Across the Reef:
The Marine Assault of Tarawa

Marines in
World War II
Commemorative Series

By Colonel Joseph H. Alexander
U.S. Marine Corps (Ret)

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In August 1943, to meet in secret with Major General Julian C. Smith and his principal staff officers of the 2d Marine Division, Vice Admiral Raymond A. Spruance, commanding the Central Pacific Force, flew to New Zealand from Pearl Harbor. Spruance told the Marines to prepare for an amphibious assault against Japanese positions in the Gilbert Islands in November.

The Marines knew about the Gilberts. The 2d Raider Battalion under Lieutenant Colonel Evans F. Carlson had attacked Makin Atoll a year earlier. Subsequent intelligence reports warned that the Japanese had fortified Betio Island in Tarawa Atoll, where elite forces guarded a new bomber strip. Spruance said Betio would be the prime target for the 2d Marine Division.

General Smith's operations officer, Lieutenant Colonel David M. Shoup, studied the primitive chart of Betio and saw that the tiny island was surrounded by a barrier reef. Shoup asked Spruance if any of the Navy's experimental, shallow-draft, plastic boats could be provided. "Not available," replied the admiral, "expect only the usual wooden landing craft." Shoup frowned. General Smith could sense that Shoup's gifted mind was already formulating a plan.

The results of that plan were momentous. The Tarawa operation became a tactical watershed: the first, large-scale test of American amphibious doctrine against a strongly fortified beachhead. The Marine assault on Betio was particularly bloody. Ten days after the assault, *Time* magazine published the first of many post-battle analyses:

> Last week some 2,000 or 3,000 United States Marines, most of them now dead or wounded, gave the nation a name to stand beside those of Concord Bridge, the *Bon Homme Richard*, the Alamo, Little Big Horn and Belleau Wood. The name was "Tarawa."

Setting the Stage

The Gilbert Islands consist of 16 scattered atolls lying along the equator in the Central Pacific. Tarawa Atoll is 2,085 miles southwest of Pearl Harbor and 540 miles southeast of Kwajalein in the Marshalls. Betio is the principal island in the atoll.

The Japanese seized Tarawa and Makin from the British within the first three days after Pearl Harbor. Carlson's brief raid in August 1942 caused the Japanese to realize their vulnerability in the Gilberts. Shortly after the raid, the *6th Yokosuka Special Naval Landing Force* arrived in the islands. With them came Rear Admiral Tomanari Saichiro, a superb engineer, who directed the construction of sophisticated defensive positions on Betio. Saichiro's primary goal was to make Betio so formidable that an American assault would be stalled at the water's edge, allowing time for the other elements of the *Yogaki* ("Waylaying Attack") Plan to destroy the landing force.

The *Yogaki* Plan was the Japanese strategy to defend eastern Micronesia from an Allied invasion. Japanese commanders agreed to counterattack with bombers, submarines, and the main battle fleet. Admiral Chester W. Nimitz, Commander-in-Chief, Pacific Fleet/Commander in Chief, Pacific Ocean Areas (CinCPac/CinCPOA), took these capabilities seriously. Nimitz directed Spruance to "get the hell in and get the hell out!" Spruance in turn warned his subordinates to seize the target islands in the Gilberts "with lightning speed." This sense of urgency had a major influence on the Tarawa campaign.

The Joint Chiefs of Staff assigned the code name Galvanic to the campaign to capture Tarawa, Makin, and Apamama in the Gilberts. The 2d Marine Division was assigned Tarawa and Apamama (a company-sized operation); the Army's 165th Regimental Combat Team of the 27th Infantry Division would tackle Makin.

By coincidence, each of the three landing force commanders in Operation Galvanic was a major general named Smith. The senior of these was a Marine, Holland M. "Howling Mad" Smith, commanding V Amphibious Corps. Julian C. Smith commanded the 2d Marine Division. Army Major General Ralph C. Smith commanded the 27th Infantry Division.

Spruance assigned Rear Admiral Richmond Kelly "Terrible" Turner, veteran of the Guadalcanal campaign, to command all amphibious forces for the operation. Turner, accompanied by Holland Smith, decided to command the northern group, Task Force 52, for the assault on Makin. Turner assigned Rear Ad-

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LtGen Julian C. Smith Collection

On the cover: *"Quiet Lagoon" is a classic end-of-battle photograph of the considerable wreckage along Red Beach Two.*

U.S. Navy Combat Art Collection

At left: *Artist Kerr Eby, who landed at Tarawa as a participant, entitled this sketch "Bullets and Barbed Wire."*

Marine Corps Personal Papers, Boardman Collection

Japanese Special Naval Landing Force *troops mount a British-made, Vickers eight-inch naval cannon into its turret on Betio before the battle. This film was developed from a Japanese camera found in the ruins while the battle was still on.*

miral Harry W. "Handsome Harry" Hill to command the southern group, Task Force 53, for the assault on Tarawa. Julian Smith would accompany Hill on board the old battleship USS *Maryland* (BB 46). The two officers were opposites—Hill, outspoken and impetuous; Julian Smith, reserved and reflective—but they worked together well. Spruance set D-Day for 20 November 1943.

Colonel Shoup came up with an idea of how to tackle Betio's barrier reefs. He had observed the Marines' new Landing Vehicle Tracked (LVT or "Alligator"), an amphibian tractor, in operation during Guadalcanal. The Alligators were unarmored logistic vehicles, not assault craft, but they were true amphibians, capable of being launched at sea and swimming ashore through moderate surf.

Shoup discussed the potential use of LVTs as assault craft with Major Henry C. Drewes, commanding the 2d Amphibian Tractor Battalion. Drewes liked the idea, but warned Shoup that many of his vehicles were in poor condition after the Guadalcanal campaign. At best, Drewes could provide a maximum of 75 vehicles, not nearly enough to carry the entire assault and following waves. Further, the thin hulls of the vehicles were vulnerable to every enemy weapon and would require some form of jury-rigged armor plating for minimal protection. Shoup encouraged Drewes to modify the vehicles with whatever armor plate he could scrounge.

General Julian Smith was aware that a number of LVT-2s were stockpiled in San Diego, and he submitted an urgent request for 100 of the newer models to the corps commander. Holland Smith endorsed the request favorably, but Admiral Turner disagreed. The two strong-willed officers were doctrinally equal during the planning phase, and the argument was intense. While Turner did not dispute the Marines' need for a reef-crossing capability, he objected to the fact that the new vehicles would have to be carried to Tarawa in tank landing ships (LSTs). The slow speed of the LSTs (8.5 knots max) would require a separate convoy, additional escorts, and an increased risk of losing the element of strategic surprise. Holland Smith reduced the debate to bare essentials: "No LVTs, no operation." Turner acquiesced, but it was not a complete victory for the Marines. Half of the 100 new LVT-2s would go to the Army forces landing at Makin against much lighter opposition. The 50 Marine vehicles would not arrive in time for either work-up training or the rehearsal landings. The first time the infantry would lay eyes on the LVT-2s would be in the pre-dawn hours of D-Day at Tarawa—if then.

