The Importance of GALVANIC

THE GILBERTS IN AMERICAN STRATEGY

To American planners, the capture of bases in the Gilberts marked the beginning of a major effort against Japan, the type of offensive outlined in the ORANGE Plans. The loss of Tarawa, Apamama, Makin, Abaiang, Marakei, and Maiana Atolls did not cripple the enemy, for GALVANIC had not been designed to do so. Although Admirals King and Nimitz believed that a victory in the Marshalls would be more damaging to the enemy than the conquest of the Gilberts, geographical considerations plus slender military resources forced them to strike first at the Gilberts. Both Nimitz, who was willing to undertake any operation that had "a reasonable prospect of success," and King, who was willing to accept "very considerable calculated risks," refused to plunge blindly into the mandated islands.[1]

Not until bombers and photographic planes had penetrated the Marshalls were the American naval leaders willing to risk the ships and men necessary for amphibious operations in that area. The capture of airfield sites in the Gilberts brought the Marshalls within more effective range of land-based planes and enabled the Navy to launch its westward drive. "This operation," commented Nimitz, "is considered to have been highly successful. Island bases essential to our advance across the Pacific were captured from the enemy with the complete destruction of all his defending forces." [2]

As a result of GALVANIC, the Army Air Forces gained four new airfields from which to launch strikes at targets in the Marshalls. At Tarawa, a 6,000-foot runway was built on Betio, while 7,000 and 4,000-foot runways were constructed on Buota. On 15 December, the first bombers, twin-engine B–25s (North American Mitchells), arrived at Tarawa, but neither of the two atoll bases was then ready to handle its full complement of planes. As the year 1944 arrived, heavy B–24s began flying bombing and reconnaissance missions from Tarawa.

[1] King and Whitehall, *Fleet Admiral King*, p. 432.

[2] CinCPac WarD, Nov43, Anx F, p. 10. In regard to the decision to attack fortified islands, like Tarawa and targets in the Marshalls, rather than undefended objectives, Admiral Hill commented that prevailing trade winds required an island air base to have fields running in the wind direction and that the Japanese, recognizing this fact, had built their bases on the relatively few islands that were situated to take best advantage of the winds. Many of the undefended atoll islands were too small for airfields or would require too much construction work to be usable. *Hill interview/comments.*

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In spite of swamps and soft ground, a 7,000-foot flight strip was finished at Makin early in January. Because this runway was built on sand rather than coral, it could not support the weight of B–24s. The Apamama facility, completed by 15 January, boasted 7,000 feet of hard coral surface ideally suited to heavy bombers.[3]

Although the bases gained as a result of GALVANIC were in themselves important, far more valuable was the experience amassed by American Army, Navy, and Marine Corps commanders. By capturing Betio Island, the men of the 2d Marine Division had proven that Marine Corps amphibious doctrine was essentially sound. Although the casualty list shocked the American public, the operation was nonetheless a success, for the capture of Makin, Tarawa, and four lesser atolls had neutralized the entire Gilberts group and advanced American might across some 700 miles of ocean. Because the loss of life was confined to so short a period, the impact on civilian morale was especially severe. Almost unnoticed was the possibility that a land campaign over a similar distance, even though comparatively few men fell each day, might in the end prove more costly than a violent but brief assault from the sea. GALVANIC, moreover, did show means by which losses could be reduced in future amphibious operations.

PERSONNEL PROBLEMS [4]

Because Betio was to be taken by a previously specified number of men in what was expected to be a brief but furious battle, corps personnel officers were not concerned with a replacement system, which would be needed in a campaign of longer duration. Routine administration, however, had to be carried on as usual, and at Betio personnel accounting proved a difficult task. Breakdowns in communications, plus the hectic tempo of the fighting prevented the 2d Marine Division from checking each day on the number of able-bodied men in its ranks. Summaries of casualties and prisoners taken were submitted to VAC immediately after the action, but the confusion of reembarkation resulted in incomplete and inaccurate returns. To provide more thorough statistics in future operations, VAC urged that periodic G–1 reports be submitted as promptly as possible.

At Butaritari, where 27th Infantry Division headquarters was rapidly established ashore, two periodic reports of losses were prepared. Details of the Apamama venture, however, remained unknown to Holland Smith's G–1 section. No reports were submitted by VAC Reconnaissance Company until the unit returned to Hawaii.

Although GALVANIC represented a greater concentration of naval might than any previous effort against the Japanese, the size of the expeditionary force was limited by the number of transports and trained men available in the Central Pacific area. The 2d Ma-

[3] Craven and Cate, *Guadalcanal to Saipan*, pp. 303–304; Morison, *The Aleutians, Gilberts, and Marshalls*, pp. 221–212.

[4] Unless otherwise noted, the material in this section is derived from: VAC G–1 Rpt GALVANIC, dtd 6Jan44, Encl E to *VAC AR;* Isely and Crowl, *Marines and Amphibious War*, pp. 203–205.

rine Division, the only experienced amphibious division that could be assigned to the Gilberts expedition, was given the mission of capturing Tarawa. In order to lessen the risk of loss of valuable ships, the Marines had to assault Betio before landing elsewhere in that atoll. Had the American fleet been strong enough to accept the possible loss of several transports or warships, the assault force could have risked prolonging the action by first seizing islands near Betio and emplacing field artillery to support the storming of the principal objective.

In addition, one Marine regiment had to be retained in corps reserve, thus leaving only two regiments at the disposal of the commanding general of the division. In brief, circumstances forced upon Julian Smith a plan that called for the direct assault by an understrength division against a heavily fortified objective. Although he later was able to employ his third regiment, he could not count on its use and had to rely on aerial and naval bombardment to make up for what he lacked in numbers. The lesson was clear. In assessing operations to seize the atoll, Admiral Nimitz wrote: "Under present conditions, it is necessary to plan for the employment of not less than one division for the capture of an enemy position comparable in strength to Tarawa." [5]

Compared to the defending garrison, the force assigned to capture Butaritari was of overwhelming strength. Yet, in the opinion of both Admiral Turner and General Holland Smith, the might of this reinforced regiment could not be dissipated in secondary landings on neighboring islands until Butaritari had been won. After the fall of the major objective was certain, the possible need for further reinforcements at Betio kept General Ralph Smith from employing his reserve battalion as he desired. Not until victory at Betio was assured, could the Army general carry out his plan to trap the remnants of the Makin garrison by landing troops on Kuma Island.

The operations against the Gilberts were the most damaging blows that could be struck against the enemy with the resources then available to Admiral Nimitz. The expedition, no more than equal to its task, was the largest that could have been mounted in the fall of 1943. The GALVANIC force, in comparison to expeditions sent forth later in the war, was small, but these few troops were able to shatter Japanese power in the Gilberts and open the way into the Marshalls.

INTELLIGENCE

American intelligence officers, working from photographs taken by submarine and aircraft, were able to locate almost all of the enemy's defensive installations before the operation got underway. If anything, the interpretation of these photos was too cautious, for several dummy gun emplacements on Butaritari were listed as containing actual weapons. Intelligence specialists, however, failed to foresee the adverse conditions off the beaches at Butaritari. Although the unexpected boulders and coral outcroppings there, together with unforeseen tides, compli-

[5] CinCPac 1stEnd to ComCenPacFor ltr to Cominch, dtd 10Dec43 (OAB, NHD).

cated the unloading of men and supplies, these conditions had little effect on the assault landings.

