there to be used in offensive air operations against Luzon and the Japanese mainland. During this time, the Japanese pounded the island with 82 major raids

involving approximately 200 aircraft. American AAA accounted for 37 planes destroyed. The official record illuminates the real contribution of the Morotai air defenders: "The 90mm guns performed valuable functions second only to destroying enemy raiders: (1) they caused the enemy bombers to take moderate or violent evasive action before and after bombing runs, with consequent marked reductions in effectiveness (bombs fell in the water); (2) they put up sufficient flak causing numerous raiders to turn away without dropping their bombs." Due largely to the extensive antiaircraft artillery on Morotai, the Japanese suspended their attacks in late December.

The assault on Leyte in October 1944 was one of the largest operations undertaken in World War II. Because of the expected air threat, the Sixth Army commander assigned one AAA group and five AAA battalions to each assault corps. The 32nd Antiaircraft Artillery Brigade was charged with control of all air defenses in the operation. Surprisingly, the Japanese did not attack on the first day of the assault. The following days, however, found Japanese fighters and bombers attacking the beachhead. During the first few days the 90s were credited with destroying nine planes and the automatic weapons battalions with 28. The Japanese continued to attack, usually at night. By Nov. 5 there were more than 199 separate attacks. Automatic weapons units killed more than 80 Japanese aircraft, while the 90s were credited with 44. Finally, in late December, the Japanese called off their futile air campaign after losing more than 251 planes to antiaircraft artillery.

Antiaircraft artillery played a key role in smashing an enemy airborne operation. The Japanese launched a 700-man paratroop operation with 40 transports and 100 fighters on Dec. 6, 1944, against the U.S.-held airstrip at San Pablo. After being ordered to weapons hold while the first wave passed by, the AAA gunners were allowed to open up on succeeding waves. One AAA battalion on the tip of Leyte shot down 19 planes. Total AAA credits were more than 60 aircraft. Despite these losses, the Japanese pressed home their attack and successfully landed 200 men. When the attackers reached the beleaguered defenses, the AAA men met them with withering fire. Those air defenders were later credited with inflicting 175 casualties.

*A 40mm gun set up to repel Japanese air raids or banzai charges.*

As the war proceeded and American forces edged closer to the Japanese mainland, Japanese resistance became more fanatical. The Japanese air campaign intensified, coupling conventional air raids with suicide, or kamikazi, attacks. Army air defenses on beaches assisted naval antiaircraft in countering these attacks. In April 1945 Americans launched their Ryukyus Islands campaign, centering on the capture of Okinawa. This proved to be among the bloodiest operations of the War. Antiaircraft artillery men fought as they had throughout the Pacific War, many paying the ultimate price in the midst of what seemed incessant combat.

One of the most inspiring, yet tragic, incidents in AAA history took place during the struggle for Okinawa. Just three-and-a-half miles off the coast of Okinawa lies the tiny island of Ie Shima. The 77th Infantry Division, with its attached 90mm AAA battalion, was ordered to take the island on April 16. Though established doctrine called for the 90s to be on the beach by dark of D-Day, tough resistance precluded that. However, most of the 93rd AAA personnel did land. Without their 90s, they quickly volunteered to assist the infantry, particularly by clearing minefields. Within days their own equipment caught up with them, and by April 19 the 93rd was fully operational.

Enemy air activity commenced on April 26, climaxing with a desperate attack on May 24. Sixteen Japanese planes made runs through the American fire. Ten planes plummeted to the ground. Attacks continued through the night. By morning, 18 Japanese planes had been destroyed and seven more damaged. The 93rd was credited with a record-setting one-day total of 15. Attacks continued that summer. On the night of June 24, Battery D of the 93rd suffered tragic losses when a string of 60-kilogram Japanese naval bombs exploded near the battery. One bomb found its mark with a direct hit on a gun position, killing the entire 12-man crew. The 93rd's actions are symbolic of much of the Pacific campaign. During air attacks infantry units scurried for cover and support troops hunkered down in bunkers and trenches; antiaircraft artillery men carried the fight. Many, like the ill-fated sons of the 93rd, made the ultimate sacrifice.

**Conclusions**

As we move through the 50-year anniversary of the greatest war in our history, one cannot help but reflect upon the changes in our world. We have already passed into, and out of, the Cold War into a nuclear and computer age. The rapidity of change following World War II is unprecedented in world history. As modern-day air defenders, we note the technological differences from our counterparts of World War II, yet we also must acknowledge that many of the issues and challenges of that era remain with us.

Certainly, air defenders today are considered important partners in the combat arms team. This has not been a natu-

*An antiaircraft crew on Biak shows off its "scoreboard" amid the scattered wreckage of a downed Japanese plane.*

ral evolution, though, as the Nike and stateside missile defense era threatened to turn us back into a nuclear-age Coastal Artillery. It's important to remember that divisional air defense in the post-World War II era came in the 1960s. This is not to belittle the tremendous contribution of Nike air defenders during the first, critical Cold War decades, but rather to demonstrate that our acceptance as a branch and a viable, essential combat arms partner has not been easy to gain. Therefore it is as paramount in importance today, as it was for those antiaircraft artillery men in World War II, to demonstrate technical and tactical combat proficiency. Any lieutenant or captain who walks into an infantry, armor or artillery tactical operations center knows that he is always being evaluated and compared. The respect we earn from the more senior combat arms partners will always be based on the same competence, initiative and aggressiveness that our AAA forefathers demonstrated a half-century ago.

Today, just as in North Africa and Europe during World War II, the roles and missions issue with the Air Force surfaces periodically. Just as in World War II, the Air Force seeks to eliminate fratricide by strictly commanding and controlling air defenses. Air Force priorities for air defense, then and now, are different from those of an Army maneuver commander. The Army has prevailed, emphasizing the need to protect the force, which obviously goes far beyond protecting airfields, and which includes, as a major mission, giving the Army commander freedom to maneuver. This issue has been hotly debated from the time that Gen. Jimmy Doolittle brought it to the attention of Gen. George Marshall, and as recently as last year. The decision has always been the same: the air forces should be allowed to coordinate and control air defense operations, but the Army retains the mission of protecting the force. No one wants to repeat the bloody mistakes of Kasserine Pass.

The lessons of World War II and our new FM 100-5 have much in common. We were a force projection Army on the islands of the Pacific and the beaches of Europe. We provided air defense in the critical lodgement phase, then continued to protect our Army as it maneuvered. We shot down not only fixed-wing aircraft but also pilotless missiles. We demonstrated versatility in countless air and ground operations. We recognized the need for synchronization and, in the end, we always protected the Army.

Finally, we must, as air defenders, continue to fight in this age of diminishing resources to develop weapons systems and fighting doctrine. Failure to do so could condemn us, or our sons and daughters, to the fate of so many brave men who died for lack of training or because of antiquated systems that could not handle the threat. We air defenders today must remember the sacrifices of those AAA men of World War II, and we must renew our determination to succeed and our commitment to our branch, our Army and our country. Anything less, and we fail those who dedicated and sacrificed themselves for our freedom 50 years ago.

*Lt. Col. Thomas E. Christianson is the Command Historian, U.S. Army ADA School. He has taught history at the U.S. Military Academy and the Command and General Staff College.*

# *World War II veteran reflects on life, liberty and happiness, and the price America paid for all of these.*

By Patricia Rhodes

*From the time his battalion left England for France, on D+21, young Major Jack Rogers kept a daily journal. Sometimes the entries were quite terse — "6 Mar 45: Still raining" — and rarely were they more than a few lines long, but he never missed a day. Through Normandy and the rest of France, through Belgium and Holland, on into Germany itself, he recorded the activities of the 463rd AAA Battalion.*

*Jack Rogers graduated from the University of California in May 1941, and his ROTC commission immediately brought him on active duty in the Army. Three years later, a newly promoted major, he was the 463rd Antiaircraft Battalion's S-3 when the battalion, training in England, received orders to cross the English Channel and join the American forces already in Normandy. And 50 years after that, Brig. Gen. (Ret.) Jack Rogers browsed through his diary (bold entries) and reminisced with me about the human side of war, the small incidents, humorous or tragic or mundane, that never made it into the official histories.*

*Brig. Gen. (Ret.) Jack Rogers was Assistant Commandant of the U.S. Army Air Defense Artillery School.*

**27 Jun 44: Our battalion alerted to load on LSTs for movement to France. After loading, the vessel pulled out into the stream and proceeded to a position off the Isle of Wight to form up with the convoy.**

At dusk we pulled out into the lee of the Isle of Wight. Some time in the morning we sailed for France. The Old Man [Lt. Col. Robin E. McCormick, commanding officer of the 463rd AAA Battalion] insisted that we all take our seasick pills; he didn't want the battalion going ashore seasick. Well, those things were also sedatives. The entire battalion was unconscious for about eight hours! I went to sleep with my head lying on my helmet. I'd put my head down "for just a moment." Hours later I woke up with my neck so stiff I could hardly wiggle. But I was well-rested — and I wasn't seasick!

**28 Jun 44: The channel weather is sunny and clear. Arrived off France in the early afternoon and proceeded to spend the rest of the day jockeying for a beach position. LST beached at 2000. Unloading began at 2230. No accidents. Only one jeep dunked itself.**

The Old Man and I were in the lead jeep. The doors of the LST opened, and we went right off into a big mine crater. The jeep and the Old Man and the driver and I went right down, blub-blub-blub. The driver had enough sense to stand up and keep his foot on the gas. So we got out, and the only tragedy was that the driver and I had earlier decided to put the Old Man's bedroll under ours in the trailer so it wouldn't get hit by shrapnel. Then the driver forgot to open the drain in the trailer. So we had two dry bedrolls and a wet one. The Old Man grumbled about it all night long. I don't think he ever forgave us for that.

*Arriving at the chaos that was Omaha Beach, the 463rd had no clear orders about what unit it was to join.*

**29 Jun 44: Spent the day trying to figure out who we are supposed to protect and why. No one knows. Finally, a party was sent to contact the 79th Infantry Division. Arrangements made to join the division in the morning.**

We'd stayed on the beach the first night, and then we went off to the headquarters of the beach area. The Old Man said to some captain, "Where do we go?" The captain said, "Don't you know?" The Old Man said he didn't know. The captain didn't know either, but he had a list of the units that were ashore, and the Old Man picked the 79th Infantry Division. The Old Man and I went off in the jeep, looking for the 79th. When we found them, we went to see the division commander, General [Ira T.] Wyche, and we said, "Do you have an antiaircraft battalion?" "No." "Would you like to have one?" "Yes." "Well, how about us?" "Okay."

**30 Jun 44: Battalion moved in from beach. Spent the day trying to figure out whether or not we are really going to be assigned to the 79th.**

We went and got the battalion, and then came back to the 79th and dug in and got all set up. Then down the road came another antiaircraft battalion, whose colonel insisted that they were supposed to protect the 79th. So we all trooped in to see General Wyche again. He said to that colonel, "Look, we know the 463rd, they're here, they're dug in; so why don't you take your battalion and go away?" The last I saw of them, they were headed down the road. I never did find out what we were supposed to be doing, and I never found out what happened to that other battalion.

*The 463rd was spread throughout the 79th Division to provide maximum protection. They put a platoon with each of the light artillery battalions, and a battery with the medium artillery battalion. The air strip got AAA protection, as did the 79th Division headquarters. One AAA platoon served as a unit that could deploy quickly to wherever it was needed. On July 3, the battalion had its first taste of combat as the 79th began a fierce attack against the Germans in the hedgerows of Normandy. The 463rd scored a couple of hits on enemy aircraft during a week of intense fighting, and on July 11 brought down its first German plane.*

**11 Jul 44: Two FW-190s appeared for their evening strafe. One ran into a little more AA than he expected and crashed on Hill 121. B and C Battery split the kill.**

One of the reasons that we got along so well with the 79th was that, early on, we shot down an airplane for them. He flew right across the light artillery battalions and was hit, burst into flames and smashed into a hill where everyone could see him. Very spectacular. This is the only way that you acquire your credentials with the rest of the Army. Not by telling them how good you are; not by showing them your target practice reports or your IG inspection reports. The way to do it is to shoot down airplanes for them. There is no other way.

*The 463rd saw plenty of enemy action during the Allied breakout from Normandy and the ensuing pursuit of the Germans across France. The Allied forces liberated scores of towns. Usually they were greeted by throngs of cheering French citizens, though sometimes they met a different reaction.*

*An antiaircraft artillery battery commander pays his soldiers while they remain at their M-51 machine gun.*

**27 Jul 44: Moved across the river to Geffosses. We ran into the first signs of happiness over liberation. Apparently these people are different than those damn Normans.**

Why was I glad to get away from the Normans? The reason was that the Germans had evacuated a great many people they considered to be too sympathetic to the Allies. Some of the people who were left were Nazi sympathizers. Some of them sniped at us, so we weren't really happy with them. I'm not by any means saying that all the Normans were, but there were just enough Nazi sympathizers that we were irritated with them, particularly the ones who had ammunition and fired at us.