Assault Preparations

As replacement troops began to pour into New Zealand, General

Smith requested the assignment of Colonel Merritt A. "Red Mike" Edson as division chief of staff. The fiery Edson, already a legend in the Corps for his heroic exploits in Central America and Guadalcanal, worked tirelessly to forge the amalgam of veterans and newcomers into an effective amphibious team.

Intelligence reports from Betio were sobering. The island, devoid of natural defilade positions and narrow enough to limit maneuver room, favored the defenders. Betio was less than three miles long, no broader than 800 yards at its widest point and contained no natural elevation higher than 10 feet above sea level. "Every place on the island can be covered by direct rifle and machine gun fire," observed Edson.

The elaborate defenses prepared by Admiral Saichiro were impressive. Concrete and steel tetrahedrons, minefields, and long strings of double-apron barbed wire protected beach approaches. The Japanese also built a barrier wall of logs and coral around much of the island. Tank traps protected heavily fortified command bunkers and firing positions inland from the beach. And everywhere there were pillboxes, nearly 500 of them, most fully covered by logs, steel plates and sand.

The Japanese on Betio were equipped with eight-inch, turret-mounted naval rifles (the so-called "Singapore Guns"), as well as a large number of heavy-caliber coast defense, antiaircraft, antiboat, and field artillery guns and howitzers. Dual-purpose 13mm heavy machine guns were prevalent. Light tanks (mounting 37mm guns), 50mm "knee mortars," and an abundance of 7.7mm light machine guns complemented the defensive weaponry.

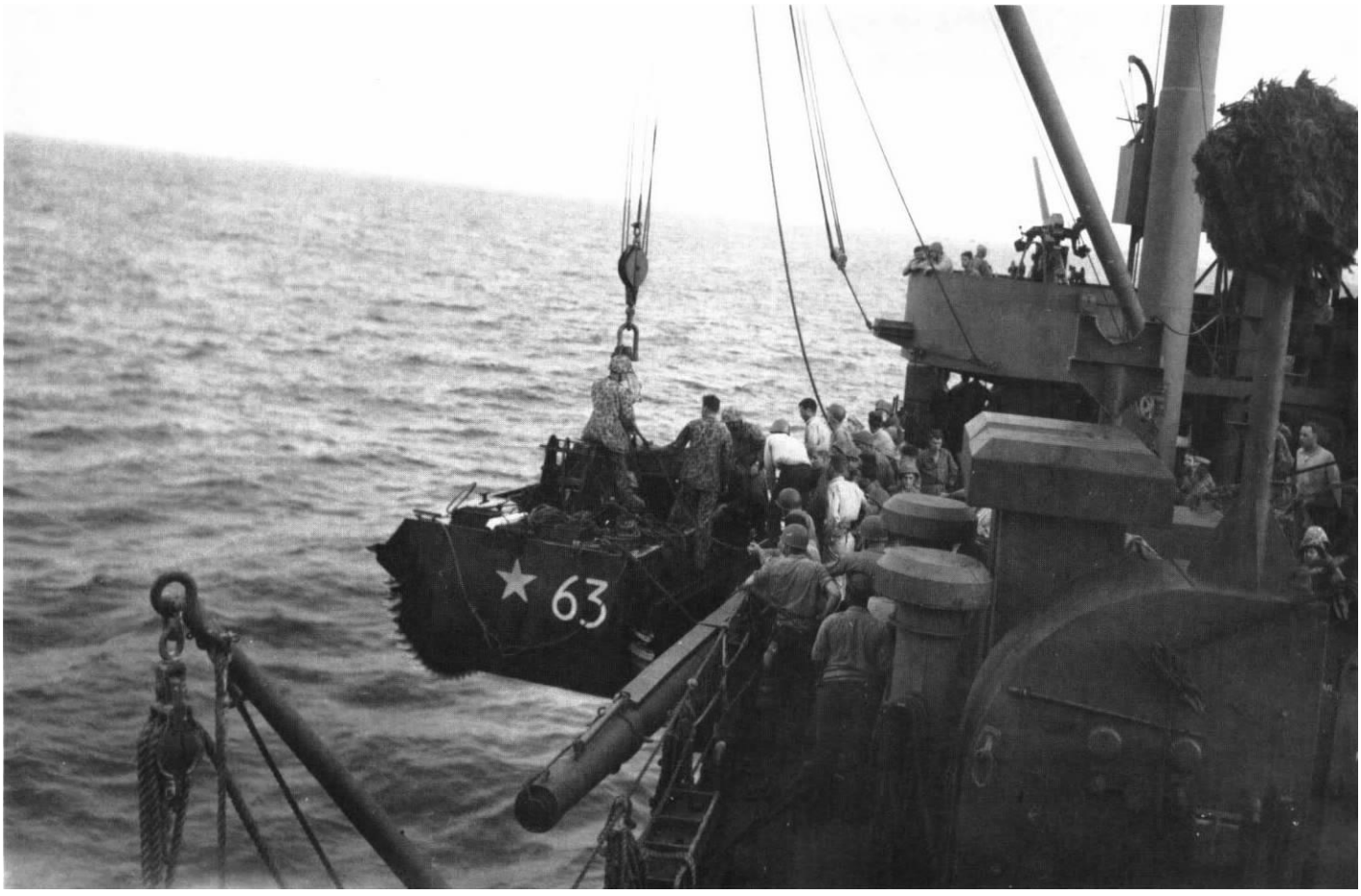
The 2d Marine Division at Tarawa

Major General Julian C. Smith's utmost concern when he assumed command of the 2d Marine Division on 1 May 1943 was the physical condition of the troops. The division had redeployed to New Zealand from Guadalcanal with nearly 13,000 confirmed cases of malaria. Half the division would have to be replaced before the next campaign. The infantry regiments of the 2d Marine Division were the 2d, 6th, and 8th Marines; the artillery regiment was the 10th Marines; and the engineers, pioneers, and Naval Construction Battalion ("Seabees") were consolidated into the 18th Marines. These were the principal commanders as the division began its intensified training program leading to Operation Galvanic:

CO, 2d Marines: Col William M. Marshall
  CO, 1/2: Maj Wood B. Kyle
  CO, 2/2: LtCol Herbert R. Amey, Jr.
  CO, 3/2: Maj John F. Schoettel
CO, 6th Marines: Col Maurice G. Holmes
  CO, 1/6: Maj William K. Jones
  CO, 2/6: LtCol Raymond L. Murray
  CO, 3/6: LtCol Kenneth F. McLeod
CO, 8th Marines: Col Elmer E. Hall
  CO, 1/8: Maj Lawrence C. Hays, Jr.
  CO, 2/8: Maj Henry P. "Jim" Crowe
  CO, 3/8: Maj Robert H. Ruud
CO, 10th Marines: BGen Thomas E. Bourke
CO, 18th Marines: Col Cyril W. Martyr

Other officers who would emerge in key roles at Tarawa included Brigadier General Leo D. Hermle, Assistant Division Commander; Lieutenant Colonel Presley M. Rixey, commanding 1/10, a pack-howitzer battalion supporting the 2d Marines; Lieutenant Colonel Alexander B. Swenceski, commanding the composite 2d Tank Battalion; Major Henry C. Drewes, commanding 2d Amphibian Tractor Battalion; Major Michael P. Ryan, commanding Company L, 3/2; and First Lieutenant William D. Hawkins, commanding the Scout Sniper Platoon in the 2d Marines. Altogether, 18,088 Marines and sailors of the division participated in the assault on Tarawa Atoll. About 55 percent were combat veterans. Unlike Guadalcanal, the Marines at Tarawa carried modern infantry weapons, including Garand M-1 semi-automatic rifles, Browning automatic rifles, and portable flame throwers. Assault Marines landed with a combat load consisting of knapsack, poncho, entrenching tool, bayonet, field rations, and gas masks (quickly discarded). Many of those carrying heavy weapons, ammunition, or radios drowned during the hectic debarkation from landing craft under fire at the reef's edge.