A greater number of oblique photos, taken at irregular hours over a period of several days, might have given a clearer indication of Betio's regular tides, but no available information could have plotted the freak dodging-tide that occurred on D-Day. When traders and British colonial administrators familiar with the Gilberts failed to agree on tidal conditions, American officers were forced to use a concensus estimate in order to prepare their carefully drawn landing plans. While General Julian Smith felt there was one chance in two that standard landing craft would be able to cross the reef at Betio, he approved a plan that envisioned "a tide that would not float our boats across the reef." [6]

More thorough photographic coverage would be needed in future amphibious undertakings, but only prolonged observation could give a hint of the course of eccentric tides. Another partial solution to the problem lay in the use of the Naval Combat Demolitions Units that had been organized prior to the invasion of Kiska. Although the six-man team destined for the Aleutians was inadvertently left behind at San Francisco, Admiral Turner felt that a similar team would have been valuable in destroying underwater obstacles off Betio. In the course of the Pacific war, these units, designated Underwater Demolitions Teams (UDTs), also were employed to collect last-minute information on the depth of water, approaches, and gradients off various objectives.[7]

During the 76-hour battle for Betio, there was little opportunity to collect, evaluate, and disseminate intelligence information. Most of the Japanese and Koreans preferred death to surrender, and the information provided by the few prisoners had no effect on the conduct of the fighting. At Butaritari, friendly natives confirmed preinvasion estimates of the size of the enemy garrison and its location. In addition, villagers on Kuma Island provided an accurate count of the Japanese in the area, information which helped General Ralph Smith prevent the enemy from retreating along the atoll. Most of the intelligence gathered in the Gilberts, however, was applicable to future operations rather than to the situation at hand.

After Betio was secured, Japanese language officers of the 2d Marine Division scoured the island in search of enemy documents. The most important find was a set of plans and specifications for some of the defenses encountered on the island. This document and the examination by engineers of shattered emplacements enabled the Americans to build sample blockhouses and test their durability. Such experiments led to improvements in naval gunfire techniques and infantry tactics

[6] LtGen Julian C. Smith interview with Hist-Br, G–3, HQMC, dtd 4Oct62. For an interesting discussion of the development of tide information at Tarawa see: Patrick L. McKiernan, "Tarawa: The Tide that Failed," *U. S. Naval Institute Proceedings*, v. 88, no. 2 (Feb62).

[7] Cdr Francis D. Fane and Don Moore, *The Naked Warriors* (New York: Appleton-Century-Crofts, Inc., 1956), pp. 24, 30–31.

in time for the Marshalls operation.[8]

Of the prisoners questioned by 2d Division intelligence specialists, only Ensign Kiyoshi Ota was able to provide valuable information. He testified that although air strikes had destroyed two or three protected installations, the men in shelters or covered fortifications were safe from both bombs and naval shells. In his opinion, naval gunfire had devastated antiaircraft emplacements, shattered communications, but failed to destroy concrete structures. The ensign, however, was impressed by the effective on-call fire delivered by destroyers posted in the lagoon. Since the building where Ota was stationed was destroyed by a tank-infantry team, his testimony indicated both the importance of coordination between infantry and armor as well as the need for a more accurate and powerful preparatory naval bombardment.[9]

COMMAND AND COMMUNICATIONS

The command relationships decided upon for GALVANIC satisfied neither Holland Smith nor Ralph Smith. Before the expedition sailed, the Marine general had pointed out that, although nominally a corps commander, he had no troops under his tactical control. The Army general felt that, since he had not been free to alter his tactical plans without Admiral Turner's approval until after the naval officer had directed him to assume command ashore, the commander of the landing force was for the most part "a conduit for the issue of orders" [10] by the assault force commander.

Ralph Smith, however, was quick to admit that an amphibious operation was a type of combat in which the concern of the Navy for its ships might conflict with the scheme of maneuver ashore. Obviously, some sort of compromise was necessary. In the general's opinion, "the successful execution of an amphibious operation is dependent not on who or what component of the armed forces commands, but on the mutual confidence between all commanders and a comprehensive understanding of the problems faced by each." [11] Apparently, there was no lack of confidence and understanding, for Turner's system of command was adequate to the situation at both major objectives.

The difficulty in transmitting orders and information rather than any weakness in the command structure caused confusion and needless delay at both Makin and Tarawa. Because there was little opposition at the beaches of Butaritari, communications failures did not jeopardize the success of the 27th Infantry Division assault troops. Radio contact between ship and shore was reliable enough, but elements of the assault battalions at times had difficulty in exchanging messages.[12]

As a command ship for the Tarawa operation, the battleship *Maryland*

[8] Maj Eugene P. Boardman ltr to CMC, dtd 16Jun47.

[9] 2d MarDiv PrelimIntelRpt of Tarawa Op, dtd 7Dec43, Encl N to VAC G–2 Rpt, dtd 8Dec43, Encl C to *VAC AR*.

[10] *27th InfDiv OpRpt*, p. 2.

[11] *Ibid.*

[12] *Ibid.*; Rpt of 27th InfDiv SigO, dtd 4Dec 43, Encl no. 2 to *27th InfDiv OpRpt*.

proved an unhappy choice. Transmitters, receivers, and antennas, installed in a compact area, interfered with each other, severely hampering communication efficiency. In addition, the concussion from the 16-inch guns of the vessel ruined some of the more delicate pieces of radio equipment. Admiral Hill recommended that, as a temporary expedient, the number of radio channels in use be drastically reduced, but the problem of ship-to-shore communications could not be solved until specially designed command ships were introduced in the Central Pacific.

The communications difficulties extended to transports and landing control craft as well. There was an evident need for better facilities, better trained control personnel, and a more systematic command setup. As a result of lessons learned, the transport group, and later the transport squadron commander, "was given a greatly enlarged staff and made responsible for 'traffic control' off the beaches. With the better communications facilities made available to him, he was," in the words of the transport commander at Tarawa, "the logical one to be charged with this duty." [13]

Once ashore on Betio, the Marines continued to have communication troubles. Batteries in the MU radio, the handset carried by platoon leaders, wore out too quickly to suit the men who depended on these sets. Officers in the division complained that the TBX radios were susceptible to water damage, but VAC analysts held that the case containing the radio was watertight if assembled properly. Neither division nor corps, however, had a kind word for the TBY, and Admiral Hill's headquarters recommended that this piece of equipment be replaced by its Army equivalent. Waterproof bags or cartons also were needed to protect telephones and switchboards during the ship to shore movement. Because each used a different type of radio, contact between infantrymen and tank commanders was uncertain.[14]

[13] *Knowles ltr.*

TACTICAL LESSONS

The most important feature of the assaults upon Betio and Butaritari was the role of the amphibian tractor as an assault craft. Prior to GALVANIC, LVTs had been used to haul supplies from transports to dumps inland of the beaches, but the conquest of the Gilberts marked the first time that these vehicles had carried the first wave of troops. The tractors proved so successful in their new role that Holland Smith came to believe that LVTs were vital to the amphibious assault.

As valuable as the tractors had been, they were not perfect. Greater speed, additional armor protection, and a ramp for discharging troops were the improvements suggested by VAC.[15] At

[14] V PhibFor CommRecoms and Cmts, Encl A to *V PhibFor AR*, p. 62; *VAC AR*, p. 17; VAC Analysis of CommRpts, dtd 3Jan44, Encl 5 to SpStfRpts, n.d., Encl F to *VAC AR*.