**6 Aug 44: Moved through Fougeres to Laval. The people here are very enthusiastic about liberation. Wine flows freely.**

Ladies brought cookies out to us. But it seemed to me that all throughout the war, other people would stop where the pretty girls and champagne were, and my vehicle stopped either by a dead horse or where an old grandmother would bring out a small baby to see the Americans.

*The Germans were now in full retreat. The Americans were moving so fast, and the Germans fleeing in such disarray, that there was mass confusion.*

**7 Aug 44: Took off again. It has been so long since we had a map that we are used to traveling on Boy Scout woodcraft. We all dashed madly down the road hoping that we wouldn't get too far out in front of the infantry.**

That happened — well, I won't say routinely, but fairly frequently — during the big breakout, while we were sweeping north. One day we stopped for lunch, and were sitting at the side of the road eating our C-rations, when around a corner came an infantry man — the point for one of the infantry regiments! How we got out ahead, we didn't know. But we'd been sitting there for half an hour, fat, dumb and happy.

The Germans tried several times to cut in behind the division. Sometimes our S-4 saw more action than the rest of

*(continued on page 67)*

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# KAMIKAZE

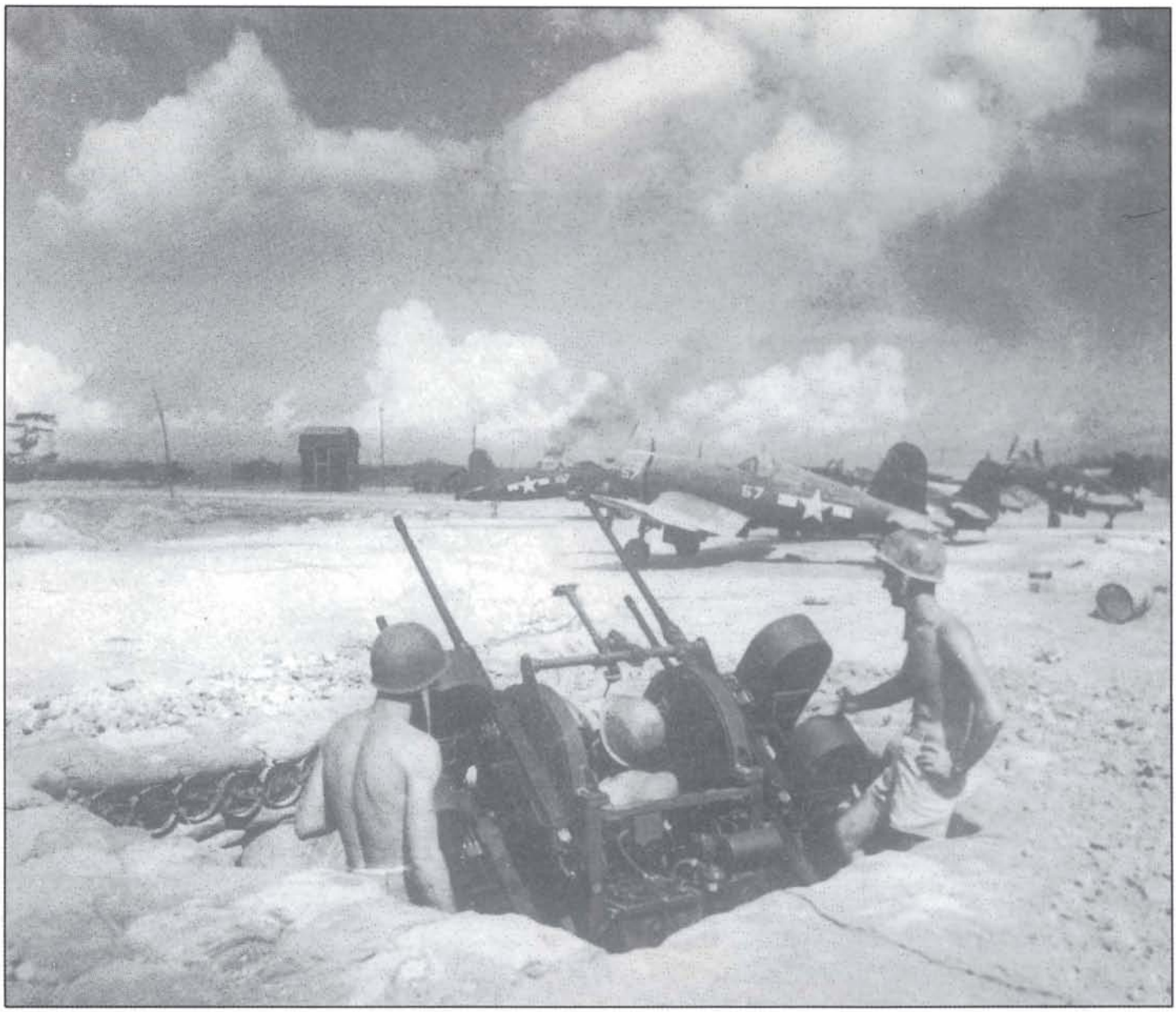
## American Antiaircraft Artillery units on Okinawa turn back Japan's "typhoon of steel"

In 1274 and 1281, the Mongol emperor, Khublai Khan, launched invasion fleets toward Japan. Each time it seemed that the heavily outnumbered and poorly armed Japanese were doomed, but each time a typhoon arose without warning out of the Inland Sea to wreck the armadas. The Japanese, convinced that the typhoons had been sent by the gods, named them kamikaze, "the divine wind." The kamikaze legend grew into a conviction on the part of the Japanese that their country could never be defeated. In 1945, as Allied invasion fleets edged nearer to the home islands, Japanese commanders gambled that a typhoon of steel — kamikaze suicide planes — could once again turn invaders away from their homeland.

Okinawa was the final and bloodiest campaign of the Pacific War and its most desperate antiaircraft battle. Operation Iceberg, as the Okinawa operation was known, involved about 548,000 U.S. soldiers, sailors and marines. The United States lost 763 aircraft, had 36 ships sunk and another 368 ships damaged. The Japanese lost 7,800 aircraft, 1,462 of them kamikazes expended in a series of massive suicide raids. Okinawa cost the United States 49,151 casualties while the Japanese took about 140,000 casualties, about 40,000 of them Okinawan civilians who decided to share their soldiers' fate.

Vice Admiral C. R. Brown, who watched waves of kamikazes attacking the U.S. fleet off Okinawa, observed: "We watched each plunging kamikaze with the detached horror of one witnessing a terrible spectacle rather than as the intended victim. We forgot self for the moment as we groped helplessly for the thought of that other man up there." The Navy bore the brunt of the kamikaze attacks. But Army Antiaircraft Artillery (AAA) units ashore added their fire to the flak umbrella that covered the fleet and protected the vital airfields from which rose American interceptors.

*Automatic weapon crews shot down five of the six Japanese bombers that approached Yontan airfield, but the sixth managed to crash land on the runway and disgorge kamikaze troops laden with explosives.*



*A Quad .50-caliber machine gun crew protects an Okinawa airfield. Okinawa's vital landing strips were lucrative targets for Japanese warplanes and defending them was a primary antiaircraft mission.*

The idea of suicide attacks appears to have originated spontaneously among Japanese pilots, and there had been isolated incidents of Japanese planes purposely crashing, or attempting to crash, into American warships prior to the return of U.S. forces to the Philippines, but it was not until Vice Admiral Takijiro Onishi arrived on Luzon, just before the American landing at Leyte, that the Kamikaze Special Attack Corps was officially organized. "In my opinion," Onishi told his commanders, "there is only one way of channeling our meager strength into maximum efficiency and that is to organize suicide attack units composed of Zero fighters equipped with 250-kilogram bombs, with each plane to crash-dive into an enemy carrier."

Still, the earlier kamikaze attacks, although somewhat successful, were sporadic and poorly coordinated; they offered only a taste of what was to follow. A combined force of about 1,815 kamikazes, most of them based in the home islands, awaited the American invasion fleet as it approached Okinawa. They were an integral part of the Japanese defense plan for Okinawa.

Irregularly shaped, about 60 miles long and 18 miles across at its widest point, Okinawa is the main island of the Ryukyus chain of islands that lies just 350 nautical miles south of Kyushu, the southernmost of Japan's home islands. In October 1945, the Joint Chiefs of Staff, planning to use Okinawa and the smaller surrounding islands as a staging base for the eventual invasion of Japan, directed its capture.

Operation Iceberg planners anticipated a tough air battle from the very beginning. They expected the Japanese to mount heavy and repeated air attacks against invasion shipping and they anticipated the Japanese would intensify their kamikaze attacks. Fortunately, many of the U.S. antiaircraft artillerymen assigned to batteries designated to take part in Operation Iceberg were veterans of previous campaigns.

The Okinawa campaign lasted from March 1945, when the United States seized the Kerama Retto (a group of small islands about 30 miles from Okinawa) as a staging base and anchorage, through June 1945. It was in every sense a joint operation. Top command was exercised by Commander, Fifth Fleet. His principle subordinate in the Ryukyus was Commander, Joint Expeditionary Forces. The next lower level of command included several task forces, one of which was Expeditionary Troops, better known in Army parlance as Tenth Army. The Tenth Army was commanded by Lt. Gen. Simon Bolivar Buckner. The son of a Confederate general, Buckner would die in the closing days of the campaign when an exploding mortar round slammed a broken piece of coral into his chest. Once U.S. forces were securely established ashore, the Navy relinquished command and control of all ground combat and service units, as well as the Tactical Marine air groups and certain naval forces. Command passed to the Tenth Army and Buckner operated directly under the theater commander, Admiral Chester M. Nimitz.

The first stage of the Okinawa campaign got underway in March with the capture of the Kerama Retto. The small Japanese garrisons in the Kerama Retto fled to the hills. The first kamikaze attacks came at dawn on March 26 against ships standing off the islands. The Japanese launched their Okinawa-based aircraft in suicide raids against the invasion fleet, and by March 29 had lost 100 percent of the Okinawa-based planes without disrupting the U.S. schedule.

U.S. planners correctly estimated Japanese fighting forces on Okinawa at about 100,000 and had anticipated a reenactment of Iwo Jima — another bloodbath on the beaches. But the initial landings on Okinawa, begun on April 1, were virtually unopposed. Even when U.S. units began pressing inland, they at first encountered nothing but enemy outposts. Army and Marine units, operating far ahead of schedule, quickly captured Okinawa's two airfields (Kadena and Yontan) and cut the island in two. For the first time in the Pacific War, GIs who had recaptured the Philippines and Marines who had waded in through the bloody surf at Tarawa slept under familiar stars; at these more northern latitudes, the Big Dipper rather than the Southern Cross dominated the nighttime sky.

Task Force 51 Commander Admiral Richmond Kelly Turner was so enthusiastic over the early progress that on April 8 he radioed Nimitz: **I MAY BE CRAZY BUT IT LOOKS LIKE THE JAPS HAVE QUIT THE WAR, AT LEAST IN THIS SECTION.** Nimitz replied: **DELETE ALL AFTER "CRAZY."**

*Antiaircraft artillery crewmen aboard ship check their 40mm Bofors gun prior to debarkation.*

The next day, a savage battle of attrition began when Buckner's troops, probing toward the south end of the island, bumped up against Lt. Gen. Mitsuri Ushijima's Thirty-Second Army. Rather than forcing the issue on the beaches by expending his soldiers in heroic but fruitless banzai charges, Ushijima had situated his forces in a series of carefully prepared defensive positions called the Shuri Line in the rugged terrain surrounding Shuri, the ancient Okinawa capital. Ushijima had no realistic chance of defeating the invasion force, but hoped to inflict so many casualties that the Allies would abandon plans to invade the home islands.

As the ground battle grew in intensity, antiaircraft artillerymen waged their own war against Japanese aircraft. Viewed in broad aspects, the portion of the operation devoted to air defense included the activities of fighter aircraft of the U.S. and British Navies, U.S. Marine Corps Aviation and, later, the Army Air Force, as well as both ground and ship-borne artillery. The Tenth Army AAA Command comprised all the Army and Marine Corps AAA assigned to Tenth Army.