Troops of the 2d Marine Division debark down cargo nets from a troop transport during amphibious training.
Department of Defense Photo (USMC) 63751



LtGen Julian C. Smith Collection

An LVT-1 is lowered from a troop transport during landing rehearsals. Some of the Marines shown here are wearing camouflage utilities while the others are in the usual herringbone twill. Note that the sea appears unusually calm.

The Japanese during August replaced Saichero with Rear Admiral Meichi Shibasaki, an officer reputed to be more of a fighter than an engineer. American intelligence sources estimated the total strength of the Betio garrison to be 4,800 men, of whom some 2,600 were considered first-rate naval troops. "Imperial Japanese Marines," Edson told the war correspondents, "the best Tojo's got." Edson's 1st Raider Battalion had sustained 88 casualties in wresting Tulagi from the *3d Kure Special Naval Landing Force* the previous August.

Admiral Shibasaki boasted to his troops, "a million Americans couldn't take Tarawa in 100 years." His optimism was forgivable. The island was the most heavily defended atoll that ever would be invaded by Allied forces in the Pacific.

Task Force 53 sorely needed detailed tidal information for Tarawa. Colonel Shoup was confident that the LVTs could negotiate the reef at any tide, but he worried about the remainder of the assault troops, tanks, artillery, and reserve forces that would have to come ashore in Higgins boats (LCVPs). The critical water depth over the reef was four feet, enough to float a laden LCVP. Anything less and the troops would have to wade ashore several hundred yards against that panoply of Japanese weapons.

Major Frank Holland, a New Zealand reserve officer with 15 years' experience sailing the waters of Tarawa, flatly predicted, "there won't be three feet of water on the reef!" Shoup took Holland's warnings seriously and made sure the troops knew in advance that "there was a 50-50 chance of having to wade ashore."

In the face of the daunting Japanese defenses and the physical constraints of the island, Shoup proposed a landing plan which included a sustained preliminary bombardment, advance seizure of neighboring Bairiki Island as an artillery fire base, and a decoy landing. General Smith took this proposal to the planning conference in Pearl Harbor with the principal officers involved in Operation Galvanic: Admirals Nimitz, Spruance, Turner, and Hill, and Major General Holland Smith.

The Marines were stunned to hear the restrictions imposed on their assault by CinCPac. Nimitz declared that the requirement for strategic surprise limited preliminary bombardment of Betio to about three hours on the morning of D-Day. The imperative to concentrate naval forces to defend against a Japanese fleet sortie also ruled out advance seizure of Bairiki and any decoy landings. Then Holland Smith announced his own bombshell: the 6th Marines would be withheld as corps reserve.

All of Julian Smith's tactical options had been stripped away. The 2d

Major General Julian C. Smith, USMC

The epic battle of Tarawa was the pinnacle of Julian Smith's life and career. Smith was 58 and had been a Marine Corps officer for 34 years at the time of Operation Galvanic. He was born in Elkton, Maryland, and graduated from the University of Delaware. Overseas service included expeditionary tours in Panama, Mexico, Haiti, Santo Domingo, Cuba, and Nicaragua. He graduated from the Naval War College in 1917 and, as did many other frustrated Marine officers, spent the duration of World War I in Quantico. As were shipmates Colonel Merritt A. Edson and Major Henry P. Crowe, Smith was a distinguished marksman and former rifle team coach. Command experience in the Fleet Marine Force (FMF) was limited. He commanded the 5th Marines in 1938, and he was commanding officer of the FMF Training School at New River until being ordered to the 2d Marine Division in May 1943.

Smith's contemporaries had a high respect for him. Although unassuming and self-effacing, "there was nothing wrong with his fighting heart." Lieutenant Colonel Ray Murray, one of his battalion commanders, described him as "a fine old gentleman of high moral fiber; you'd fight for him." Smith's troops perceived that their commanding general had a genuine love for them.

Julian Smith knew what to expect from the neap tides at Betio. "I'm an old railbird shooter up on the marshes of the Chesapeake Bay," he said, "You push over the marshes at high tide, and when you have a neap tide, you can't get over the marshes." His landing boats were similarly restricted as they went in toward Tarawa.

Smith was awarded the Distinguished Service Medal for Tarawa to go with the Navy Cross he received for heroic acts in Nicaragua a decade earlier. The balance of his career was unremarkable. He retired as a lieutenant general in 1946, and he died in 1975, age 90. To the end of his life he valued his experience at Betio. As he communicated to the officers and men of the division after the battle: "It will always be a source of supreme satisfaction and pride to be able to say, 'I was with the 2d Marine Division at Tarawa.' "