[15] Of the 125 LVTs used at Tarawa, 35 were sunk at sea, 26 were filled with water on the reef, 9 were burned on the beach as gas tanks ignited, and 2 were destroyed by mines on the beach. Eight tractors were put out of action by mechanical failures. Of the 500 men in the 2d Amphibian Tractor Batallion, 323 were killed, wounded, or missing in action, including the battalion commander, Major Henry C.

the time of GALVANIC, an armored amphibian tractor mounting a 37mm gun, the LVT(A), and an amphibious 2½-ton truck, the DUKW, were in production. Even though neither of these types had undergone an adequate combat test,[16] corps recommended that a battalion of armored tractors, two companies of the new DUKWs, and two battalions of ordinary LVTs be assigned each division in future assault landings.[17]

The fighting on Betio centered around pillboxes and shelters built of either steel and concrete or log and coral. Many of the flamethrowers which the Marines used so effectively against these installations had been made available by the Army Chemical Warfare Service detachment in Hawaii.[18] In spite of the help of the Army, there were not enough flamethrowers at Betio, so VAC recommended that in the future one such weapon be assigned to each rifle platoon. In addition, the Army, Navy, and Marine Corps agencies in Hawaii began cooperating in the development of a flame-throwing tank.

The Sherman tanks and the halftracks, which also mounted high-velocity 75mm guns, proved effective against the lighter Japanese installations. Because the 37mm guns of the light tanks could do little damage to prepared fortifications, Holland Smith's headquarters recommended that these vehicles be replaced by the heavier Shermans. Pack howitzers, which had to be wheeled into position by their crews, were not as effective in delivering direct fire against pillboxes as were the more maneuverable tanks and self-propelled guns.

Demolitions had proved so deadly that corps recommended the issue of one demolitions kit to each rifle squad. Flamethrowers, demolitions, and armor had enabled Marine infantrymen to close with and kill the enemy by means of grenades and rifle fire. Grenades, in fact, were so valuable that VAC urged still greater emphasis on the offensive or concussion type. Perhaps the most important lesson learned was that the destruction of a Japanese garrison as skilfully entrenched as the defenders of Betio was a task that required teamwork as well as courage.

Because units tended to become intermingled during the amphibious assault, individual Marines might find themselves commanded by a stranger. Under these adverse conditions, the riflemen had to fight as part of a hastily organized team. In the opinion of corps operations officers, this kind of teamwork could only result from the self-discipline, resourcefulness, and initiative of every unit leader. Leadership, then, would continue to be stressed in future training.[19]

ARTILLERY AND NAVAL GUNFIRE

Had circumstances not forced him to do otherwise, General Julian Smith would have seized the islands adjacent to Betio, emplaced artillery on them,

Drewes, killed on D-Day. Information supplied by LtGen Julian C. Smith, dtd 15Oct62.

[16] Two of the DUKWs were used at Makin Atoll.

[17] *VAC AR*, p. 12.

[18] Col George F. Unmacht, USA, "Flame Throwing Seabees," *U. S. Naval Institute Proceedings*, v. 74, no. 4 (Apr48), pp. 425–426.

[19] *VAC AR*, p. 20.

and shelled the main objective before attempting to storm it. The need to capture Betio as quickly as possible prevented him from landing elsewhere in the atoll prior to the principal assault, but a study of the operation indicated the soundness of the original idea. Although Holland Smith's headquarters had no choice but to veto such tactics at Tarawa, the corps headquarters now urged that every effort be made in future operations to land artillery on lightly defended islands within range of the major objective.[20]

At Betio in particular, great things had been expected of the preparatory naval bombardment. Representatives of V Amphibious Force, V Amphibious Corps, and the 2d Marine Division, had contributed their knowledge to the drafting of a naval gunfire plan. As a result of their combined efforts, a greater weight of metal was hurled into each square foot of Betio than had rained down on any previous amphibious objective, but the bombardment, awesome as it seemed, did not kill enough Japanese. The VAC commander noted, however, in his report on the operation that "without naval gunfire the landing could not have been made." [21]

GALVANIC taught naval gunfire officers that, when the requirements of a surprise attack did not preclude it, adequate preparation required days rather than hours of precision bombardment. To fire for two or three hours, much of the time shifting from one sector to another, was not enough. The sturdiest Japanese installations, many of them dug into the coral sands, could be penetrated only by a base-fused, armor-piercing shell plunging at a steep angle. Instead of the armor-piercing type, comparatively ineffective point-detonating, high-capacity ammunition was used at Betio. Although the training and rehearsals for GALVANIC had helped, especially in the accurate delivery of on-call fire, still more training was thought necessary. A simpler and more effective target designation system needed to be developed.[22] In the future, the officers of every supporting ship should know just what was expected of their guns. The ideal solution to the problems posed by the fortifications at Tarawa appeared to be the early arrival of the objective of thoroughly trained fire support units stocked with the proper ammunition, a deliberate bombardment designed to shatter possible strongpoints, additional shelling by destroyers and landing craft during the assault, and finally the accurate delivery of whatever fires the troops ashore might request.[23]

[20] *Ibid.*, p. 20.

[21] NGF SptRpt, n.d., p. 49, Encl A to *TF 53 AR.*

[22] The naval gunfire grid and target designation system used in the Gilberts proved to be "cumbersome and inaccurate" at times. In future Central Pacific operations, the Tactical Area Designation system, developed by a group of Army, Navy, and Marine intelligence and mapping officers at Pearl Harbor, was standard. The new system, based on a 1,000-yard grid broken down into 200-yard lettered squares was readily usable by all fire support agencies. Col Cecil W. Shuler comments on draft MS, dtd 12Dec62.

[23] *VAC AR*, pp. 16–17; Rpt of NavShoBomb, dtd 4Dec43, Encl H, and Important Recoms, dtd 4Dec43, Encl J, to *V PhibFor AR;* NGF Rpt, dtd 7Jan44, Encl 2 to SplStfRpts, n.d., Encl F to *VAC AR.*

Because the preliminary hammering of Betio had not achieved the spectacular results hoped for, the importance of naval gunfire to the success of the operation could easily be underestimated. The 3,000 tons of explosives that blasted the island caused many casualties, disrupted Japanese communications, and enabled the first three assault waves to gain the beaches without meeting organized resistance.[24] Once these Marines were ashore, the enemy rallied to inflict serious casualties on succeeding waves. This seemingly remarkable recovery was due in part to the lifting of naval gunfire where the LVTs were some distance from shore. Out of the entire task force, only the pair of destroyers in the lagoon could see the progress of the amphibian tractors and time their fires accordingly. The other fire support ships halted their bombardment according to a prearranged schedule that did not take into account the distance yet to be traveled by the assault waves. To prevent the premature lifting of preliminary fires, Admiral Hill's staff recommended that destroyers take up positions from whch they could track the incoming waves and thus keep firing as long as the friendly troops were not endangered.[25]

LOGISTICS

The original logistical plan for the Betio operation, though carefully drafted and based on previous amphibious experience, proved unrealistic. A beachhead was needed for the unloading of supplies and evacuation of casualties, but at Betio the Marines fought through the first day with their backs against the sea. Not until the long pier was pressed into service as a transfer point was there room to store or sort cargo. Even if space had been available ashore, landing craft could not have crossed the reef to reach the island. The carrying of supplies from the end of the pier, a point accessible to LCVPs and LCMs, to the front lines was best done by LVTs. Casualties were evacuated in the same vehicles that brought food, water, and ammunition to the embattled units. Wounded Marines were placed in the tractors and carried to the end of the pier where they were given emergency treatment and transferred to landing craft for the journey out to the transports. A naval officer in a minesweeper at the line of departure was given control over boat traffic, and the improvised system worked quite well. The Navy and Marine Corps officers responsible for beachhead logistics, when confronted with an unforeseen difficulty, had responded to the challenge.