The principle AAA operations in the Ryukyus campaign took place on the islands of Okinawa and Ie Shima, a tiny island just off the coast of Okinawa. The operation on each island had its assault phase, during which certain AAA units were attached to the corps and divisions. At the end of each assault, these AAA units reverted to the control of Tenth Army AAA. After the capture of Ie Shima, the AAA activities on both islands were closely related and merged into a single series of operations, all of which can best be considered chronologically.

After a heavy preparatory bombardment of the beaches, the assault on Okinawa began at 0830. Landings were made on a two-corps front, four divisions abreast. Before noon, reconnaissance parties of the 485th and 861st AAA AW Battalions were ashore and selecting positions. By nightfall three batteries of these units were ashore and operational. The remainder landed the next day and, together with two gun batteries, were operational by evening. By the night of April 4, all assault AAA units with the XXIV Corps had landed and were operational.

With the exception of the first night, when the 861st AAA AW Battalion destroyed one enemy plane,

the AAA units saw little air activity during the April 1 to April 4 assault phase. Ernie Pyle, the famed war correspondent who had recently transferred from Europe to the Pacific, was amazed at the assembled antiaircraft firepower. "Just at dusk," he reported, "three planes flew slowly overhead in the direction of the beach. We paid no attention, for we thought they were ours. But they weren't. In a moment all hell cut loose from the beach. Our entire fleet and the guns ashore started throwing stuff at the sky. I'd never seen a thicker batch of ack-ack. As one of the marines said, there were more bullets than there was sky. Those Japanese pilots must have thought the world was coming to an end when they flew into that lead storm only 10 hours after we had landed on Okinawa. All three were shot down."

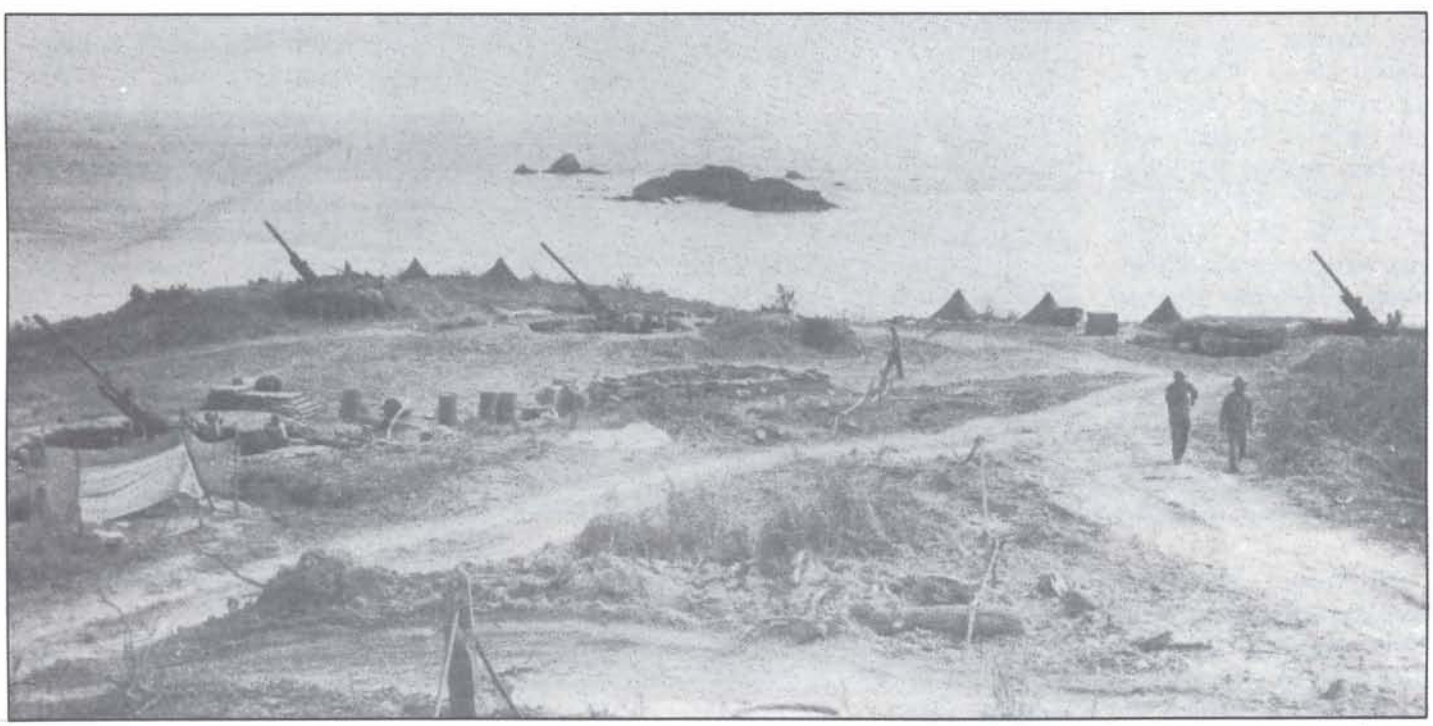
On April 5, all Army AAA units ashore on Okinawa reverted to XXIV Corps under control of the 97th AAA Group. Units were displaced to cover the Yontan and Kadena airfields, both of which had been captured on L-Day. AAA units also provided air defense protection for field artillery areas, and one gun battery was detached to corps for field artillery support. The 97th AAA Group assumed responsibility for coordination of AAA fires within the corps area.

The heavy strikes against Japan by planes of the Fast Carrier Task Force prior to L-Day, together with the protection of the beaches by combat air patrols, prevented any effective Japanese air attack on Okinawa during the assault phase, although scattered kamikaze and conventional flights from Japan and Formosa were a daily occurrence. During the first few days of April the toll of damaged and sunk ships grew at an alarming rate — and naval casualties mounted proportionately.

The Japanese unleashed the first and largest of 10 coordinated suicide attacks against Iceberg forces on April 6. Spearheading the kamikazes were 14 planes sent to bomb and strafe Okinawa airfields in hopes of destroying Allied aircraft. In the early morning hours, spread beam searchlights illuminated one Zeke strafing Yontan from 1,500 feet and one Kate over the field at 3,000 feet. They were engaged by AAA fire, and though no damage was observed both planes quickly departed. These raids did little damage to the runways and none to the Tactical Air Force planes, for none had yet flown ashore.

Following the early morning group of aircraft came more than 100 fighters and bombers sent to engage Task Force 58 off Amami-O-Shima to draw American carrier-based planes away from the suiciders heading for Okinawa. The main attack, with 355 suicide sorties (most of them targeted at shipping in the transport area), began at about 1500 and spread out all over the combat zone. The kamikazes, accompanied by a nearly equal number of conventional fighters and bombers, ran into a storm of flak put up by naval and shore batteries that also subjected friendly troops in exposed positions on the beach to a deadly rain of AAA shell fragments. The outer ring of radar picket boats and patrol craft, lacking a protective shield, caught the full brunt of the attack. Ships of all types, however, were fair game. Two cargo ships loaded with all the 81mm mortar ammunition available for Operation Iceberg exploded, and replacement rounds had to be airlifted onto Okinawa. Three U.S. fighters that followed Japanese planes too closely into the murderous barrage burst into flames.

Navy aviators claimed to have shot down at least 380 enemy planes (the Japanese reported their losses at 335 planes), but the AAA batteries ashore also got into the action. In the late afternoon a flurry of activity occurred with damage to both sides. At 1605, shore-based antiaircraft batteries shot down one Japanese plane as it attempted to crash dive a battleship. At 1617 another enemy plane at 7,000 feet was destroyed over the transport area by ship and shore



*On Okinawa, this 90mm Antiaircraft Artillery battery, deployed to provide protective fires for the invasion fleet, dares the Japanese to attack.*

# 1994 ADA UNIT DIRECTORY

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## Compiled by

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Information in this listing current as of May 1, 1994

*A 40mm gun of the 866th AAA AW Battalion guards shipping at the Kerama Retto anchorage, a favorite target of Japanese kamikaze pilots.*

*(continued from page 55)*
planes overflew the gun-defended area and were engaged; one was destroyed and two probably destroyed by radar-controlled 90mm fire. At 2140, after orbiting 15 miles east of the island, an unidentified enemy plane came in at 15,000 feet and was fired on by 90mm guns with unknown results. Simultaneously, one Betty was engaged and damaged. This was followed by the destruction by radar-controlled gunfire of an enemy plane flying over at 6,000 feet.

The 77th Infantry Division's assault on Ie Shima, which had a plateau suitable for an airfield, began on April 15. Antiaircraft units attached to the 77th were the 93rd AAA Gun Battalion (Lt. Col. A. H. Vail), 7th AAA AW Battalion (Lt. Col. R. F. Murphy) and the 2nd Platoon, Battery A, 295th AAA Searchlight Battalion. Because of the slowness of the initial advance from the beach, no AAA units landed on the first day. On April 16, some AW elements were put ashore and became operational. Gun battalion personnel also landed and, working as infantrymen throughout the night, helped the shore parties repel Japanese counterattacks. The unloading of AAA equipment progressed slowly during the next two days because the beach area remained under intermittent sniper fire. Movement into positions was hampered by the great number of mines that the Japanese had emplaced througout the island. The mines forced AAA units to stay on roads that had been cleared.

On April 18, the Associated Press put a short obituary on the wire: "AT A COMMAND POST, IE SHIMA, RYUKYUS ISLANDS, APRIL 18 (AP) — Ernie Pyle, war correspondent, beloved by co-workers, GIs and generals alike, was killed by a Japanese machine-gun bullet through his left temple this morning. The famed columnist, who had reported the war from Africa to Okinawa, met his death at 10:15 a.m. (9:15 p.m. Tuesday, Eastern War Time) about a mile forward of this command post." Soldiers put up a sign that read: AT THIS SPOT THE 77TH INFANTRY DIVISION LOST A BUDDY — ERNIE PYLE.

By April 19, all AAA assault elements were in position and operational. The two AAA battalions had removed about 56 mines. AAA units helped the infantry clear out isolated Japanese pockets of resistance in the vicinity of the AAA gun positions. On April 19, the AAA units passed to the control of Tenth Army AAA with attachment to Island Command, Ie Shima.

Meanwhile, on Okinawa, the unloading of Headquarters and Headquarters Battery, 53rd AAA Brigade and the establishment of communications had been completed. The AAA units on Okinawa reverted to control of Tenth Army AAA on April 20 and were attached to the 53rd AAA Brigade. Marine units were attached for operational control only. Air warning teams, previously with XXIV Corps, reverted to control of the air defense command. The AAA units' positions and responsibilities remained unchanged.

As the fighting progressed and the front moved forward, additional AAA units arrived at Okinawa and the outlying islands. The buildup of the AAA defense on Okinawa and adjacent islands was phased to keep pace with the base development and to provide AAA protection for the ever-increasing number of installations to be defended. With few exceptions these units disembarked, moved into positions and participated in combat soon after arrival.

On the evening of April 20, between 1911 and 2335, the enemy staged an extended air attack with more than 50 planes, the bulk of which penetrated the gun-defended area on Okinawa. This operation portrayed vividly some inherent problems in combined fighter-AAA defense of a congested area filled with friendly as well as hostile aircraft. Day fighters landed at dusk while night fighters "scrambled" and "pancaked" at odd intervals throughout the night. It was the practice of the air defense controller to withhold AAA

fire when friendly planes were overhead, regardless of the comparative effectiveness of fighters and AAA.

Japanese pilots soon learned to follow U.S. fighters in and bomb the airfields while AAA was in Control Green and not permitted to fire. On this night they did exactly that with unusual success. The area containing Yontan and Kadena airfields and the landing beaches was the main objective of six separate raids, flown about 45 minutes apart. The third raid was tracked at 17,000 feet; the others at from 100 to 1,000 feet. During the course of the attacks some of the enemy flew low over the airfields with running lights on, circling the field with friendly fighters. They strafed and dropped approximately 40 incendiary and high explosive bombs that started fires at both airfields, forcing the one Marine AAA 40mm gun to evacuate its position. During the entire period, AAA was held in Control Green except for 15 minutes when no enemy planes were in the area. The only AAA firing was by automatic weapons at strafing planes.