Department of Defense Photo (USMC) 70729

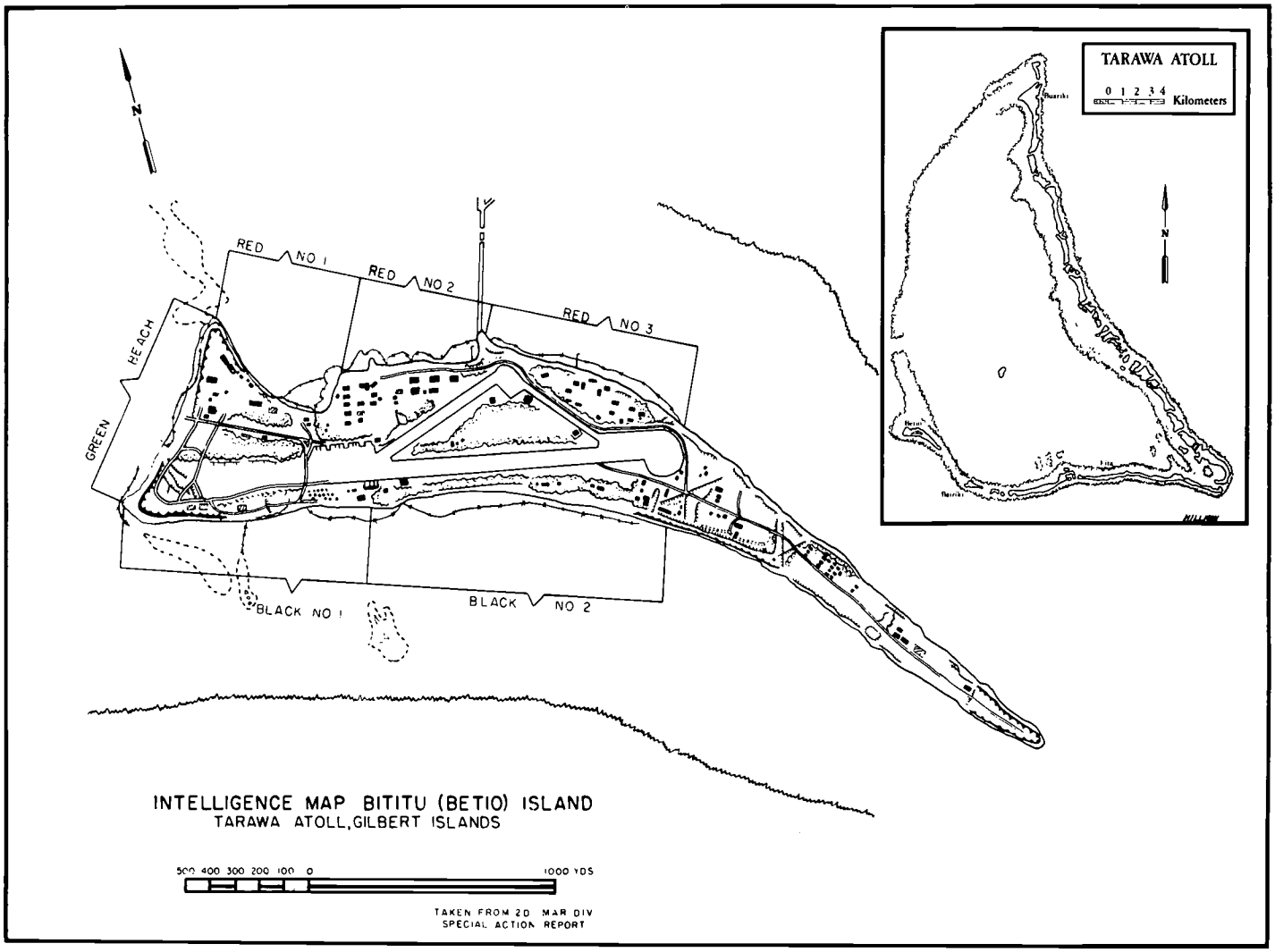
MajGen Julian C. Smith, USMC, right, commanding general, 2d Marine Division, escorts MajGen Holland M. Smith, USMC, commander, V Amphibious Corps, on Betio.

Marine Division was compelled to make a frontal assault into the teeth of Betio's defenses with an abbreviated preparatory bombardment. Worse, loss of the 6th Marines meant he would be attacking the island fortress with only a 2-to-1 superiority in troops, well below the doctrinal minimum. Shaken, he insisted that Holland Smith absolve him of any responsibility for the consequences. This was done.

David Shoup returned to New Zealand to prepare a modified operations order and select the landing beaches. Betio, located on the southwestern tip of Tarawa near the entrance to the lagoon, took the shape of a small bird, lying on its back, with its breast facing north, into the lagoon. The Japanese had concentrated their defenses on the southern and western coasts, roughly the bird's head and back (where they themselves had landed). By contrast, the northern beaches (the bird's breast) had calmer waters in the lagoon and, with one deadly exception (the "re-entrant"), were convex. Defenses in this sector were being improved daily but were not yet complete. A 1,000-yard pier which jutted due north over the fringing reef into deeper lagoon waters (in effect, the bird's legs) was an attractive logistics target. It was an easy decision to select the northern coast for landing beaches, but there was no real safe avenue of approach.

Looking at the north shore of Betio from the line of departure within the lagoon, Shoup designated three landing beaches, each 600 yards in length. From right to left these were: Red Beach One, from Betio's northwestern tip (the bird's beak) to a point just east of the re-entrant; Red Beach Two, from that juncture to the pier; Red Beach Three, from the pier eastward. Other beaches were designated as contingencies, notably Green Beach along the western shore (the bird's head).

Julian Smith had intended to land with two regiments abreast and one in reserve. Loss of the 6th Marines forced a major change. Shoup's modified plan assigned the 2d Marines, reinforced by Landing Team (LT) 2/8 (2d Battalion, 8th Marines), as the assault force. The rest of the 8th Marines would constitute the division reserve. The attack would be



preceded by advance seizure of the pier by the regimental scout sniper platoon (Lieutenant William D. Hawkins). Landing abreast at H-Hour would be LT 3/2 (3d Battalion, 2d Marines) (Major John F. Schoettel) on Red One; LT 2/2 (2d Battalion, 2d Marines) (Lieutenant Colonel Herbert R. Amey, Jr.) on Red Two; and LT 2/8 (Major Henry P. Jim Crowe) on Red Three. Major Wood B. Kyle's LT 1/2 (1st Battalion, 2d Marines) would be on call as the regimental reserve.

General Smith scheduled a large-scale amphibious exercise in Hawkes Bay for the first of November and made arrangements for New Zealand trucks to haul the men back to Wellington at the conclusion in time for a large dance. Complacently, the entire 2d Marine Division embarked aboard 16 amphibious ships for the routine exercise. It was all an artful ruse. The ships weighed anchor and headed north for Operation Galvanic. For once, "Tokyo Rose" had no clue of the impending campaign.

Most of Task Force 53 assembled in Efate, New Hebrides, on 7 November. Admiral Hill arrived on board *Maryland*. The Marines, now keenly aware that an operation was underway, were more interested in the arrival from Noumea of 14 new Sherman M4-A2 tanks on board the dock landing ship *Ashland* (LSD 1). The division had never operated with medium tanks before.

The landing rehearsals at Efate did little to prepare the Marines for Betio. The fleet carriers and their embarked air wings were off assaulting targets in the Solomons. The Sherman tanks had no place to offload. The new LVT-2s were presumably somewhere to the north, underway directly for Tarawa. Naval gun ships bombarded Erradaka Island, well away from the troops landing at Mele Bay.

One overlooked aspect of the rehearsal paid subsequent dividends for the Marines in the coming assault. Major William K. "Willie K." Jones, commanding LT 1/6, took the opportunity to practice embarking his troops in rubber rafts. In the prewar Fleet Marine Force, the first battalion in each regiment had been designated "the rubber boat battalion." The uncommon sight of this mini-flotilla inspired numerous catcalls from the other Marines. Jones himself was dubbed "The Admiral of the Condom Fleet."

The contentious issue during the post-rehearsal critique was the suitability of the naval gunfire plan. The target island was scheduled to receive the greatest concentration of naval gunfire of the war to date. Many senior naval officers were optimistic of the outcome. "We do not intend

to neutralize [the island], we do not intend to destroy it," boasted one admiral, "Gentlemen, we will obliterate it." But General Smith had heard enough of these boasts. In a voice taut with anger he stood to address the meeting: "Even though you naval officers do come in to about 1,000 yards, I remind you that you have a little armor. I want you to know the Marines are crossing the beach with bayonets, and the only armor they'll have is a khaki shirt!"