The waters off the pier were usually dotted with landing craft waiting their turn to unload. This congestion was due to the conflicting needs of the Navy and Marine Corps as well as to the fact that supplies had to be funneled along the pier. The Marines wanted items landed in the order of their importance, but the Navy had to unload the transports as rapidly as possible regardless of the value of the cargo to the attack-

[24] General Shoup, noting the few casualties in the leading assault waves, commented: "I always attributed this to a destroyer on the flank which kept firing and kept the Japanese in their holes." *Shoup interview/comments.*

[25] TF 53 NGF SptRpt, n.d., p. 49, Encl A to ***TF 53 AR.***

ing troops.[26] The longer the transports remained at the objective, the greater the danger to these valuable ships from Japanese planes and submarines.

In their eagerness to aid the assault troops, the ship crews were often too cooperative. As the commander ashore on D-Day noted:

> In their enthusiasm, they did not load what I wanted, they just loaded. By the time they got a message from me requesting certain items the boats were already filled with other material. Tarawa made SOP [Standing Operating Procedure] that the Navy would not unload supplies except as requested by the landing force commander ashore. . . . Items that come ashore must be in accordance with the requirements of those ashore.[27]

Although pallets, a few of which were used at Tarawa, were recommended for adoption, Marine planners pointed out that not all bulk supplies could be lashed to wooden frames. During the early hours of the assault, or when the beachhead was narrow and under fire, supplies would have to be landed rapidly and in comparatively small quantities. Once the beachhead had been won, these platforms appeared to be one of the best means of speeding the movement of cargo from the transports, across the beaches, and to inland dumps.

At Betio, supplies piled up on the beaches, for enemy opposition and a shortage of manpower prevented the shore party from functioning as planned. A single pioneer battalion from the engineer regiment was not equal to the task, and the Marines from certain of the rifle companies, men who were supposed to be sorting and moving supplies, had joined in the fighting, leaving their work to be done by whomever the shore party officers could press into service. In the opinion of the corps G–4 section, the shore party machinery was in need of overhaul, for the pioneer unit was not large enough to do its work without reinforcement. Until the table of organization could be revised, Marines from service rather than combat units should be detailed to aid in the logistical effort.[28]

The evacuation of casualties became increasingly efficient as the beachhead was expanded. On the first day, the wounded were placed in rubber boats and towed by hand to the edge of the reef where they were transferred to landing craft for the journey out to the transport area. Later, LVTs became available to evacuate the wounded to boats waiting at the end of the pier. Although the supplies of morphine, sulpha drugs, splints, dressings, and plasma proved adequate, the collecting platoons did run short of litters. At Tarawa, the doctors and corpsmen did a heroic job. The major recommendation to result from the operation was that hospital ships be assigned to task forces charged with seizing heavily defended atolls.[29]

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[26] LtCol Robert D. Heinl, Jr., notes of an interview with BGen Merritt A. Edson, dtd 26May47.

[27] *Shoup interview/comments.*

[28] G–4 Rpt, dtd 4Jan44, pp. 3–4, Encl D, and Rpt of TQM, dtd 30Dec43, Encl 8 to SplStfRpts, n.d., pp. 13–14, Encl F to *VAC AR.*

[29] Rpt of MedObserver, FwdEch, GALVANIC, dtd 1Dec43, Encl 6 to SplStfRpts, n.d. Encl F to *VAC AR.*

THE ROLE OF AVIATION

Both defense against air attack and the close support of ground troops were entrusted to carrier planes flown by Navy pilots. One force of carriers stood ready to intercept Japanese planes striking from the Marshalls. Other carriers protected the Makin task force and attacked targets ashore, while a third group performed the same tasks at Tarawa. Except for unsuccessful night attacks on the retiring task forces, the enemy offered no serious challenge to American air defenses.

Air support at Tarawa, in the opinion of both Navy and Marine Corps officers, suffered many of the ills that had plagued naval gunfire support. The strikes made prior to the assault accomplished little, for not enough bombs were delivered, and those dropped were not heavy enough to damage Japanese emplacements. On D-Day, because of severe communication difficulties, there had been poor coordination of the aerial effort with the progress of the assault waves toward the beaches. The planes scheduled to attack at dawn arrived late, and those which were to support the landing were early, their pilots unaware of a postponement of H-Hour. Although the beaches were strafed just before H-Hour, the attack was not effective, for the Japanese, who had taken cover in air raid shelters and pillboxes, were immune to harm from machine gun bullets. Later in the operation, while supporting units ashore, the aviators had difficulty in locating their targets.

These shortcomings indicated, among other things, that effective air support was impossible unless the pilots and ground troops had trained as a team. Marine Colonel Peter P. Schrider, VAC air officer, was convinced that the division and its supporting carriers should train together for two or three days—the longest possible time at this stage of the war.[30] Holland Smith recommended that Marine aviators thoroughly schooled in the principles of direct air support should be assigned to escort carriers and included in any future amphibious operation undertaken by a Marine division. If this request could not be granted, he continued, the Navy airmen selected for the task should be carefully indoctrinated in the tactics they would employ.[31]

Air operations at Tarawa led to certain changes in doctrine, which would benefit soldiers and Marines storming other beaches. Unless dive bombers were attacking a particular target which might be obscured by smoke and dust, there was no need to suspend naval gunfire while the planes executed the strike. No danger of shells striking aircraft existed as long as the pilots pulled out of their dives at an altitude higher than the maximum ordinate of the naval guns. In addition, the practice of scheduling the final aerial attack in relation to H-Hour was judged to be unrealistic. Those planes assigned to maintain the neutralization of the beaches just prior to the assault should begin their attack when the landing craft were about 1,000 yards from the objective and continue the bombing and strafing until the assault waves were approximately 100 yards from shore.

[30] Rpt of AirO, dtd 6Jan44, Encl 1 to SplStfRpts, n.d., p. 2, Encl F to *VAC AR*.

[31] *VAC AR*, p. 16.

Finally, since machine gun fire had proved ineffective against beach defenses, some sort of gasoline bomb was needed, a device which would insure that the defenses remained silenced during the last few minutes of the ship-to-shore movement.[32]

Not only were important lessons learned from GALVANIC, but many necessary changes in amphibious tactics and techniques were made almost immediately. By the time of the Marshalls operation, for example, naval gunfire would improve in both accuracy and volume. On the other hand, the war had reached the Marianas before effective coordination was achieved between air strikes and naval gunfire. As one study of amphibious warfare has phrased it, "Tactically, Betio became the textbook for future amphibious landings and assaults." [33] In the flames of Tarawa was tempered the sword that would cut to the heart of the Japanese Pacific empire.

[32] Rpt of AirSpt, n.d., Encl A to *TF 53 AR*, pp. 58–61.

[33] Isely and Crowl, *Marines and Amphibious War*, p. 251.

PART III

The Marshalls: Quickening the Pace

FLINTLOCK Plans and Preparations [1]

GETTING ON WITH THE WAR

During the series of Allied conferences that resulted in approval for the Central Pacific campaign, the first proposed objective was the Marshalls. Because of the lack of information concerning these islands and the shortage of men and materiel, the initial blow struck the Gilberts instead. After the capture of Apamama, Makin, and Tarawa, planes based at these atolls gathered the needed intelligence. As this information was processed, American planners prepared and revised several concepts for an offensive against the Marshalls.