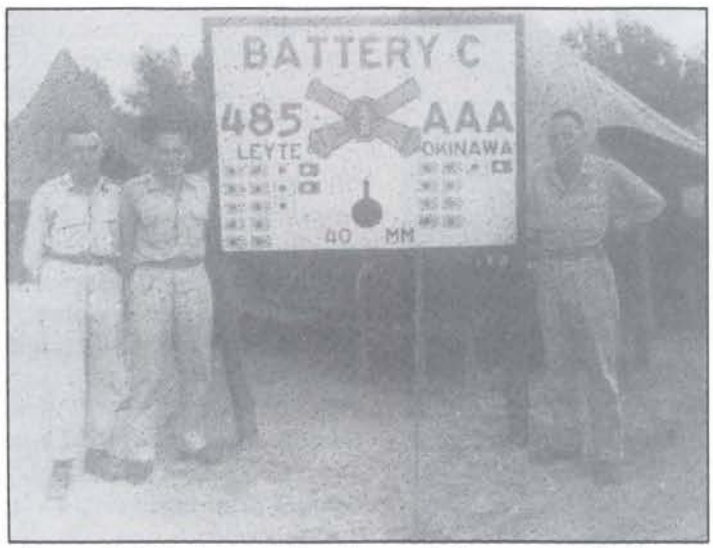
The hastily constructed airfield on Ie Shima was on a level plateau in the center of the island. On the north and south sides the ground beyond the plateau sloped sharply to a lower level that extended to the water line. On the lower level and just opposite the end of one of the runways was pitched the camp of Headquarters Battery, 93rd AAA Gun Battalion. At 1130 on April 25, a P-43 taking off from this runway failed to become airborne and crashed into the middle of the camp, immediately bursting into flames. A great deal of equipment was destroyed, as were the permanent records of more than 400 officers and enlisted men. Two men were killed and five severely burned.

The first AAA action against enemy aircraft on Ie Shima took place on April 26. Three single planes flew over the island headed for Okinawa. They were engaged by radar-controlled gunfire, but showed no evidence of destruction. The fourth mass raid of the month took place on April 27-28 when 115 suicide pilots attacked friendly ships and radar picket boats. Later in the afternoon of the second day another kamikaze formation was intercepted as it approached Okinawa. The Baka, a small, rocket-powered wooden craft that carried a one-man crew and more than a ton-and-a-half of explosives, made its first appearance during this raid. Carried by a twin-engine bomber to a point near the target, the Baka was released when its pilot had spotted a target and started the rocket motors.

On the night of April 27-28, the Japanese attacked Ie Shima itself. At 2200 one plane was engaged by radar-controlled fire at 1,700 feet. Between 0015 and 0330 nine planes attacked. One plane was destroyed and two were damaged by shells armed with variable time fuzes.

Meanwhile, on Okinawa, the AAA commander had conferred with the air support commander and achieved some improvement in the handling of fighters to facilitate the release of AAA fire when required. Favorable results were first demonstrated during the night of April 27, when the enemy renewed his aerial activity over Okinawa. Aided by clear weather and a full moon, he struck in force at Yontan airfield. Seven raids between 2053 and 2400 reached the gun-defended area. Japanese planes dropped a large quantity of tinfoil and used IFF. Air defense control was excellent and friendly fighters were held away from the area while enemy planes were within range of the AAA fire. Four planes were destroyed and one probably destroyed at altitudes from 3,000 to 9,000 feet. This attack on Yontan carried over into the early morning with two raids at 0252 and 0301. The first, a bomber at 19,000 feet, was shot down on its third attempted bombing run. The second raid of two planes, one fighter very low and a bomber at 6,000 feet, were unsuccessful: the fighter was destroyed and the bomber driven off.

The next evening, April 28, an enemy force estimated at not less than 100 planes started for Okinawa. Of these, 18 penetrated to the gun-defended areas. Raids ranged from single flights to multiple groups. Attacks from all directions at altitudes from very low to 15,000 feet pressed home in spite of heavy AAA fire. The Japanese pilots resorted to violent evasive action when under fire. The first wave struck Yontan while AAA was in Control Green, but damage to the field was not great. AAA fire was released after the first raid and AAA gunners destroyed five attacking planes, plus one probably destroyed and one damaged.



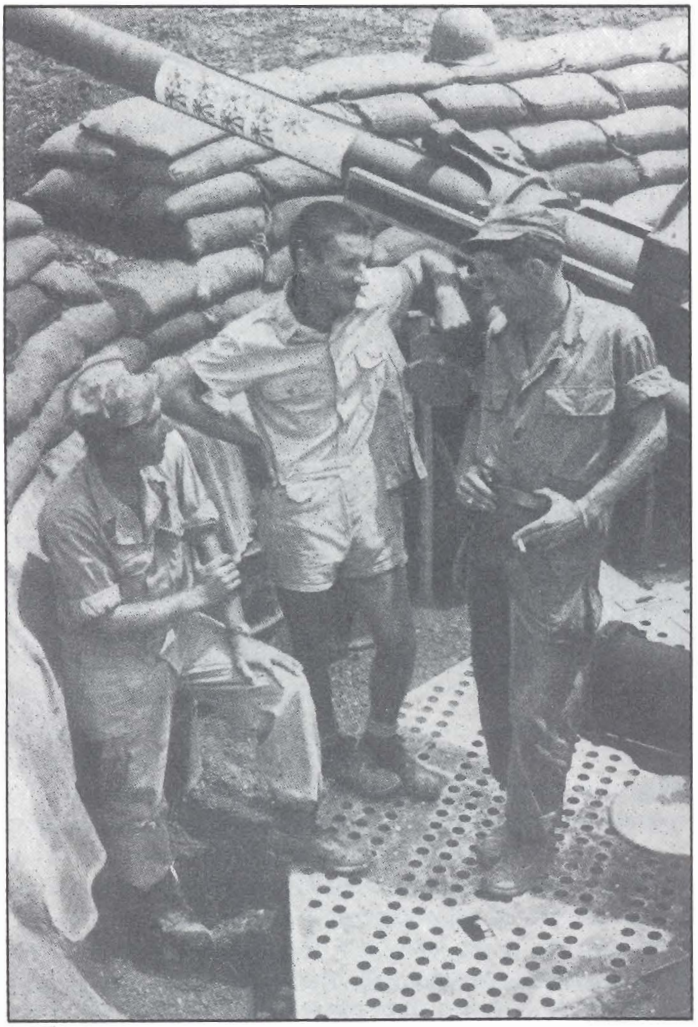
*Battery C, 485th AAA AW Battalion, marks its score: 18 kills, four damaged, three probables.*

During the early morning hours of May 4, the Japanese again raided installations within the AAA defended area on Okinawa. At Brig. Gen. Morris C. Handwerk's large underground AAA operations room (located on a tomb-studded hill overlooking the Kadena airstrip), it did not appear that the evening raid would differ from the other night attacks. The routine had been simple: suicide planes diving at the ships in the harbors during the daylight and a few bombers striking at Yontan and Kadena airfields at night. There was the familiar pattern of colored arrows on the operations board, indicating the approach of the "bogies" boring in from the Kyushu airfields to the north. The arrow tracks, first picked up by the courageous little radar picket ships of the Navy that enveloped Okinawa in a double ring, started a hundred miles away. The plots moved toward the island with a rapid-

ity that indicated this was not a friendly air patrol returning to land. Then suddenly, on the large plotting board, it became apparent this was no usual raid of four or five bombers. New tracks appeared, then more and more.

To the Japanese pilots approaching the Ryukyus all must have looked peaceful below. And it was peaceful, except that on the tiny, outlying island of Ie Shima, the crack gun crews of Vail's 93rd AAA Gun Battalion had been alerted and were silently tracking the incoming raiders with their 90mm equipment. At 2101 the first enemy plane came within fuze range of the 90mms on Ie Shima. Instantly, 16 90mm guns barked as one. At 2101, Battery C of the 93rd drew first blood and watched the first flaming Japanese plane of the evening twist like a burning leaf into the ocean; at 2104, Battery B splashed a second; at 2105, Battery D buried a third Japanese plane in the watery graveyard of the East China Sea; and in the next minute — in a spectacular exhibition of sniping — Battery C destroyed its second and third Japanese planes. Total: five destroyed by three batteries, and the Japanese armada had not even reached the main gun defense of Okinawa!

The remaining bombers revised their plan of approach to the target from the northwest. The change in course, however, only prolonged the pain. Eleven minutes after the attackers had been so severely shattered over Ie Shima, the first gun battery of Handwerk's brigade flashed "in action." Shortly afterward the sky was studded with bursts and for 40 minutes the guns of Okinawa thundered. The AAA gunners on Okinawa simultaneously engaged four different flights. The Japanese planes approached from directions between northeast and east, dropping large quantities of tinfoil and adopting violent evasive action under AAA fire. The 90mm gun batteries shot down two planes.



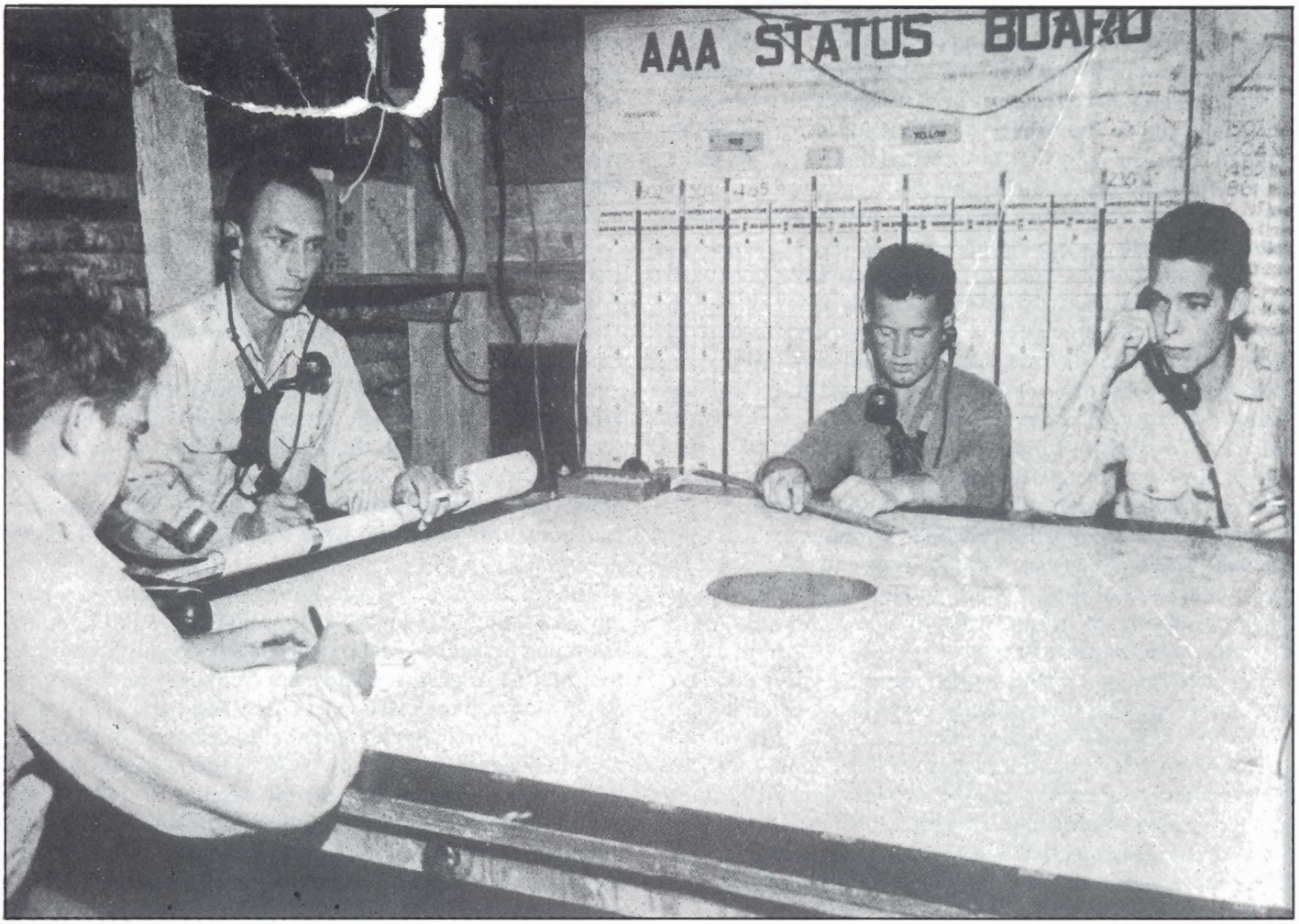
*Sgt. Frank De Luccia, 93rd AAA Battalion commander Lt. Col. William Vail, and Captain Robert Cannon discuss action on Ie Shima.*

On May 16 a raid of five enemy aircraft at high altitudes dropped bombs on both of the Okinawa airfields. One plane was damaged by AAA gunfire. That evening two more planes made bombing runs over Yontan and underwent heavy AAA fire, but the only apparent result was that the bombing was unsuccessful.