While at Efate, Colonel William Marshall, commanding Combat Team Two and scheduled for the major assault role at Betio, became too ill to continue. In a memorable decision, General Smith promoted David Shoup to colonel and ordered him to relieve Colonel Marshall. Shoup knew the 2d Marines, and he certainly knew the plan. The architect was about to become the executor.

Once underway from Efate, Admiral Hill ordered the various com-

The Japanese Special Naval Landing Forces

Tarawa was the first large-scale encounter between U.S. Marines and the Japanese *Special Naval Landing Forces*. The division intelligence staff had forewarned that "naval units of this type are usually more highly trained and have a greater tenacity and fighting spirit than the average Japanese Army unit," but the Marines were surprised at the ferocity of the defenders on Betio.

The Japanese "Imperial Marines" earned the grudging respect of their American counterparts for their esprit, discipline, marksmanship, proficiency with heavy weapons, small-unit leadership, manifest bravery, and a stoic willingness to die to the last man. Major William K. Jones, whose 1st Battalion, 6th Marines, engaged more of the enemy in hand-to-hand combat on Betio than any other unit, said "these [defenders] were pretty tough, and they were big, six-foot, the biggest Japs that I ever saw." Major Lawrence C. Hays reported that "their equipment was excellent and there was plenty of surplus found, including large amounts of ammo."

The Japanese used *Special Naval Landing Forces* frequently in the early years of the war. In December 1941, a force of 5,000 landed on Guam, and another unit of 450 assaulted Wake Island. A small detachment of 113 men was the first Japanese reinforcing unit to land on Guadalcanal, 10 days after the American landing. A 350-man SNLF detachment provided fierce resistance to the 1st Marine Division landings on Tulagi and Gavutu-Tanambogo early in the Guadalcanal campaign. A typical SNLF unit in a defensive role was commanded by a navy captain and consisted of three rifle companies augmented by antiaircraft, coast defense, antiboat, and field artillery units of several batteries each, plus service and labor troops.

Photo courtesy of 2d Marine Division Association

The Japanese garrison on Betio conducts pre-battle training.

Japanese on Betio conduct field firing exercises before the battle. The film from which this picture was developed came from a Japanese camera captured during the assault.

Photo courtesy of 2d Marine Division Association

The Japanese garrison on Betio on D-Day consisted of the *3d Special Base Force* (formerly the *6th Yokosuka Special Naval Landing Force*), the *7th Sasebo Special Naval Landing Force* (which included 200 NCOs and officers of the *Tateyama Naval Gunnery School*), the *111th Pioneers*, and the *4th Construction Unit*, an estimated grand total of 4,856 men.

All crew-served weapons on Betio, from 7.7mm light machine guns to eight-inch naval rifles, were integrated into the fortified defensive system that included 500 pillboxes, blockhouses, and other emplacements. The basic beach defense weapon faced by the Marines during their landings on the northern coast was the M93 13mm, dual purpose (antiair, antiboat) heavy machine gun. In many seawall emplacements, these lethal weapons were sited to provide flanking fire along wire entanglements and other boat obstacles. Flanking fire discipline was insured by sealing off the front embrasures.

Admiral Shibasaki organized his troops on Betio for "an overall decisive defense at the beach." His men fought with great valor. After 76 hours of bitter fighting, 4,690 lay dead. Most of the 146 prisoners taken were conscripted Korean laborers.

Only 17 wounded Japanese surrendered.

Department of Defense Photo (USMC) 87675

Col David M. Shoup pictured in the field. The clenched cigar became a trademark.

manders of Task Force 53 to brief the troops on their destination and mission. Tarawa came as a surprise to most of the men. Many had wagered they were heading for Wake Island. On the day before D-Day, General Julian Smith sent a message "to the officers and men of the 2d Division." In it, the commanding general sought to reassure his men that, unlike the Guadalcanal campaign, the Navy would stay and provide support throughout. The troops listened attentively to these words coming over the loudspeakers:

> A great offensive to destroy the enemy in the Central Pacific has begun. Our Navy screens our operation and will support our attack tomorrow with the greatest concentration of aerial bombardment and naval gunfire in the history of warfare. It will remain with us until our objective is secured . . . . Garrison troops are already enroute to relieve us as soon as we have completed our job . . . . Good luck and God bless you all.

As the sun began to set on Task Force 53 on the evening of D-minus-one, it appeared that strategic surprise had indeed been attained. More good news came with the report that the small convoy of LSTs bearing LVT-2s had arrived safely from Samoa and was joining the formation. All the pieces seemed to be coming together.

D-Day at Betio, 20 November 1943

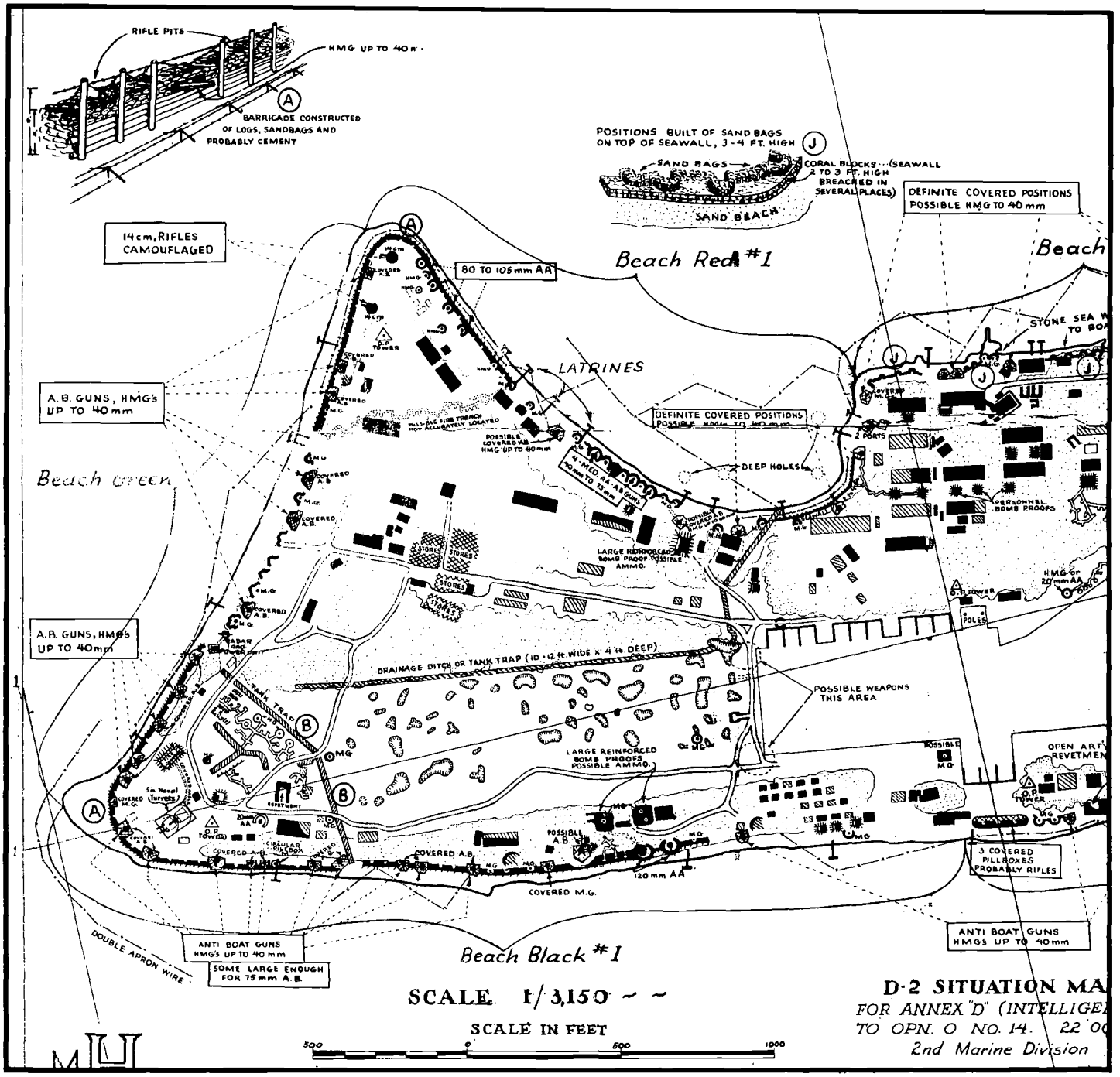
The crowded transports of Task Force 53 arrived off Tarawa Atoll shortly after midnight on D-Day. Debarkation began at 0320. The captain of the *Zeilin* (APA 3) played the Marines Hymn over the public address system, and the sailors cheered as the 2d Battalion, 2d Marines, crawled over the side and down the cargo nets.