Like GALVANIC, the invasion of the Marshalls was the responsibility of the Commander in Chief, Pacific Ocean Areas, Admiral Nimitz. His principal subordinate planner was Admiral Spruance, Commander, Fifth Fleet and Central Pacific Force.[2] Admiral Turner, Commander, V Amphibious Force, and General Holland Smith, Commanding General, V Amphibious Corps, were the officers upon whom Spruance relied for advice throughout the planning of the operation.

EARLY PLANS FOR THE MARSHALLS

The Marshalls consist of two island chains, Ratak (Sunrise) in the east and Ralik (Sunset) in the west. Some 32 atolls of varying size form the Marshalls group. Those of the greatest military importance by late 1943 were Mille, Maloelap, and Wotje in the Ratak chain, and in the Ralik chain, Jaluit, Kwajalein, and Eniwetok. Except for

[1] Unless otherwise noted, the material in this chapter is derived from: US PacFleet OPlan 16–43, rev, dtd 14Dec43; CenPacFor OPlan Cen 1–44, dtd 6Jan44; USAFPOA, Participation in the Kwajalein and Eniwetok Ops, dtd 30Nov4 (OAB, NHD); TF 51 OPlan A6–43, dtd 3Jan44, hereafter *TF 51 OPlan A6–43;* VAC Rpt on FLINTLOCK, dtd 6Mar44, hereafter *VAC AR FLINTLOCK;* VAC AdminO 1–44, dtd 5Jan44; TF 52 AtO A1–44, dtd 14Jan44; TF 53 OpO A157–44, dtd 8Jan44; TF 53 Rpt of PhibOps for the Capture of Roi and Namur Islands, dtd 23Feb44, hereafter *TF 53 AR Roi-Namur;* 4th MarDiv OPlan 3–44 (rev), dtd 10Jan44, hereafter *4th MarDiv OPlan 3–44;* 4th MarDiv Final Rpt of FLINTLOCK Op, dtd 28Mar44, hereafter *4th MarDiv AR;* Crowl and Love, *The Gilberts and Marshalls;* LtCol Robert D. Heinl, Jr. and LtCol John A. Crown, *The Marshalls: Increasing the Tempo* (Washington: HistBr, G–3, HQMC, 1954), hereafter Heinl and Crown, *The Marshalls.* Unless otherwise noted, all documents cited are located in the Marshalls Area OpFile and Marshalls Cmt File, HistBr, HQMC.

[2] The Central Pacific Force was, at this stage of the war, also known as the Fifth Fleet. After the Marshalls operation, the latter title was habitually used.

Jaluit, which was a seaplane base,[3] all of these atolls were the sites of enemy airfields, and those in the Ralik chain were suitable as naval anchorages.[4] (See Map 7.)

In May 1943, at the Washington Conference, the CCS recommended to the Allied heads of state that an offensive be launched into the Marshalls. At this time, American planners believed that the services of two amphibious divisions and three months' time would be needed to neutralize or occupy all of the major atolls in the group and Wake Island, as well. The JCS considered the 1st, 2d, and 3d Marine Divisions available for immediate service and was certain that the 4th Marine Division, then training in the United States, would be ready for combat by the end of the year.[5]

After the Washington Conference had adjourned, the JCS directed Admiral Nimitz to submit a plan for operations against the Marshalls, and the admiral responded with a preliminary proposal,[6] necessarily vague because he lacked adequate information on the area. Within three weeks after receiving Nimitz' views, on 20 July the JCS directed him to plan for an attack against the Gilberts, a move to be made prior to the Marshalls offensive. Thus, early planning for the Marshalls coincided with preparations for GALVANIC.

By the end of August, Nimitz and his staff had carefully evaluated the proposed Marshalls operation. In their opinion, the United States was strong enough to undertake an offensive that would strengthen the security of Allied lines of communications, win bases for the American fleet, force the enemy to redeploy men and ships, and possibly result in a stinging defeat for the *Imperial Navy*. The attackers, however, would need to gain aerial superiority in the area and obtain accurate intelligence. A solution was required for the logistical problem of sustaining the fleet in extended operations some 2,000 miles west of Pearl Harbor. Finally, VAC would have to speed the training of the 35,000 amphibious troops required for the campaign. The proposed objectives were key islands in Kwajalein, Wotje, and Maloelap Atolls. Central Pacific amphibious forces were to seize all of these simultaneously while ships and aircraft neutralized Jaluit and Mille. Nimitz now requested specific authorization to seize control of the Marshalls, urging that "thus we get on with the war." [7]

At the Quebec Conference of August 1943, Allied leaders agreed that an effort against the Marshalls should follow the successful conquest of the Gilberts. Accordingly, the JCS on 1 September issued Nimitz a directive to undertake the operations he had recently proposed and, upon their completion, to seize or neutralize Wake Is-

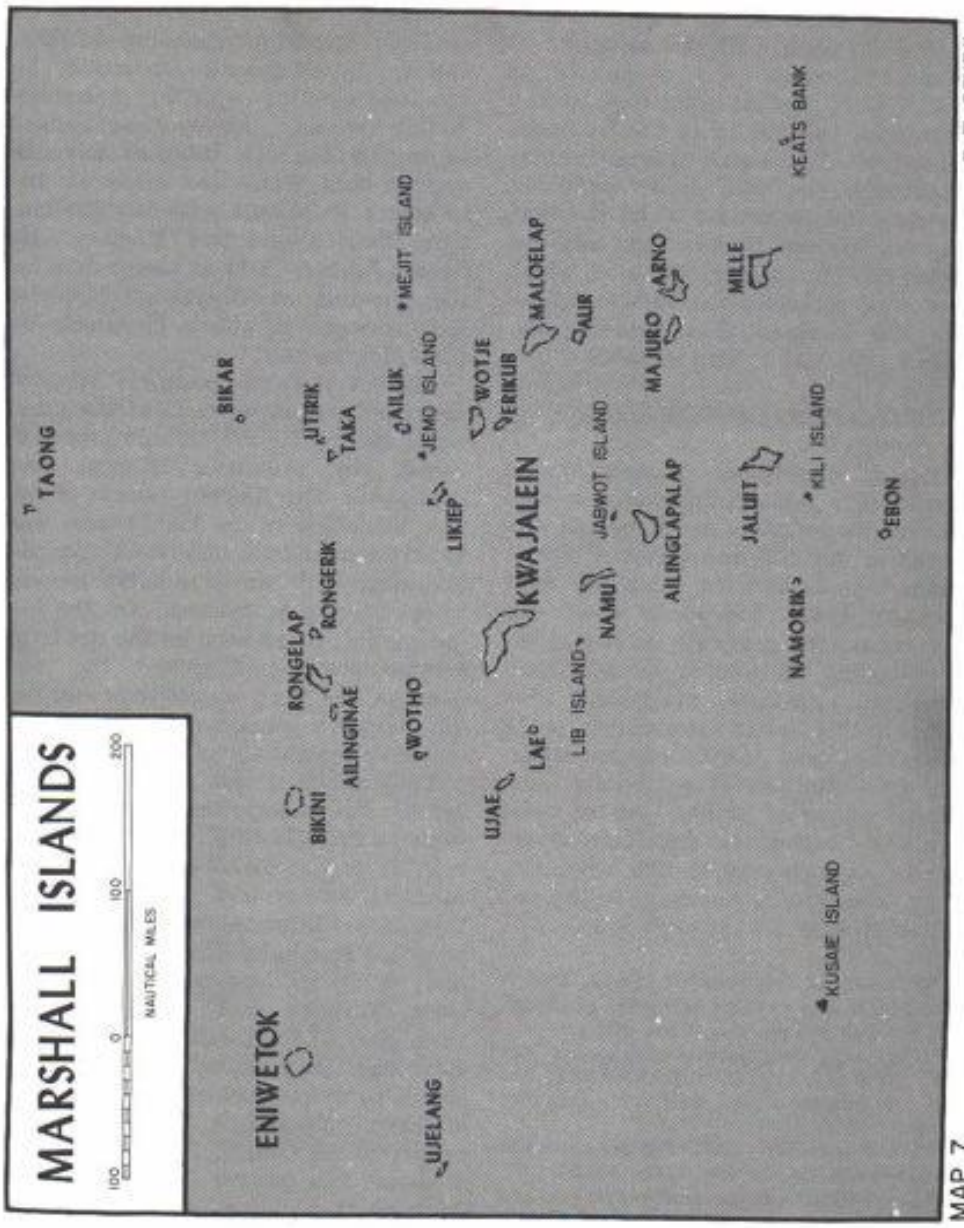
[3] RAdm Charles J. Moore cmts on draft MS, dtd 25Jan63, hereafter *Moore comments Marshalls.*