Although raids occurred daily from May 17 through May 22, that period can be classified as relatively quiet. However, on the 24th between 2000 and 2400, both Okinawa and Ie Shima experienced the most intense enemy aerial activity of the campaign. The Japanese were determined to make one last desperate bid to destroy the huge Yontan airfield.

Again, the 90mms on Ie Shima were waiting. The 93rd AAA Gun Battalion sent seven Japanese planes plummeting into the sea and damaged two more. But this first wave was only a feint, for while the Ie Shima unit was chalking up its amazing score, over the main target, Okinawa, from the north and northeast came a formation of eight Sallys, large, two-engine bombers the Japanese sometimes used to transport troops. Inside were 120 members of the Japanese Special Attack Corps, cream of the enemy's suicide troops. The antiaircraft artillerymen and aviation personnel at Yontan were startled to see the Japanese bombers attempting to land on the Yontan airstrip.

The Sallys drifted in low with motors cut off, boring in silently to hit the runway. But a Marine searchlight position on the edge of Yontan field, a section of Col. K. W. Benner's 1st Provisional Marine AAA Group, heard the first plane not more than 100 feet overhead. The time was 2200. Now it was the automatic weapons' turn. In a matter of seconds, the spray of tracer bullets and exploding Japanese aircraft lit up the Okinawa landscape with a blaze that eclipsed any July fireworks display. Within 16 minutes, the devastating barrage from Army and Marine units on Okinawa had exploded six of the attacking Japanese planes in midair. One flaming plane crashed into a searchlight position, killing two enlisted soldiers and wounding one officer and seven enlisted men. One badly damaged Sally managed a belly-landing on the airfield. At least eight heavily armed Japanese soldiers scrambled from the wreckage and began tossing grenades and incendiaries into the aircraft parked along the runway. Two Corsairs, four C-54s and one Privateer were destroyed and 26 others damaged. Two fuel dumps were ignited before the Japanese airborne troops were disposed of. Later, it was uncertain how much of the damage had been caused by the raiders and how much by the cross fire of automatic weapons. While the actual damages inflicted by the suicide squad were not material, the confusion and cross fire put the field out of action until the last raider was killed early the following morning.




*The U.S. Navy's radar picket ships relayed early air raid warnings to antiaircraft artillery operations rooms dug into Okinawan hillsides.*

Yet the Japanese would not give up, and attacks continued through the rest of the night. While the Special Attack Force hit Yontan, the enemy made 20 raids on Ie Shima. These were mostly single plane attacks, although two flights of several planes hit the airstrips and fuel dumps, but damage to installations was slight. As the tired gun crews wearily swabbed the tubes, a "Well Done" flashed down from the naval task force commander.

The attack continued during the early morning with 12 additional raids over the gun-defended area. On Ie Shima, the final count for the six-hour attack was 27 Japanese aircraft destroyed, two probably destroyed and 10 damaged. After daylight, shipping became the principal target. Offshore 176 kamikazes swept in toward the transport area and, in the next 12 hours, sank LSM-135 and the destroyer *Bates* and severely damaged other ships, four so badly that they had to be scuttled, scrapped or decommissioned.

Although sporadic raids occurred over the islands during June and July, there was no repetition of the concerted air activity of the preceding month. However, the enemy did extract a measure of revenge. On the night of June 24, 15 Japanese Naval PG 60-kilogram bombs landed in or near the position of Battery D, 93rd AAA Gun Battalion. One bomb struck inside the bunker of one of the guns, instantly killing the entire crew, while intense fires from the explosion consumed all inflammable material and spread among the wooden boxes where ammunition was stored in the emplacement. Fire and explosions continued for an hour before being brought under control. Unexploded ammunition was scattered over the battery position. However, the debris was quickly cleared away, damage to fire control equipment was repaired and the battery, less one gun, was again operative.

**Air Defense Control**

During the entire Okinawa campaign, the AAA was controlled from the Combat Information Center afloat. The Commander, Air Support exercised control through his Force Fighter Director. Radar picket ships stationed in all directions from Okinawa turned in early warning data to the Fighter Director for the control of interceptors and the release of AAA fire. Because of their relative isolation, these picket ships took a terrific pounding from kamikaze attacks. However, replacements were effected and operations were conducted to capture smaller outlying islands to serve as early warning bases to supplement the picket ships.

In addition to the strict control the Commander, Air Support, exercised over AAA units' fire, Army orders explicitly regulated antiaircraft fire from non-AAA units. These regulations provided that AAA weapons in the hands of non-

AAA units were authorized to fire only when under direct attack by hostile aircraft during daylight, and under no circumstances during darkness. AAA commanders on Okinawa were justifiably proud of the fire discipline their units exhibited and in the ability of their gunners to recognize targets and use judgment before opening fire. The same cannot be said of gunners in non-AAA units whose lack of fire discipline and failure to observe Army orders caused appalling results during the first week of the campaign.

Large numbers of light AAA weapons were emplaced along the beach. Most Army units ashore had managed to scavenge AW machine guns. Other ground and naval units were likewise armed. Amtracks, LCTs and small naval craft had mounted AWs for air defense. With adequate training and proper control, these gunners could have afforded tremendous defensive firepower. However, they were untrained in target recognition and unfamiliar with Army orders governing the control of AAA fire. Many of these units lacked the communication facilities necessary for proper control. Their motto was to shoot first and ask questions later. One burst of fire from any gunner against any type of plane invariably set off a terrific volume of fire that, once started, was impossible to stop.

For example, at 1155 on April 7, warning was passed on the control net that three friendly planes were going to land on Yontan airfield. The planes drew no fire as they passed over AAA installations, but as they circled to land, amtracks near the field began firing and the fire was taken up by other gunners on the beach and by ships. One plane was destroyed, one crash-landed and the third was damaged. It is likely these were the "enemy" planes of Ernie Pyle's dispatch from the beachhead.

The situation made it necessary for AAA commanders in each area to search out and take control of AAA weapons in the hands of non-AAA troops. A few were incorporated into the AAA control net. Some were allowed to continue if they were able to convince AAA commanders that Army orders regarding AAA fire were being followed. All others were dismounted and stored. Thus was it possible to ensure the safety of friendly planes operating over Okinawa.

It is true that these incidents of fratricide contributed to the caution of the Fighter Director in withholding AAA fire and preventing the full employment of AAA capabilities on a few occasions during the early days of the campaign. However, due to close liaison between Tenth Army AAA and Commander, Air Support, as well as strenuous efforts on the part of all AAA commanders, errors were corrected and a system of coordinated control of fighter aircraft and AAA fire was developed that, by the middle of the campaign, was a model for effectiveness.

**Lessons Learned**

Results obtained by Tenth Army AAA during the Ryukyus campaign included 127 enemy planes destroyed, 20 probably destroyed and 56 damaged. Battle casualties to AAA personnel totaled 39 killed and 139 wounded and injured. Non-battle AAA casualties came to 289.

Lessons concerning supply, administration and the technical aspects of ammunition and equipment served mostly to confirm what had already been known from previous operations. The principal lessons learned in this campaign pertained to training and emphasized the necessity in large amphibious operations for —

— thorough indoctrination in target recognition and fire discipline on the part of AAA gunners in non-AAA units, including complete dissemination of Army orders for the control of AAA fire to the lowest echelon;

— provision of protection from AAA engagements for all troops, especially those near beaches exposed to naval AAA fire at planes in line with the shore; and

— continued stress on local security of AAA positions, including offensive patrolling.

The end of the Ryukyus campaign was officially declared with organized resistance ceased on July 2. The Japanese commander performed the traditional rites to the emperor by committing suicide, and the Stars and Stripes was hoisted above his command post; however, nearly 7,400 Japanese soldiers surrendered and were transported to POW camps in Hawaii.

The termination of major ground combat activities actually had little effect on the AAA units in the Ryukyus. Air alerts and occasional raids occurred throughout July and the first half of August, but with less frequency and intensity. Enemy losses were placed at 107,539 dead and 23,764 were assumed to have been sealed in caves or buried by the Japanese themselves. A total of 10,755 were captured or gave themselves up. Since the overall number of 142,058 was higher than the military strength on the island, Tenth Army intelligence agencies presumed that about 42,000 were civilian killed or wounded. American losses were heavy. Tenth Army reported 7,374 killed or died of wounds, 31,807 wounded or injured in action, 230 missing and 26,221 non-battle casualties. In addition, 4,907 sailors were killed or missing in action and 4,824 were wounded.

The AAA units on Okinawa continued performing their primary mission to the end of the war. Headquarters, Tenth Army AAA Command concerned itself principally with preparation for the scheduled invasion of Japan, an invasion American commanders estimated would cost the United States more than 200,000 casualties. The atomic bombs dropped on Hiroshima and Nagasaki in early August made the invasion unnecessary.

On Aug. 15, the Emperor of Japan broadcast a message to his people telling them Japan had lost the war. In Tokyo, Admiral Onishi, the creator of the kamikaze corps, wrote a suicide note asking the stunned citizens of Japan to abide by the spirit of the Emperor's decision and entreating them to work for peace throughout the world. Beside his body lay a newly composed Japanese haiku:

*Refreshed, I feel*
*Like the new moon*
*After a storm*

Okinawa was the last of 72 U.S. combat landing operations carried out in less than three years. The war against Japan accounted for approximately 175,000 casualties, including about 52,000 killed.

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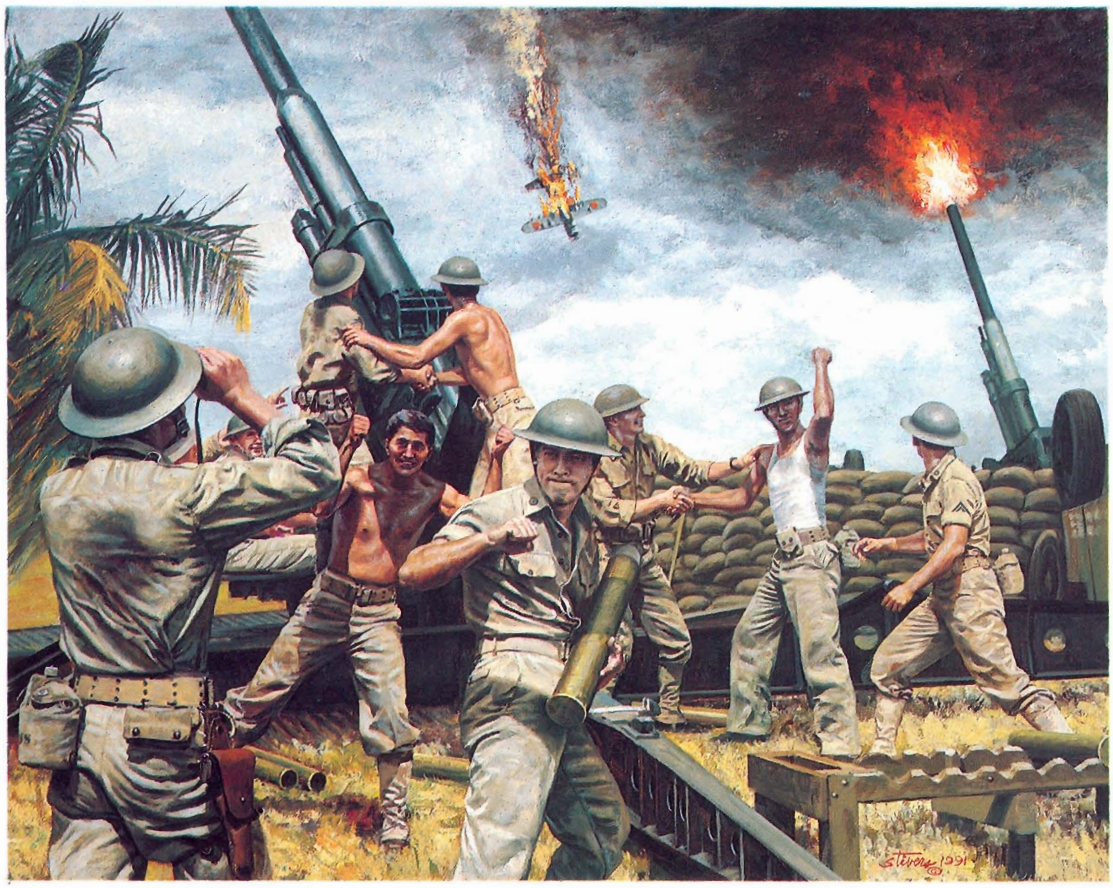


# FIRST TO FIRE

The 200th Coast Artillery in Defense of Clark Field, the Philippines, December 8, 1941

## DON STIVERS

The 200th Coast Artillery (Anti-Aircraft), originally the 111th Cavalry—a New Mexico National Guard unit—had been sent to the Philippines to provide air defense for Clark Field. Typical of American guard units, it was a hodge-podge of races and colors with Mexican and Native American blood running through the men's veins. There was a certain pride in this uniquely American mixture; while overseas dictators preached the dominance of a master race, they served for the freedom of all.