At this point, things started to go wrong. Admiral Hill discovered that the transports were in the wrong anchorage, masking some of the fire support ships, and directed them to shift immediately to the correct site. The landing craft bobbed along in the wake of the ships; some Marines had been halfway down the cargo nets when the ships abruptly weighed anchor. Matching the exact LVTs with their assigned assault teams in the darkness became haphazard. Choppy seas made cross-deck transfers between the small craft dangerous.

Few tactical plans survive the opening rounds of execution, particularly in amphibious operations. "The Plan" for D-Day at Betio established H-Hour for the assault waves at 0830. Strike aircraft from the fast carriers would initiate the action with a half-hour bombing raid at 0545. Then the fire support ships would bombard the island from close range for the ensuing 130 minutes. The planes would return for a final strafing run at H-minus-five, then shift to inland targets as the Marines stormed ashore. None of this went according to plan.

The Japanese initiated the battle. Alerted by the pre-dawn activities offshore, the garrison opened fire on the task force with their big naval guns at 0507. The main batteries of the battleships *Colorado* (BB 45) and *Maryland* commenced counterbattery fire almost immediately. Several 16-inch shells found their mark; a huge fireball signalled destruction of an ammunition bunker for one of the Japanese gun positions. Other fire support ships joined in. At 0542 Hill ordered "cease fire," expecting the air attack to commence momentarily. There was a long silence.

The carrier air group had changed its plans, postponing the strike by 30 minutes. Inexplicably, that unilateral modification was never transmitted to Admiral Hill, the amphibious task force commander. Hill's problems were further compounded by the sudden loss of communications on his flagship *Maryland* with the first crashing salvo of the ship's main battery. The Japanese coastal defense guns were damaged but still dangerous. The American mix-up provided the defenders a grace period of 25 minutes to recover and adjust. Frustrated at every turn, Hill



Marine Corps Personal Papers

A detailed view of Division D-2 situation map of western Betio was prepared one month before the landing. Note the predicited position of Japanese defenses along Green Beach and Red Beach One, especially those within the "re-entrant" cove along the north shore. Intelligence projections proved almost 90 percent accurate and heavy casualties resulted.

ordered his ships to resume firing at 0605. Suddenly, at 0610, the aircraft appeared, bombing and strafing the island for the next few minutes. Amid all this, the sun rose, red and ominous through the thick smoke.

The battleships, cruisers, and destroyers of Task Force 53 began a saturation bombardment of Betio for the next several hours. The awesome shock and sounds of the shelling were experienced avidly by the Marines. Staff Sergeant Norman Hatch, a combat photographer, thought to himself, "we just really didn't see how we could do [anything] but go in there and bury the people . . . this wasn't going to be a fight." *Time* correspondent Robert Sherrod thought, "surely, no mortal men could live through such destroying power . . . any Japs on the island would all be dead by now." Sherrod's thoughts were rudely interrupted by a geyser of water 50 yards astern of the ship. The Japanese had resumed fire and their targets were the vulnerable transports. The troop ships hastily got underway for the second time that morning.

For Admiral Hill and General Julian Smith on board *Maryland*, the best source of information throughout the long day would prove to be the Vought-Sikorsky Type OS2U Kingfisher observation aircraft

LVT-2 and LVT(A)2 Amphibian Tractors

The LVT-2, popularly known as the Water Buffalo, was built to improve upon shortcomings in the design of the Marine Corps' initial amphibian vehicle, the LVT-1. The new vehicle featured a redesigned suspension system with rubber-tired road wheels and torsion springs for improved stability and a smoother ride. The power train was standardized with that of the M3A1 Stuart light tank. This gave the LVT-2 greater power and reliability than its predecessor and, combined with new "W"-shaped treads, gave it greater propulsion on land and in the water. The new vehicle also could carry 1,500 pounds more cargo than the original LVT-1.

The LVT-2 entered production in June 1942, but did not see combat until Tarawa in November 1943. The Marines used a combination of LVT-1s and LVT-2s in the assault on Betio. The 50 LVT-2s used at Tarawa were modified in Samoa just before the battle with 3/8-inch boiler plates installed around the cab for greater protection from small arms fire and shell fragments. Despite the loss of 30 of these vehicles to enemy fire at Tarawa, the improvised armor was considered promising and led to a call for truly armored LVTs.

The LVT(A)2 ["A" for armored] requested by the U.S. Army was a version which saw limited use with the Marine Corps. The LVT(A)2 had factory-installed armor plating on the hull and cab to resist heavy machine gun fire. The new version appeared identical to the LVT-2 with the exception of armored drivers' hatches. With legitimate armor protection, the LVT(A)2 could function as an assault vehicle in the lead waves of a landing. The armored amphibian vehicle provided excellent service when it was introduced to Marine operations on New Britain.

Department of Defense Photo (USMC) 63646

LVT-2 comes ashore on Green Beach on approximately D+2

More than 3,000 LVT-2s and LVT(A)2s were manufactured during World War II. These combat vehicles proved to be valuable assets to Marine Corps assault teams throughout the Pacific campaign, transporting thousands of troops and tons of equipment. The overall design, however, left some operational deficiencies. For one thing, the vehicles lacked a ramp. All troops and equipment had to be loaded and unloaded over the gunwales. This caused problems in normal field use and was particularly hazardous during an opposed landing. This factor would lead to the further development of amphibian tractors in the LVT family during the war.