[4] VAC G–2 Study of the Theater of Ops; Marshall Islands, dtd 26Nov43, pp. 1–2.

[5] JCS 304, Ops in the Pac and Far East in 1943–1944, dtd 12May44 (OPD File, ABC Pac, WWII RecsDiv, FRC, Alexandria, Va.)

[6] CinCPac disp to CominCh, ser no. 0096, dtd 1Jul43, referred to in CinCPac disp to CominCh, ser no. 00151, dtd 20Aug43 (OPlan File, OAB, NHD).

[7] CinCPac disp to CominCh, ser no. 00151, dtd 20Aug43.



MAP 7

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land and Eniwetok, as well as Kusaie in the Carolines. By this time, the 2d Marine Division was committed to GALVANIC, the 1st to the New Britain operation, and the 3d to the Solomons offensive. As assault troops for the Marshalls, the JCS made available, pending the completion of its training, the 4th Marine Division and also selected the 7th Infantry Division, which had seen action in the Aleutians, and the 22d Marines, then guarding Samoa.[8] See Map I, Map Section.)

THE SHAPING OF FLINTLOCK [9]

On 22 September, Nimitz handed Spruance a preliminary study in support of the course of action he had proposed to the JCS and directed him to prepare to assault the Marshalls on 1 January 1944. The study itself was not considered complete, so the objectives might be altered as additional intelligence became available.[10] Because of this lack of information on the Marshalls area, Spruance began studying two alternatives to Nimitz' suggested course of action. All of these proposals called for simultaneous assaults, at sometime in the operation, upon three atolls, Maloelap, Wotje, and either Mille or Kwajalein.[11]

Although Nimitz on 12 October issued an operation plan for FLINTLOCK, the Marshalls Operation, he avoided selecting specific objectives. Within two days, however, he decided to employ the 7th Infantry Division against both Wotje and Maloelap and to attack Kwajalein with the 4th Marine Division and 22d Marines. He fixed 1 January 1944 as target date for the storming on Wotje and Maloelap and proposed to attack Kwajalein on the following day.

General Holland Smith's VAC staff now prepared an estimate of the situation based on the preliminary plans advanced by Admirals Nimitz and Spruance. The likeliest course of action, according to the VAC paper, was to strike simultaneously at Wotje and Maloelap, with the Kwajalein assault troops serving as reserve. On the following day, or as soon as the need for reinforcements had passed, the conquest of the third objective would begin. Smith's headquarters drew up a tentative operation plan for such a campaign, but at this point the attack against the Gilberts temporarily halted work on FLINTLOCK.

Prior to the GALVANIC operation, Admiral Turner had done little more than gather information concerning the proposed Marshalls offensive. Immediately following the conquest of the Gilberts, Turner's staff carefully examined the FLINTLOCK concept and concluded that Maloelap and Wotje should be secured before Kwajalein was attacked. Meanwhile, every planning agency in the Central Pacific Area was digesting the lessons of GALVANIC. Among other things, the theories regarding naval gunfire were revised.

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[8] JCS disp to CinCPac, dtd 1Sep43, Encl A to CinCPac disp to ComCenPac, ser no. 00190, dtd 22Sep43 (OPlan File, OAB, NHD).

[9] Originally, the Marshalls operation had been given the code name BANKRATE, but this title was abandoned early in the planning phase.

[10] CinCPac disp to ComCenPac ser no. 01900, dtd 22Sept43 (OPlan File, OAB, NHD).

[11] ComCenPac disp to Com VPhibFor and CG VAC ser no. 0053, dtd 10Oct43 (OPlan File, OAB, NHD).

As an Army officer assigned to General Smith's staff phrased it, "Instead of shooting at geography, the ships learned to shoot at definite targets." [12] After they had evaluated events in the Gilberts and assessed their own strength, Turner and Smith agreed that with the forces available Kwajalein could not be taken immediately after the landings on Wotje and Maloelap. Nimitz, acting on the same information available to his subordinates, also desired to alter FLINTLOCK, but in an entirely different manner.

On 7 December, CinCPac proposed an amphibious thrust at Kwajalein in the western Marshalls, coupled with the neutralization of the surrounding Japanese bases. In a series of conferences of senior commanders that followed, General Smith joined Admirals Turner and Spruance in objecting to this bold stroke.[13] Spruance, the most determined of the three, pointed out that immediately after the capture of Kwajalein units of his Central Pacific Force were scheduled to depart for the South Pacific. Once the fast carriers had steamed southward, he could no longer maintain the neutralization of Wotje, Maloelap, Mille, and Jaluit, and the enemy would be able to ferry planes to these Marshalls bases in order to attack the line of communications between the Gilberts and Kwajalein. Spruance also desired to ease the logistical strain by seizing an additional fleet anchorage in the Marshalls. To meet the last objective Nimitz included in FLINTLOCK the capture of a second atoll, one that was weakly defended. To cripple Japanese air power, he approved a more thorough pounding of the enemy bases that ringed Kwajalein.[14]

After informing the JCS of his change of plans, Nimitz on 14 December directed Spruance and his other subordinates to devise a plan for the assault on Roi and Kwajalein Islands in Kwajalein Atoll. The alternative objectives were Maloelap and Wotje, but whichever objectives were attacked, D-Day was fixed as 17 January 1944.[15] On 18 December, Nimitz informed King that he had set back D-Day to 31 January in view of the need for additional time for training and the need to make repairs to the carriers USS *Saratoga, Princeton,* and *Intrepid.*[16]

The assignment of another reinforced regiment, the 106th RCT of the 27th Infantry Division, to the FLINTLOCK force increased the number of men available for the expanded plan, but Turner continued to worry about the readiness of the various units. On 20 December, he requested that D-Day be postponed until 10 February to allow the two divisions to receive the proper equipment and to enable the 4th Marine Division to hold rehearsals.[17] No further delays were authorized, however, as the JCS had directed that

[12] Col Joseph C. Anderson, USA, ltr to CMC, dtd 23Jan53, hereafter *Anderson ltr.*

[13] FAdm Chester W. Nimitz ltr to CMC, dtd 27Feb53; Adm Richmond K. Turner ltr to CMC, dtd 27Feb53, hereafter *Turner ltr I.*

[14] *Turner ltr I;* Adm Raymond A. Spruance ltr to CMC, dtd 12Jan53.