In the summer of 1941, while American attention was directed to Europe, the Japanese outblitzkrieged their Nazi allies by suddenly occupying nearly 1/7 of the globe. They struck America at Pearl Harbor. At 5:00 a.m. on December 8, 1941 (10:00 a.m. December 7 in Hawaii) the men in the 200th CA were notified that the United States was officially at war with Japan; just six and a half hours later, Japanese bombers and fighters attacked. Now, it was an entire planet at war with itself.

The men rushed to their weapons as the first bombs fell, some of them firing live ammunition for the first time. Only one of six of the ancient shells exploded. Yet they brought down five enemy fighters with their fierce anti-aircraft fire.

The next four months would bring determined rearguard fighting as American and Filipino defenders retreated onto the Bataan Peninsula. On April 9, 1942 the 200th and 515th Coast Artillery, along with the rest of the Bataan defenders began the march of death to prison camps where they would be interned for three and one half years. Of the 1841 men of the Regiment who began the march, 819 would not survive the war.

And while their war ended after just a few months fighting, the men of the 200th forged a legacy—and left a military maxim—for all those who would serve as air defenders in World War II: "First to Fire."

STIVERS
PUBLISHING

*Image: 16½ × 21"*
*Edition: 400*
*A.D.A.A. Edition: 500*
*$125. Shipping $10.*

# *Air Defense Artillery Association proudly supports capital campaign for new ADA Museum.*

By Col. Dennis L. Morreale

An army that forgets its heroes and abandons its heritage is an army in danger of collapse. Nevertheless, few ADA soldiers will have the chance to stand atop Normandy's bluffs on the 50th anniversary of D-Day, June 6, 1944, and imagine antiaircraft half-tracks rolling through a bloody surf onto a fireswept beach. But every ADA soldier, at one time or another, has an opportunity to visit the ADA Museum at Fort Bliss, Texas.

The ADA Museum preserves the heritage of our branch and keeps the memory of our heroes alive. That's why supporting the ADA Museum is a top priority mission for your ADA Association. This mission has taken on added urgency now that Fort Bliss has launched a capital campaign designed to raise funds to build a badly needed new ADA Museum building.

Air Defense Artillery, organized as a separate combat arm in 1968, was once regarded as a branch without a history, an inaccurate perception that the ADA Museum (which opened in 1975 on the Army's 200th anniversary) has done much to change. The ADA Museum has a first-rate staff that, in 1982, made the museum one of only six Army museums to win accreditation by the American Association of Museums. But the museum is housed in a second-rate, antiquated building that is totally inadequate as a showplace for the "First to Fire" branch.

The capital campaign will give the museum's talented and dedicated staff a modern facility that will permit them to make the ADA Museum a source of pride and inspiration for ADA soldiers around the world. The capital campaign got underway March 25 when the Chief of ADA, Maj. Gen. James J. Cravens Jr., hosted the ADA Association Ball at El Paso's Hilton Inn. More than 300 guests viewed the museum's mobile "Treasures of ADA" display, a series of enlarged photographs from Air Defense Artillery's past. An audience of soldiers, federal civilian employees and civic leaders then viewed "Museum On Target," a promotional video that outlines the contributions of air defenders in World War II, Korea and Desert Storm, that was produced by The Emery Group (an El Paso public relations firm) to support the capital campaign.

On March 29, the Chief of Air Defense Artillery hosted a reception for community and corporate leaders that included a tour of the present museum and a presentation outlining the critical need for the new building. On display was an artist's rendering of the proposed building by Moore, Nordell and Kroeger, the architectural and engineering firm for the new museum.

On March 30, General Cravens hosted a dinner at the Fort Bliss Officer's Club. This culmination of the campaign "kick-off" activities also featured the "Treasures of Air Defense Artillery" photos and "Museum on Target" video. Brigadier General (Ret.) Ernst Roberts, chairman of the building fund, presented the new ADA Museum "vision" statement and outlined the aggressive capital campaign underway to build it. The "vision" of the new ADA Museum is, to put it mildly, breathtaking.

The new museum will be built in separate phases to reduce construction costs and speed the opening date. Phase I will include the ADA Gallery, which will house a 36,000-square-foot pageant of the history of Air Defense Artillery.

This phase will also feature the museum construction shops where specialists will construct colorful displays that recreate the branch's past achievements and the artifact collection vaults that will safeguard priceless ADA treasures. Administrative office space will be included, along with a 7,000-square-foot patio for evening activities.

Phase II will contain the Fort Bliss Gallery, which will tell the story of the installation from its beginning as a frontier outpost tasked with protecting the borderland from bandit raiders and Indian war parties. This phase will also feature the construction of a 250-seat auditorium, an education center and a food service facility to provide refreshments for visitors.

The new ADA Museum will cost between $8 million and $10 million. The initial goal of the campaign is to raise $300,000 for the design, model, and engineering and construction drawings for the new building. Next, the campaign will focus on raising approximately $5 million to pay for the actual Phase I construction. The second stage of the campaign will raise funds necessary to complete Phase II.

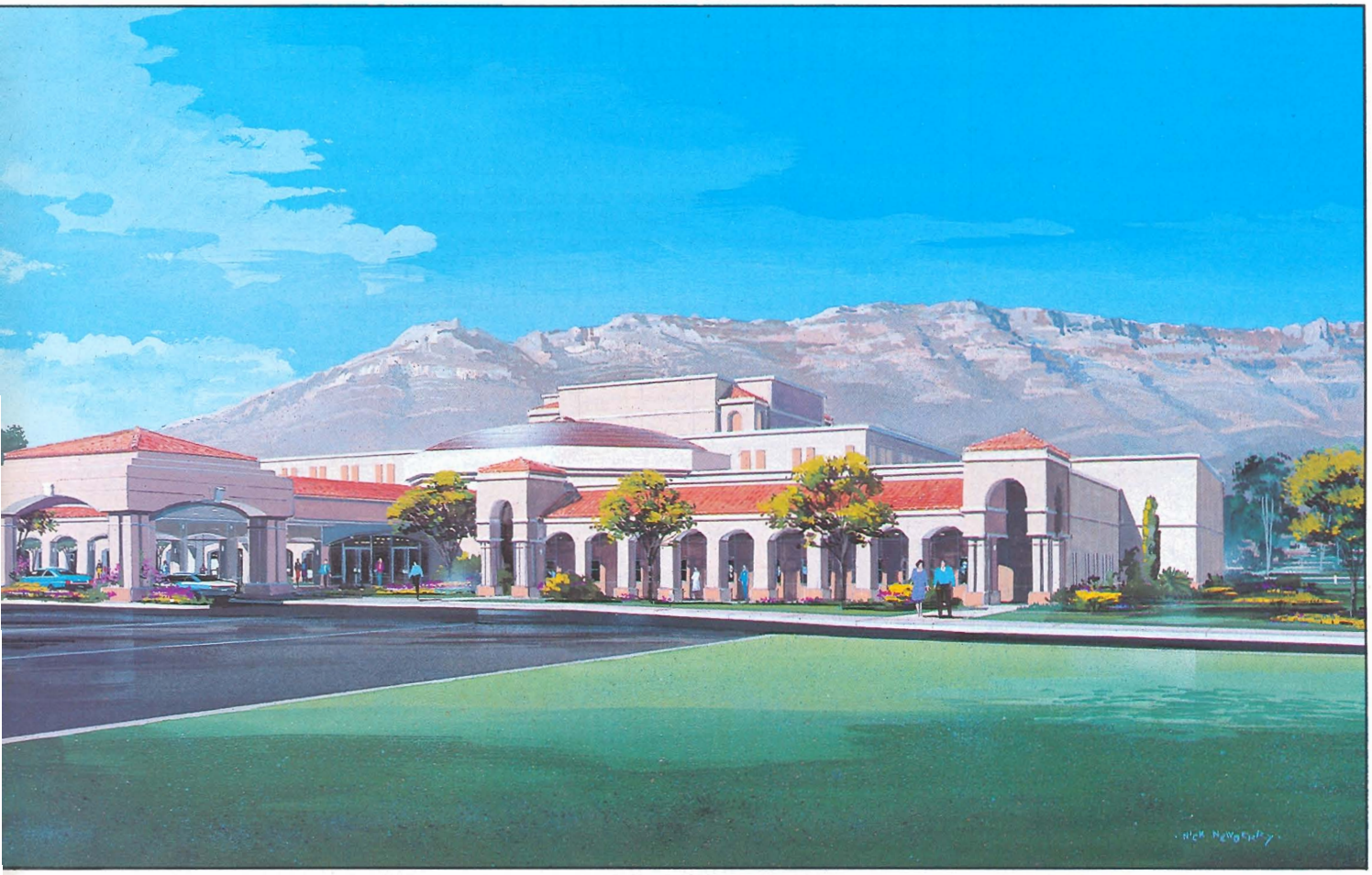
The new museum will be constructed to follow the Fort Bliss Installation of Excellence Plan, a master plan that is gradually beginning to give the home of Air Defense Artillery a distinctive appearance perfectly suited to the Desert Southwest. The spacious patio will flank future visitors as they enter the museum through an imposing portico that suddenly opens up into an impressive Orientation Gallery that rises to a 30-foot ceiling. Ahead lies the gallery that houses the ADA exhibit with its 60-foot central tower displaying a Spartan missile and V-2 rocket. Visitors may purchase mementoes in the adjacent gift shop or spend a moment of contemplation in the chapel.

Corporations or private individuals who wish to contribute to the ADA Museum Capital Campaign should contact ADA Association Secretary Edith Fanning at (915) 564-4331 for more information or mail their tax deductible donations to: ADA Association, Building Fund, P.O. Box 6101, Fort Bliss, TX 79916.

The new museum will serve as a regional tourist attraction and a focal point for post activities as well as the spiritual center of Air Defense Artillery. It will build branch pride, an appreciation of ADA traditions and esprit in the heart of every ADA soldier.

The new building project will depend largely on corporate contributions, but individuals can help by making personal donations or by joining the ADA Association, which contributes directly to the building fund. The ADA Museum capital campaign deserves the support of air defenders worldwide and every corporation interested in the welfare of the branch and the military service, or in the growth and improvement of the Fort Bliss-El Paso community.

*Col. Dennis L. Morreale is the executive director of the ADA Association and commander of the 6th ADA Brigade, Fort Bliss, Texas.*



# ADA Association Gift Shop

Address orders to:
ADA Association Gift Shop
P.O. Box 6101, Fort Bliss, TX 79906
915-564-4331 (DSN 978-5412)
FAX 915-566-9407

**T-Shirts**

| | | |
|---|---|---|
| Adults | (S, M, L, XL) | $10.00 |
| Youth | (ES, S, M) | 9.00 |
| XXL | | 11.00 |

First to Fire
Flies it Dies
Have Hawk Will Travel
Patriot
Patriot Scudbuster
Stinger
Avenger
Chaparral
Vulcan
Missile Systems

**Coffee Mugs** 6.00

ADA Logo
Hawk
Patriot
Patriot Scudbuster
Stinger
Chaparral/Vulcan

**Hats**

| | |
|---|---|
| Ball Hat | $7.50 |
| Golf Hat | 10.00 |

Patriot
Hawk
Avenger
Stinger
Vulcan
Chaparral

**Belt Buckles**

| | |
|---|---|
| ADA Commemorative | $19.95 |
| ADA | 8.50 |

**"Hottest Brand in the Army"**

| | |
|---|---|
| Tote Bag | 5.00 |
| Scarf | 4.50 |

**ADA Brass Logo Items**

| | | |
|---|---|---|
| Plaques | (8x10) | 30.00 |
| | (5x7) | 25.00 |
| Walnut Box | (Cigar Size) | 70.00 |
| | (Card Size) | 40.00 |

**Bookends** $40.00

**Pen Set**

| | |
|---|---|
| (Double) | $30.00 |
| (Single) | 25.00 |

**ADA Desk Flag Set** $6.00

**First to Fire Sunscreen** $5.00

**ADA Tie** $16.95

**Stinger Statue** $59.00
(+$6.00 S/H)

Chapters and units may order any item in larger quantities and receive a 15% discount.

Prices do not include shipping and handling.