Compiled by Second Lieutenant Wesley L. Feight, USMC

launched by the battleships. At 0648, Hill inquired of the pilot of one float plane, "Is reef covered with water?" The answer was a cryptic "negative." At that same time, the LVTs of Wave One, with 700 infantrymen embarked, left the assembly area and headed for the line of departure.

The crews and embarked troops in the LVTs had already had a long morning, complete with hair-raising cross-deck transfers in the choppy sea and the unwelcome thrill of eight-inch shells landing in their proximity. Now they were commencing an extremely long run to the beach, a distance of nearly 10 miles. The craft started on time but quickly fell behind schedule. The LVT-1s of the first wave failed to maintain the planned 4.5-knot speed of advance due to a strong westerly current, decreased buoyancy from the weight of the improvised armor plating, and their overaged power plants. There was a psychological factor at work as well. "Red Mike" Edson had criticized the LVT crews for landing five minutes early during the rehearsal at Efate, saying, "early arrival inexcusable, late arrival preferable." Admiral Hill and General Smith soon realized that the three struggling columns of LVTs would never make the beach by 0830. H-Hour was postponed twice, to 0845, then to 0900. Here again, not all hands received this word.

The destroyers *Ringgold* (DD 500) and *Dashiell* (DD 659) entered the lagoon in the wake of two minesweepers to provide close-in fire support. Once in the lagoon, the minesweeper *Pursuit* (AM 108) became the Primary Control Ship, taking position directly on the line of departure. *Pursuit* turned her searchlight seaward to provide the LVTs with a beacon through the thick dust and smoke. Finally, at 0824, the first wave of LVTs crossed the line, still 6,000 yards away from the target beaches.

A minute later the second group of carrier aircraft roared over Betio, right on time for the original H-Hour, but totally unaware of the new times. This was another blunder. Admiral Kelly Turner had specifically provided all players in Operation Galvanic with this admonition: "Times of strafing beaches with reference to H-Hour are approximate; the distance of the boats from the beach is the governing factor." Admiral Hill had to call them off. The planes remained on station, but with depleted fuel and ammunition levels available.

The LVTs struggled shoreward in three long waves, each separated by

LtGen Julian C. Smith Collection

Troops of the 2d Battalion, 2d Marines, 2d Marine Division, load magazines and clean their weapons enroute to Betio on board the attack transport Zeilin *(APA 3).*

a 300-yard interval: the 42 LVT-1s of Wave One, followed by 24 LVT-2s of Wave Two, and 21 LVT-2s of Wave Three. Behind the tracked vehicles came Waves Four and Five of LCVPs. Each of the assault battalion commanders were in Wave Four. Further astern, the *Ashland* ballasted down and launched 14 LCMs, each carrying a Sherman medium tank. Four other LCMs appeared carrying light tanks (37mm guns).

Shortly before 0800, Colonel Shoup and elements of his tactical command post debarked into LCVPs from *Biddle* (APA 8) and headed for the line of departure. Close by Shoup stood an enterprising sergeant, energetically shielding his bulky radio from the salt spray. Of the myriad of communications blackouts and failures on D-Day, Shoup's radio would remain functional longer and serve him better than the radios of any other commander, American or Japanese, on the island.

Admiral Hill ordered a ceasefire at 0854, even though the waves were still 4,000 yards off shore. General Smith and "Red Mike" Edson objected strenuously, but Hill considered the huge pillars of smoke unsafe for overhead fire support of the assault waves. The great noise abruptly ceased. The LVTs making their final approach soon began to receive long-range machine gun fire and artillery air-bursts. The latter could have been fatal to the troops crowded into open-topped LVTs, but the Japanese had overloaded the projectiles with high explosives. Instead of steel shell fragments, the Marines were "doused with hot sand." It was the last tactical mistake the Japanese would make that day.

The previously aborted air strike returned at 0855 for five minutes of noisy but ineffective strafing along the beaches, the pilots again heeding their wristwatches instead of the progress of the lead LVTs.

Two other events occurred at this time. A pair of naval landing boats darted towards the end of the long pier at the reef's edge. Out charged First Lieutenant Hawkins with his scout-sniper platoon and a squad of combat engineers. These shock troops made quick work of Japanese machine gun emplacements along the pier with explosives and flame throwers. Meanwhile, the LVTs of Wave One struck the reef and crawled effortlessly over it, commencing their final run to the beach. These parts of Shoup's landing plan worked to perfection.

But the preliminary bombardment, as awesome and unprecedented as it had been, had failed significantly to soften the defenses. Very little ships' fire had been directed against the landing beaches themselves, where Admiral Shibasaki vowed to defeat the assault units at the water's edge. The well-protected defenders simply shook off the sand and manned their guns. Worse, the near-total curtailment of naval gunfire for the final 25 minutes of the assault run was a fateful lapse. In effect, the Americans gave their opponents time to shift forces from the southern and western beaches to reinforce northern positions. The defenders were groggy from the pounding and stunned at the sight of LVTs crossing the barrier reef, but Shibasaki's killing zone was still largely intact. The assault waves were greeted by a steadily increasing volume of combined arms fire.

For Wave One, the final 200 yards to the beach were the roughest, especially for those LVTs approaching Red Beaches One and Two. The vehicles were hammered by well-aimed fire from heavy and light machine guns and 40mm antiboat guns. The Marines fired back, expending 10,000 rounds from the .50-caliber machine guns mounted forward on each LVT-1. But the exposed gunners were easy targets, and dozens were cut down. Major Drewes, the LVT battalion commander who had worked so hard with Shoup to make this assault possible, took over one machine gun from a fallen crewman and was immediately killed by a bullet through the brain. Captain Fenlon A. Durand, one of Drewes' company commanders, saw a Japanese officer standing defiantly on the sea wall