[15] CinCPac disp to ComCenPac, ser no. 001689, dtd 14Dec43 (OPlan File, OAB, NHD).

[16] CinCPac disp to CominCh, ser no. 0236, dtd 18Dec43 (OPlan File, OAB, NHD).

[17] *Turner ltr I.*

the operation get under way "not later than 31 January 1944." [18]

Nimitz' headquarters on 20 December issued FLINTLOCK II, a joint staff study which incorporated the results of his recent conversations with Spruance. Carrier aircraft, land-based bombers, and surface ships were to blast the Japanese bases at Wotje and Maloelap. If necessary, the carriers would launch strikes to aid land-based planes in neutralizing Mille, Jaluit, Kusaie, and Eniwetok. The primary objectives remained Roi and Kwajalein Islands, but a secondary target, Majuro Atoll, was also included.

Admiral Spruance, in reviewing the reasons that he recommended Majuro as an objective, stated:

> Airfields on Majuro would enable us to help cover shipping moving in for the buildup of Kwajalein, and it would give us a fire protected anchorage at an early date for fleet use, if the capture of Kwajalein were a protracted operation. We had been fortunate during the Gilberts operation in being able to fuel fleet forces at sea without having them attacked by submarines. This we did by shifting the fueling areas daily. There were too many islands through the Marshalls for that area to lend itself to this procedure.[19]

With the final selection on 26 December of an assault force for Majuro, the FLINTLOCK plan was completed. For a time, General Smith had considered using most of Tactical Group I, the 22d Marines and the 106th Infantry, against Majuro. A staff officer of Tactical Group I, who was present during the discussions of this phase of the operation, recalled that "General Holland Smith paced the floor of the little planning room, cigar butt in mouth or hand —thinking out loud." Thanks to additional intelligence, the choice by this time lay between employing an entire regiment or a smaller force. After weighing the evidence, Smith announced he was "convinced that there can't be more than a squad or two on those islands today . . . let's use only one battalion for the Majuro job." [20] As a result, 2/106 was given the task of seizing Majuro, while the remainder of that regiment and the 22d Marines were designated the reserve for FLINTLOCK.

ORGANIZATION AND COMMAND

Task Force 50, commanded by Admiral Spruance, included all the forces assigned to the FLINTLOCK operation. Its major components were: Task Force 58, Rear Admiral Marc A. Mitscher's fast carriers and modern battleships; Task Force 57, Defense Forces and Land-Based Air, commanded by Rear Admiral John H. Hoover; Task Group 50.15, the Neutralization Group under Rear Admiral Ernest G. Small; and Admiral Turner's Task Force 51, the Joint Expeditionary Force. Admiral Spruance decided to accompany the expedition to the Marshalls, but he would not assume tactical command unless the *Imperial Japanese Navy* chose to contest the operation.

Admiral Turner, as commander of

[18] CominCh memo to CinCPac, ser no. 002415, dtd 4Nov44 (OPlan File, OAB, NHD).

[19] Adm Raymond A. Spruance ltr to ACofs, G–3, HQMC, dtd 10Sep62, hereafter *Spruance 62 ltr.*

[20] Col Wallace M. Greene, Jr., ltr to CMC, dtd 23Nov52, hereafter *Greene ltr I.*

the Joint Expeditionary Force, was primarily concerned with conveying the assault troops to the objective and getting them safely ashore. Within his command were: the Southern Attack Force, over which he retained personal command; the Northern Attack Force, entrusted to Rear Admiral Richard L. Conolly, a veteran of the Sicily landings; the Majuro Attack Group under Rear Admiral Hill, commander at Tarawa; Captain Harold B. Sallada's Headquarters, Supporting Aircraft, the agency through which Admirals Turner, Conolly, and Hill would direct aerial support of the landings; and General Smith's Expeditionary Troops. Among the 297 vessels assigned to Turner for FLINTLOCK were two new AGC command ships, 7 old battleships, 11 carriers of various classes, 12 cruisers, 75 destroyers and destroyer escorts, 46 transports, 27 cargo vessels, 5 LSDs, and 45 LSTs.[21]

As far as General Smith's status was concerned, Spruance's command structure for FLINTLOCK fit the situation and continued the primary responsibility of Admiral Turner for the success of the operation.[22] Until the amphibious phase was completed and the troops were ashore, Admiral Turner would, through the attack force commanders, exercise tactical control. After the 7th Infantry Division had landed on Kwajalein Island and the 4th Marine Division on Roi-Namur, General Smith was to assume the authority of corps commander and retain it until Admiral Spruance declared the capture and occupation of the objectives to be completed. The authority of the Marine general, however, was as limited as it had been in the Gilberts operation, for he could not make major changes in the tactical plan nor order unscheduled major landings without the approval of Admiral Turner. Included in Expeditionary Troops with the two assault divisions were the 106th Infantry, 22d Marines, the 1st and 15th Marine Defense Battalions, Marine Headquarters and Service Squadron 31, and several Army and Navy units which would help garrison and develop the captured atolls.

At Roi-Namur, objective of the Northern Attack Force, and at Kwajalein Island, where the Southern Attack Force would strike, Admirals Conolly and Turner were initially to command the assault forces through the appropriate landing force commander. As soon as the landing force commander knew that his troops had made a lodgement, he was to assume command ashore. The Majuro operation was an exception, for Admiral Hill, in command of the attack group, was in control from the time his ships arrived, throughout the fighting ashore, until Admiral Spruance proclaimed the atoll captured.

APPLYING THE LESSONS OF TARAWA

Everyone who took part in planning FLINTLOCK profited from the recent GALVANIC operation. To prevent a repetition of the sort of communications failures that had happened off

[21] CominCh, *Amphibious Operations: The Marshall Islands, January-February 1944*, dtd 20May44, p. 1:5, hereafter CominCh, *Marshall Islands.*

[22] *Moore comments Marshalls.*

Betio, the commander of each attack force was to sail in a ship especially designed to serve as a floating headquarters during an amphibious assault. The AGC *Rocky Mount* would carry Turner to Kwajalein, while Conolly would command the Roi-Namur assault from the AGC *Appalachian*. The *Cambria*, a transport equipped with additional communications equipment, was assigned to Admiral Hill for use at Majuro.

Prior to the attack on Tarawa, Marine planners had requested permission to land first on the islands near Betio to gain artillery positions from which to support the main assault. The loss of surprise and the consequent risk to valuable shipping were judged to outweigh the tactical benefits to be gained from these preparatory landings, and the 2d Marine Division was directed to strike directly at the principal objective. Such was not the case in FLINTLOCK. Plans called for both the 7th Infantry Division and the 4th Marine Division to occupy four lesser islands before launching their main attacks.

In addition to providing for artillery support of the major landings, planners sought to increase the effectiveness of naval gunfire. On D minus 1, while cruisers and destroyers of Task Force 51 bombarded Maloelap and Wotje, Admiral Mitscher's fast battleships were to hammer Roi-Namur and Kwajalein Islands. At dawn, elements of Task Force 58 would begin the task of destroying Japanese aircraft, making the flight strips temporarily useless, and shattering coastal defense guns. After pausing for an air strike, the ships were to resume firing, primarily against shore defenses. On D-Day, the landing forces would seize certain small islands adjacent to the main objectives. These operations were to be supported by naval gunfire and aerial bombardment in a manner similar to that planned for the assaults on Kwajalein Island and Roi-Namur. Plans also called for the American warships to maintain the neutralization of principal objectives while supporting the secondary landings elsewhere in the atoll.