# ADA Association Membership Application

**Mail form and payment to:**
ADA Association
P. O. Box 6101
Fort Bliss, TX 79906

**Or call Association Secretary:**
Edith Fanning
915-562-0665

MAILING ADDRESS

LAST NAME FIRST NAME RANK

UNIT

STATION

ADDRESS

CITY STATE ZIP

PERMANENT MAILING ADDRESS OR HOME OF RECORD
TO ENSURE CONTINUED SERVICE IF YOU MOVE

ADDRESS

CITY STATE ZIP

MEMBERSHIP DUES (P AYABLE TO THE ADA ASSOCIA TION)
LIFETIME MEMBERSHIP $30.00

FOR ASSOCIA TION USE ONLY FOR ASSOCIA TION USE ONLY FOR ASSOCIA TION USE ONLY

TOTAL AMT DATE JOINED MBR NUMBER

ADA ASSOCIA TION FORM NUMBER 5, REVISED 25 APR 92

*(continued from page 48)*
the battalion while on his way back to get ammunition or supplies.

Another time we were involved in a move-all-day-and-all-night thing. One night an MP stopped us, and said, "There is a German tank unit about a mile ahead of you." What had happened was that he was directing traffic on the road, and one of the people in a turret lit a cigarette. He saw that the man was in a German uniform, and it was a German tank, so the MP just kind of faded quietly into the background and let them go by. Then when the next unit came along — which was us — he stopped us and warned us.

*Many enemy soldiers preferred to surrender rather than stay with the disintegrating German defense. The Americans took large numbers of prisoners; by the end of the war, the 79th would capture nearly 36,000 Germans.*

*A 40mm Bofors antiaircraft gun crew lowers its sights to deliver direct fire against a German troop concentration.*

**8 Aug 44: Jerries are all over the place. They are in the woods, trying to get back to their outfits or surrender.**

Our little unit went into a small French town. Some soldiers of the French Forces of the Interior were lined up, firing madly into a wheat field. They said, "There's a German division over there." We automatically discounted it from a division to a regiment, because they tended to overestimate. So we took a Quad mount up to the field and opened fire. Nothing happened for about 30 seconds, and then a white flag came up out of the wheat. This was a lone German soldier who had gotten cut off, and the French were after him, and he felt that his only way of surviving was to attack. He had a rifle, and he attacked, firing and rolling and then firing again, giving the impression that there were more than one of him. He was a one-man attack force.

We usually took any prisoners that fell into our hands directly to the division PW cage. But when we were moving, we simply loaded the prisoners up and took them with us until we got to a point where we could turn them over to somebody. The fellow from the wheat field wanted to stay with us forever. He was happy as a clam. The war was over for him, he was eating better, nobody was shooting at him very often, and he made himself handy. He would help with the dishes and things like that. He was with us for maybe 10 days before we had an opportunity to turn him over to the division. He really wanted to enlist in the United States Army, he was so happy with us.

*Nothing interfered with requirements for paperwork, not even the rush across Europe and the turbulence of war. When it came to red tape, it was business as usual.*

**15 Aug 44: We are moving east toward Paris now. We moved about 70 miles today, through burning villages, medium-size battles and various fireworks displays, finally winding up standing stock-still in the middle of a field while Jerry lit things up with a few flares and looked around for a spot to drop his bombs.**

After we broke out of Normandy and were making our big sweep toward the Seine, moving night and day, we got a command from some higher headquarters. They wanted our after after-action report. Well, I'd never before heard of an after after-action report (and haven't ever again), but they demanded it. So in the midst of all the confusion and the constant moving, we sat down and carefully extracted items from the morning reports, put it all together, typed it up neatly, and sent it in. About two weeks later we got a nasty message saying, "We don't want a copy of your after after-action report; we want the original."

So what we did was, we sat down and would type a paragraph, then handwrite a paragraph. We'd get people to come in and make entries in different handwriting. Every time somebody came in, we'd say, "Here, you write a paragraph." Then we artificially aged it. We put coffee rings on it, dripped candle wax on it, crumpled it up a little bit, then sent it in. Apparently this satisfied them. I bet that it's in a file somewhere, and someday a historian will find it and say, "This is genuine! This is the real thing!"

*There was more to the chase across Europe than administrative matters or crowds of enthusiastic French citizens. There were scenes of pure horror and casualties on both sides, though the Germans sustained the heavier losses.*

**22 Aug 44: Today the Jerries approach in hellish big formations, as**

*American soldiers inspect the wreckage of a German JU-52 shot down with only three rounds by a 40mm gun crew.*

**many as 60 planes, strafing everyhing in sight, particularly AA guns. Sergeant Smith was killed by a flight of eight enemy planes which strafed his gun from behind while he was engaging another three.**

We lost a gun sergeant; he was firing in one direction and another plane came along and hit him from behind and took his head off. Our casualties were pretty evenly distributed throughout our 11 months in combat. We had something like 35 or 36 killed in action, which is not too bad considering the amount of action we were in.

**28 Aug 44: Moved up on the high ground above Limay into the grounds of a chateau. Everything in the area is full of shell holes. There are actually pieces of dead Jerries hanging in the trees. A lovely sight indeed.**

After we crossed the Seine, we stayed in that area for a few days. For about two days the Germans counterattacked energetically. They thought the 79th was a lightly-armed airborne division. As a matter of fact, *LIFE Magazine* reported that there had been an airborne drop on the north side of the Seine, not realizing that the beetle crushers had just hiked across a dam. So the Germans committed a couple of divisions, attacking up out of a woods toward our infantry, which was up on the rim of a flat place, dug in. They attacked, and instead of running into a lightly-armed airborne unit, they ran into a full infantry division with support from eight or nine corps artillery battalions besides the division's organic battalion. So the artillery just shot them back into the woods, then lifted the artillery fire, put it on the back edge of the woods, and shot them out the front. Then the infantry took them on with machine guns, and they went back into the woods, and then were shot out again. After about two days of that, there was nothing left of the German counterattack. I went into the woods later, after the action was over, and it was pretty awful. There really were chunks of German soldiers hanging on trees. Bad mistake on the part of German intelligence.

*War's destruction, and the coming of one of the worst, and earliest, winters in European history, added to the turmoil.*

**20 Sep 44: Moved at night again. This is the first time we had real trouble with many roads.**

The roads were damaged, and then shell fragments would land in the roads, stick in the mud, and freeze in place with jagged edges sticking up. Very bad for tires. Later, during the Battle of the Bulge, there were rumors that the Germans were infiltrating our lines dressed in American uniforms. Nobody trusted the passwords any more, so sentries would ask questions they thought only an American could answer, like who won the World Series.

On one cold, bitter night I was called to corps headquarters. It was about 1 a.m. when the driver and I started back. We were going down this snowy road, and ran into one of those sharp shell fragments. It punctured a tire. I said, "OK, change the tire." The driver said, "I can't." I said, "Why can't you?" "Well," he said, "I was afraid somebody would steal the tire tools, so I left them in my bedroll." So there we were, stuck.

After about 20 minutes, along came an infantry patrol in a jeep, with a 30-caliber machine gun in the back. I stepped out and held my hand up. They came to a screeching halt, and I heard the gunner pull the handle back. He'd had it on half-cock; now it was no longer on half-cock. They pointed it right between my eyes, and this kid said, "What is the capitol of South Dakota?" Now I know it's Pierre, but then, I didn't have the faintest idea! We went through the routine of "Put your ID down and back off 20 yards," but they finally decided we were friendly. I'll never forget that or the capitol of South Dakota.

**27 Sep 44: Moved into Luneville. For the first time since landing we are under cover. Our new home is a schoolhouse with stoves, flush (almost) toilets, electric light and all the trimmings.**

Staying out of buildings was General Wyche's policy, a very wise one. His idea was that if you live in a house, the Jerries might know where it is, so stay out in the boonies. And it worked. Not only did it produce fewer casualties, but surprisingly, we were healthier. We didn't get colds until we started moving into buildings. Then we passed them around from one to another.

*A man became a toughened veteran quickly in this war. After less than four months of combat and moving and death and devastation, the men of the 463rd regarded new arrivals to the front with some condescension.*

**16 Oct 44: A bunch of green pea infantry moved in with us last night in the dark of the moon. They see a German behind every bush, and tried to capture our AAAIS [Antiaircraft Artillery Information Station]. They look like a carnival. All they lack is a ferris wheel, and we are expecting that momentarily.**

Those guys caused all kinds of noise and confusion and dust. They attracted so much attention that the Germans shelled us that night. I guess you can never train people to do all the smart things that experienced people have learned to do. The new guys opened fire on one of our own AAAIS groups, who were up on a roof with a radio. One of these doughboys saw a guy up there with a radio and assumed he was a German spy radioing their position.

Another thing a green unit did was capture a French postman, because his uniform was similar to a German Panzer uniform. He was riding a bicycle, and a sentry hauled him in. You never saw such a mad Frenchman!

And another batch of greenies, a tank destroyer unit, set up in a field across from our CP, and fired a field artillery mission. Then they set fire to their empty wooden ammunition boxes and off down the road they went. A column of smoke went up in the air. Guess what happened? Counter-battery fire. Guess who caught it? We did. To this day I don't understand why they felt they had to make a bonfire out of those boxes. They could have just left them.

*In the manner of soldiers since time immemorial, the soldiers of the 463rd learned to improvise.*

**18 Oct 44: The owner of a nearby farm showed up. He is short some cows.**

We did not eat those cows. That is, headquarters did not eat those cows, but I won't say that nobody in our battalion did it. You get awfully hungry for fresh meat. Each of our gun crews had one of its trucks rigged up as a kitchen. They usually had a stove that they'd "liberated" somewhere, and whenever they got something that was cookable, they'd cook it on that. They often did their own cooking, because it was impractical to try to serve from a battery kitchen to 15 gun sections that might be miles away.

So they did their own cooking, and this meant that if they ran into a cow that was seriously ill and needed euthanasia, they were capable of frying steaks.

*After a while, the AAA soldiers got used to war and its dangers, and they developed a certain gallows humor. Minor wounds and close calls began to seem funny.*

**16 Nov 44: Lieutenant Mitchell poked his nose around a corner and met a piece of shrapnel. Total damage: contusions of the last one-eighth inch of nose.**

He stuck his head around a corner as a piece of shell fragment went by. You know how head wounds are; it bled like crazy. He had a little bandage stuck on the end of his nose. He got the Purple Heart. He was treated by the medics, and the rule at that time was that if it was serious enough for treatment by a medical officer or aid man, then you were entitled to the Purple Heart.

*Dug in adjacent to the "dragon's teeth" of the Siegfried Line, a 40mm Bofors gun crew waits for a target.*

**28 Nov 44: Foggy day. The shelling is arriving at chow time and hitting chow lines.**

One of our units was serving the noon meal in an ex-schoolhouse, which had large glass windows. A German airplane dropped a string of anti-personnel bombs, which landed in a pile of anti-tank mines that one of our tank destroyer units had piled up in the courtyard across the street. Well, these things went off with a tremendous roar, blew in the windows and knocked down the chow line. One unfortunate soldier managed to sit on the fork of the man behind him and sustained a three- or four-tine wound in the seat of his pants. It required medical treatment, so we put him in for a Purple Heart.

Some ribbon clerk way up the line turned it down, because the wound was caused by a "friendly fork." We pointed out in the next endorsement that although it was a friendly fork, the thing that blew him over was an explosion caused by the enemy. It came back, again, saying that those weren't enemy mines that went off, they were friendly mines. It went back and forth. Finally General Wyche heard about it, and he thought it was funny, so he had someone call the ribbon clerk and say, "Either give that guy his Purple Heart or come and explain to the division commander why you won't." Then the Purple Heart arrived almost immediately.

**6 Jan 45: Things quiet during the day, but Hagenau was shelled during the night by a railway gun, reputedly 270mm. Whatever it is, the shells arrive with no noise, and then make a hell of a noise. Two hits very close to battalion CP. No casualties, but several men from other units were wounded, and one killed.**

The Germans brought out their railroad gun, actually 380mm, the one that we called "Anzio Annie." Every night they pulled it out of a railroad tunnel about the time it got dark, 5 o'clock in the evening. It took them about six hours to get the thing moved and in place. Then it took 14 minutes to load and fire a round. So at 11:14 every night the first round would come in and tear everything up. We were living in the basement of an old stone building. But the bathrooms weren't working, so we had latrines up on the surface. If you had to use one, you waited until a round came in, then looked at your watch, and knew you had 14 minutes. You sat there with a flashlight, looking at your watch, and at 13 minutes you went down again. The rounds came that regularly.