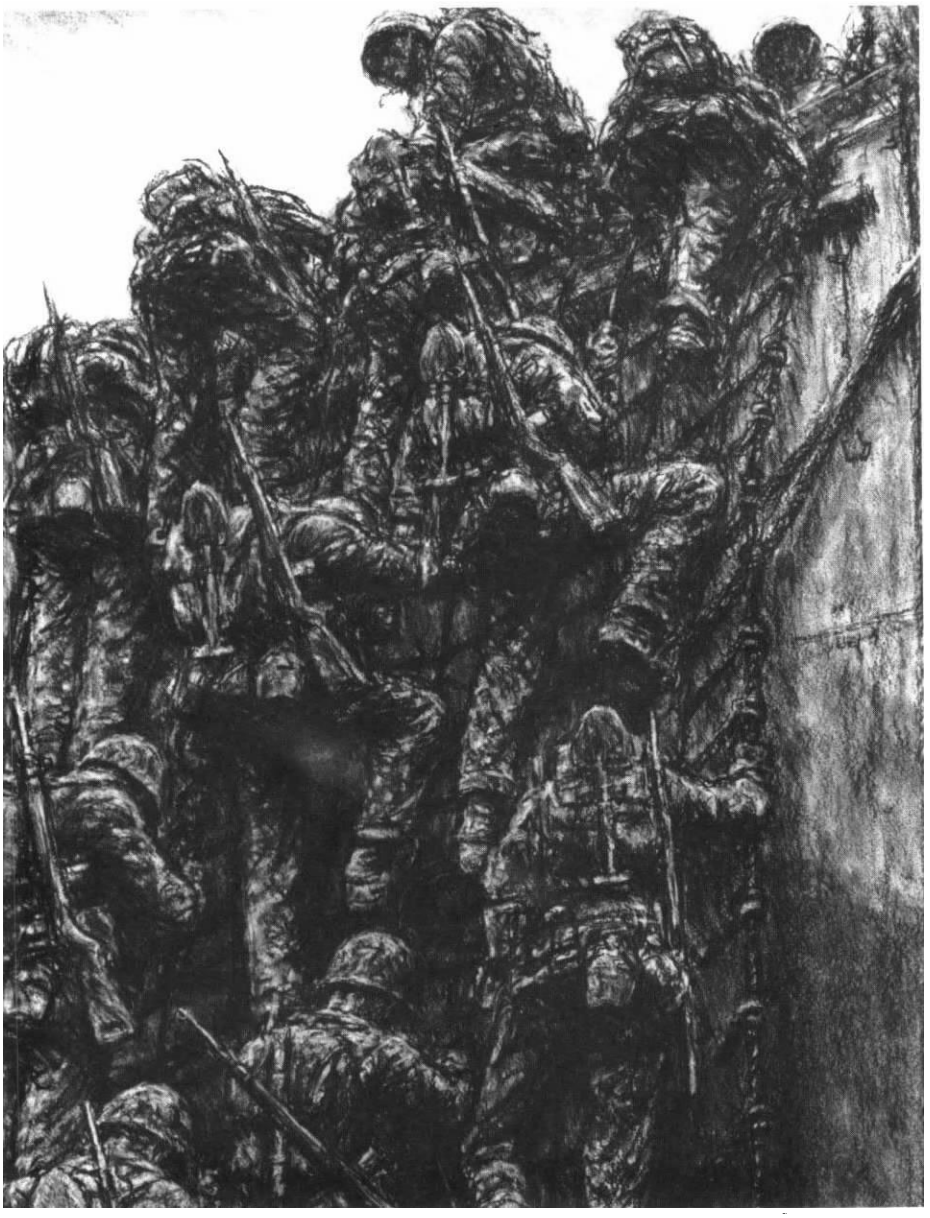
waving a pistol, "just daring us to come ashore."

On they came. Initial touchdown times were staggered: 0910 on Red Beach One; 0917 on Red Beach Three; 0922 on Red Beach Two. The first LVT ashore was vehicle number 4-9, nicknamed "My Deloris," driven by PFC Edward J. Moore. "My Deloris" was the right guide vehicle in Wave One on Red Beach One, hitting the beach squarely on "the bird's beak." Moore tried his best to drive his LVT over the five-foot seawall, but the vehicle stalled in a near-vertical position while nearby machine guns riddled the cab. Moore reached for his rifle only to find it shot in half. One of the embarked troops was 19-year-old Private First Class Gilbert Ferguson, who recalled what happened next on board the LVT: "The sergeant stood up and yelled 'everybody out.' At that very instant, machine gun bullets appeared to rip his head off . . ." Ferguson, Moore, and others escaped from the vehicle and dispatched two machine gun positions only yards away. All became casualties in short order.

Very few of the LVTs could negotiate the seawall. Stalled on the beach, the vehicles were vulnerable to preregistered mortar and howitzer fire, as well as hand grenades tossed into the open troop compartments by Japanese troops on the other side of the barrier. The crew chief of one vehicle, Corporal John Spillane, had been a baseball prospect with the St. Louis Cardinals organization before the war. Spillane caught two Japanese grenades barehanded in mid-air, tossing them back over the wall. A third grenade exploded in his hand, grievously wounding him.

The second and third waves of LVT-2s, protected only by 3/8-inch boiler plate hurriedly installed in Samoa, suffered even more intense fire. Several were destroyed spectacularly by large-caliber antiboat guns. Private First Class Newman M. Baird, a machine gunner aboard one embattled vehicle, recounted his ordeal: "We were 100 yards in now and the enemy fire was awful damn intense and getting worse. They were knocking [LVTs] out left and right.

Marines and sailors traveling on board a troop transport receive their initial briefing on the landing plan for Betio.
Department of Defense Photo (USMC) 101807



U.S. Navy Combat Art Collection

"Down the Net," a sketch by Kerr Eby.

A tractor'd get hit, stop, and burst into flames, with men jumping out like torches." Baird's own vehicle was then hit by a shell, killing the crew and many of the troops. "I grabbed my carbine and an ammunition box and stepped over a couple of fellas lying there and put my hand on the side so's to roll over into the water. I didn't want to put my head up. The bullets were pouring at us like a sheet of rain."

On balance, the LVTs performed their assault mission fully within Julian Smith's expectations. Only eight of the 87 vehicles in the first three waves were lost in the assault (although 15 more were so riddled with holes that they sank upon reaching deep water while seeking to shuttle more troops ashore). Within a span of 10 minutes, the LVTs landed more than 1,500 Marines on Betio's north shore, a great start to the operation. The critical problem lay in sustaining the momentum of the assault. Major Holland's dire predictions about the neap tide had proven accurate. No landing craft would cross the reef throughout D-Day.

Shoup hoped enough LVTs would survive to permit wholesale transfer-line operations with the boats along the edge of the reef. It rarely worked. The LVTs suffered increasing casualties. Many vehicles, afloat for five hours already, simply ran of gas. Others had to be used immediately for emergency evacuation of wounded Marines. Communications, never good, deteriorated as more and more radio sets suffered water damage or enemy fire. The surviving LVTs continued to serve, but after about 1000 on D-Day, most troops had no other option but to wade ashore from the reef, covering distances from 500 to 1,000 yards under well-aimed fire.

Marines of Major Schoettel's LT 3/2 were particularly hard hit on Red Beach One. Company K suffered heavy casualties from the re-entrant strongpoint on the left. Company I made progress over the seawall along the "bird's beak," but paid a high price, including the loss of the company commander, Captain William E. Tatom, killed before he could even debark from his LVT. Both units lost half their men in the first two hours. Major Michael P. "Mike" Ryan's Company L, forced to wade ashore when their boats grounded on the reef, sustained 35 percent casualties. Ryan recalled the murderous enfilading fire and the confusion. Suddenly, "one lone trooper was spotted through the fire and smoke scrambling over a parapet on the beach to the right," marking a new landing point. As Ryan finally reached the beach, he looked back over his shoulder. "All [I] could see was heads with rifles held over them," as his wading men tried to make as small a target as possible. Ryan began assembling the stragglers of various waves in a relatively sheltered area along Green Beach.

Major Schoettel remained in his boat with the remnants of his fourth wave, convinced that his landing team had been shattered beyond relief. No one had contact with Ryan. The fragmented reports Schoettel received from the survivors of the two other assault companies were disheartening. Seventeen of his 37 officers were casualties.

In the center, Landing Team 2/2 was also hard hit coming ashore over Red Beach Two. The Japanese strong-