One night a round hit about 75 yards from our basement. I was sleeping in the bottom bunk, and the blast was so violent that the upper bunk came down. A 160-pound warrant officer came with it, and landed on me. My first reaction was, "I've been hit! I'm dead!" Our little stove fell apart too, and it was smoky and dusty in there, and I thought for a minute I was in Hades.

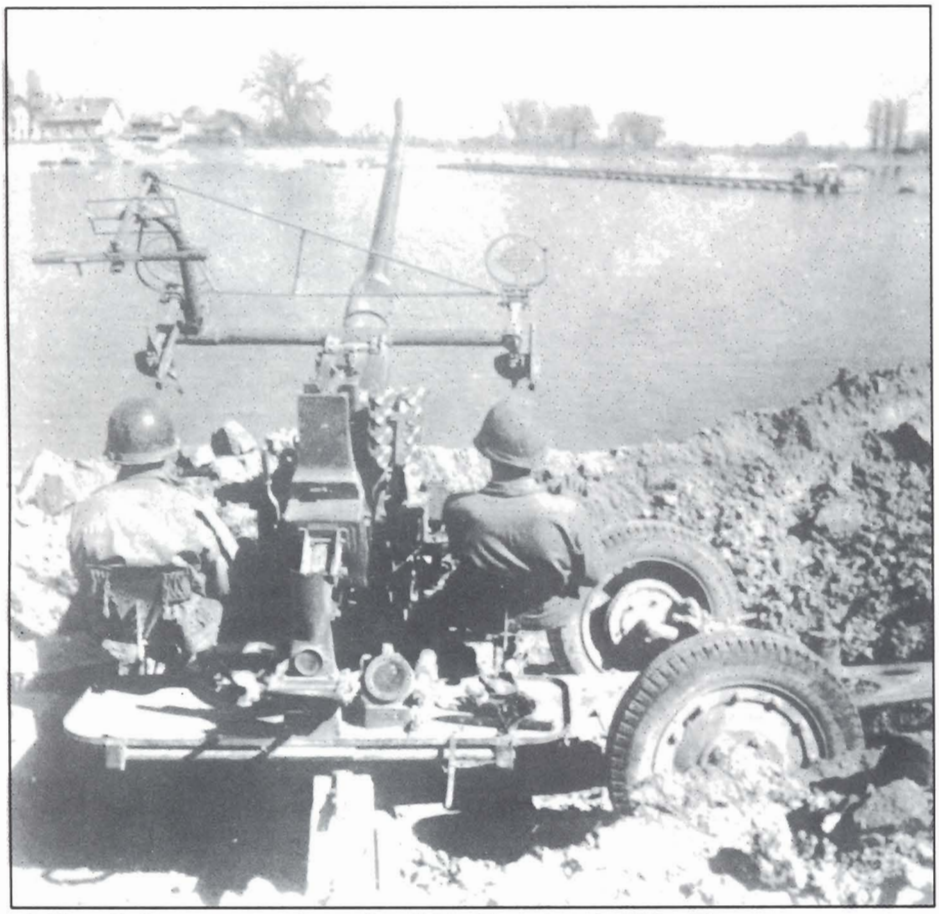
*In January 1945, a new German aircraft appeared upon the scene: the Messerschmitt 262, a jet plane with a speed of 575 miles per hour. The ME-262 had made its maiden flight in July 1942, but it was not until 1945 that Hitler decided to use it. Within days, the gunners of the 463rd were seeing these new planes.*

**10 Jan 45: Very busy day. One hell of a lot of jets over. No hits so far. They are very fast, and almost silent. We think Jerry fires smoke into the target area to mark for them, as they go too fast to be able to see clearly.**

The jets were a problem because by the time you heard the darn thing, it was gone. But the ME-262 was not a particularly good ground attack airplane. They had trouble locating things because they were going so fast. So the Germans started to mark targets with smoke, putting smoke into the towns. Then we came up with an idea. The minute the Germans would fire a smoke round on a town, we'd fire a smoke round on some town behind German lines.

The Jerries never figured out how to overcome this. They tried using colored smoke, but it didn't work. The pilots seemed to be fixated on the idea of smoke, and if they saw smoke, color didn't mean anything. So they kept on bombing their own troops.

**13 Jan 45: Jet crashed in enemy territory. No. 1 for the Seventh Army.**



*A 40mm Bofors gun crew enjoys a clear field of fire across the Rhine River.*

The first jet that we shot down: everybody opened up on him, and somebody hit his hydraulic system. His wheels and flaps came down, and of course that cut his speed tremendously. Then everybody in the area got on to him, and they clobbered him proper. That was the first one shot down by antiaircraft fire.

*There were friendly fire incidents in this war, as there have been in all wars.*

**7 Apr 45: A P-47 got lost and strafed and bombed near our CP. Busy writing letters and explaining why we shot at him.**

What happened was that we were in a little town, and there was quite a bit of traffic going through. You know, the war was almost over, and nobody wanted to get killed the last days of the war. And this idiot came down there and began to strafe the traffic going through town. He did it once and then made a big circle. The color of the day, the friendly color, was yellow. I got a yellow smoke grenade, and when he got around where I thought he could surely see me, I pulled the pin and threw it out. Big cloud of yellow smoke — and this knothead proceeded to strafe it! I was thoroughly ticked off, and obviously so were our gun sections. They were willing to give a guy one pass, but then, if he didn't see the error of his ways, they fired at him. We had to do a lot of explaining. But the 79th Division was solidly behind us, very supportive, so there was no clamor for heads to roll.

*On April 18, 1945, even before V-E Day, the 79th, and the 463rd along with it, was assigned to military government duties in occupied Germany. Besides maintaining order and processing German POWs, the division was also responsible for organizing hundreds of displaced persons camps in the area, assisting nearly a hundred thousand people who had been made homeless by the war.*

**23 Apr 45: Ear-deep in displaced Poles, weeping Germans, et cetera. We now have 9,185 little charges under our motherly wing.**

The 79th Division was ordered into a military government role. It was an officially assigned mission, but we had no training, no experience and no idea what we were supposed to do. We had a mix of folks from all over eastern Europe. They were impossible to control. They moved from one camp to another. They'd hear, "Cousin Louie is in that camp," or "The food is better over there," and they'd go over the fence in the night and show up at another camp. You wouldn't know where they went, and they'd just drop off your strength and show up on somebody else's.

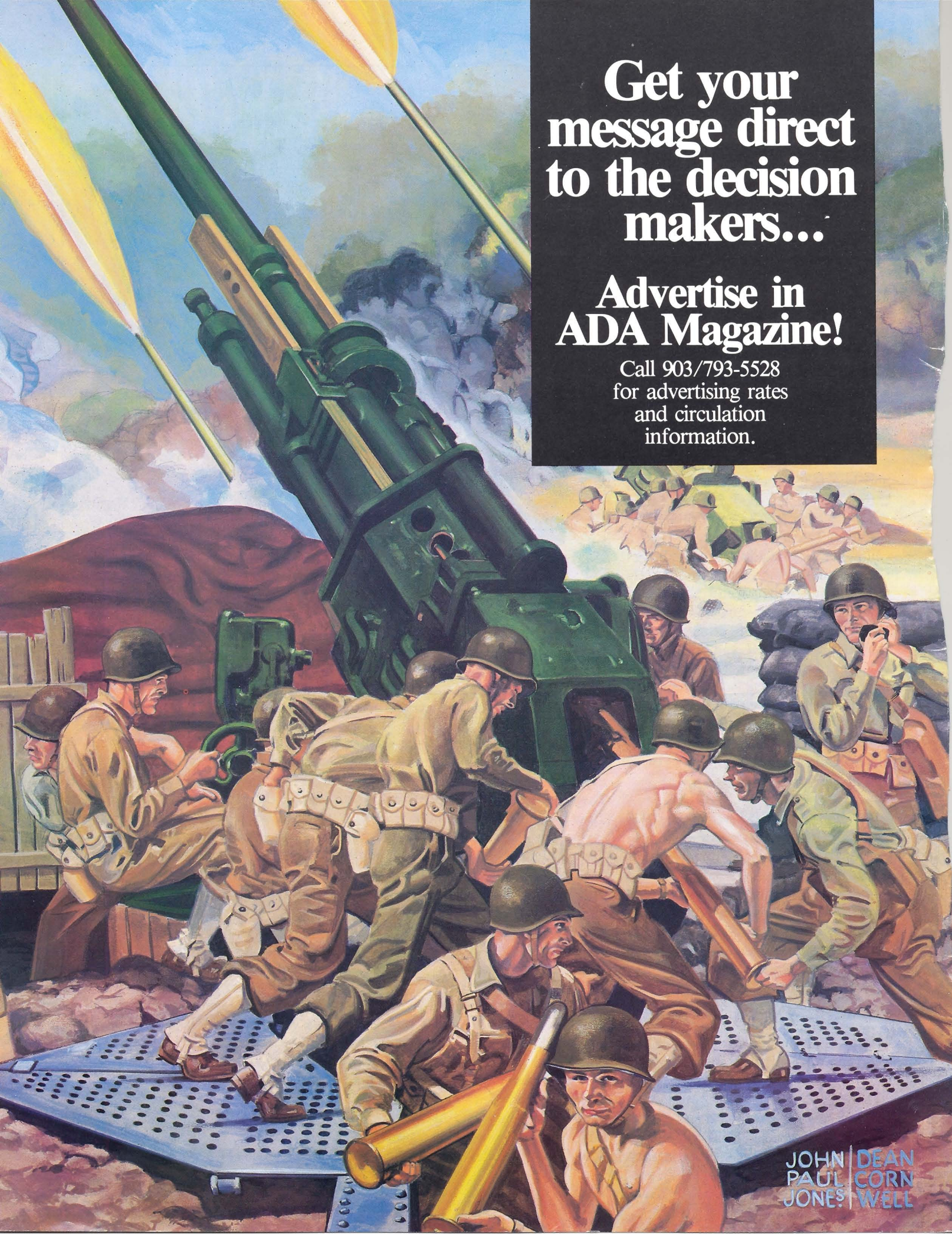
Once a bunch of people from the United Nations came by. They looked at our strength, and there was an unexplained loss of 40 Bulgarians. They demanded to know what I'd done with those 40 Bulgarians. I tried to explain that I had no idea where they were; they'd wandered out of camp, and God knows where they were. The U.N. people got real nasty about it. They said, "Well, this sounds like genocide." Somehow I muddled my way through.

*Victory! Antiaircraft artillery units roll triumphantly into Germany.*

*On May 8, 1945, Germany surrendered unconditionally to the Allies, and near the end of May, the 79th received orders to relieve Third Army units occupying Cheb, Czechoslovakia and part of the surrounding Sudetenland. Again the 463rd went along, and again they were placed in a military government role.*

*When the antiaircraft mission became, instead, a military government mission — for which he felt unqualified — the now battle-hardened young major lost interest in his journal. Thereafter, he made only short and sporadic entries. Early that fall he went home to a distinguished career as an air defender. Before retiring in 1972 he served as the Assistant Commandant of the U.S. Army Air Defense Artillery School.*

*Patricia Rhodes is a research historian in the Office of the Command Historian, U.S. Army ADA School, Fort Bliss.*





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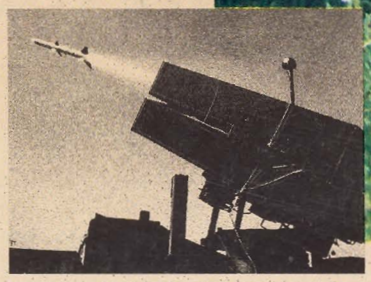
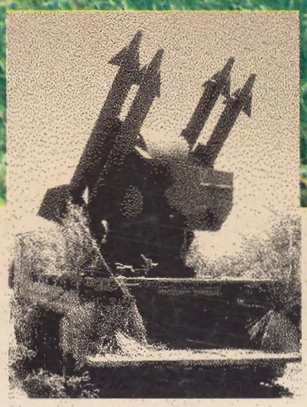
# DEADLY ACCURATE... AN/MPQ-64

## *The Army's New Battlefield Radar*

The U.S. Army's newest battlefield radar, the AN/MPQ-64 Ground Based Sensor, provided targeting information in recent exercises to weapon systems that shot down two unmanned helicopters and a one-half scale unmanned aerial vehicle. The AN/MPQ-64 Ground Based Sensor, developed and produced by Hughes Aircraft Company, provided three-dimensional acquisition, tracking and engagement data on highly lethal battlefield targets to the Bradley Stinger Fighting Vehicle, Roadrunner (Chapparral), Avenger and Stinger Manpads weapon systems. The reaction time against hovering helicopters was so short that, at times, the radar acquired the helicopter and provided cueing data prior to unmask.

*AN/MPQ-64*





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