About 25 minutes before H-Hour for the main landings, cruisers, destroyers, and LCI(G)s were to begin firing into the assault beaches, distributing high explosives throughout an area bounded by lines 100 yards seaward of the edge of the water, 200 yards inshore, and 300 yards beyond both flanks. Admiral Turner directed that cruisers continue their bombardment until the landing craft were 1,000 yards from shore, destroyers until the assault waves were 500 yards or less from the island, and LCI(G)s until the troops were even closer to their assigned beaches. Since the plan depended upon the progress of the assault rather than on a fixed schedule, the defenders would not be given the sort of respite gained by the Betio garrison.[23]

[23] The executive officer of the 106th Infantry recalled that, during a briefing of principal commanders and staff officers at Pearl Harbor in January, Admiral Turner said, in effect: "I say to you commanders of ships—your mission is to put the troops ashore and support their attack to the limit of your capabilities. We expect to lose some ships! If your mission demands it, risk *your* ship!" Col Joseph J. Farley, AUS, ltr to Head, HistBr, G–3, HQMC, dtd 200ct62.

The LCI(G)s which figured so prominently in Admiral Turner's plans were infantry landing craft converted into shallow-draft gunboats. These vessels mounted .50 caliber machine guns, 40mm and 20mm guns, as well as 4.5-inch rockets. Another means of neutralizing the beach defenses was provided by the armored amphibian, LVT(A)(1), which boasted a 37mm gun and five .30 caliber machine guns. One machine gun was located atop the turret, one was mounted coaxially with the cannon, a third was located in a ball and socket mount in the forepart of the hull, and the other two were placed on ring mounts to the rear of the turret.[24] Protection for the crew of six was provided by ¼ to ½ inch of armor plate and by small shields fixed to the exposed machine guns. Neither the LCI(G)s nor the LVT(A)(1)s were troop carriers.[25] A few LVT(2)s with troops embarked were equipped with multiple rocket launchers to assist in the last-minute pounding of Japanese shore defenses.

Admiral Turner and General Smith also attempted to increase the effectiveness of supporting aircraft. The strikes delivered to cover the approaching assault waves were scheduled according to the progress of the LVTs. When the amphibian tractors reached a specified distance from the beaches, the planes would begin their attacks, diving parallel to the course of the landing craft and at a steep angle to lessen the danger of accidentally hitting friendly troops. During these pre-assault aerial attacks, both naval guns and artillery were ordered to suspend firing.

Throughout the operation, carrier planes assigned to support ground troops were subject to control by both the Commander, Support Aircraft, and the airborne coordinator. The coordinator, whose plane remained on station during daylight hours, could initiate strikes against targets of opportunity, but the other officer, who received his information from the attack force commanders, was better able to arrange for attacks that involved close cooperation with artillery or naval gunfire. During GALVANIC, the airborne coordinator had performed the additional task of relaying information on the progress of the battle. This extra burden now fell to a ground officer, trained as an aerial observer, who would report from dawn to dusk on the location of friendly units, enemy strongpoints, and hostile activities.[26]

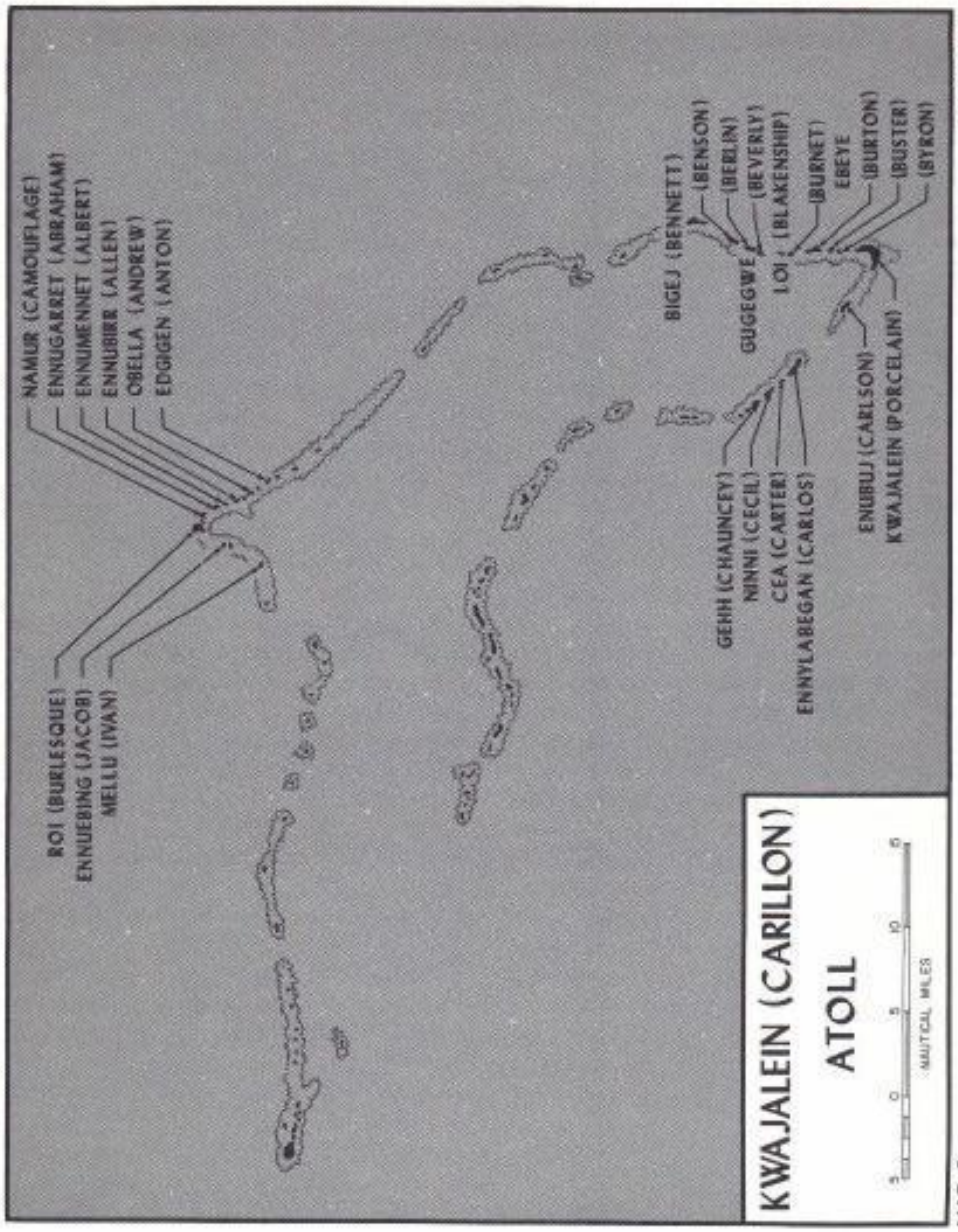
THE LANDING FORCE PLANS

The objectives finally selected for FLINTLOCK were Majuro and Kwajalein Atolls. Measuring about 24 miles from east to west and 5 miles from north to south, Majuro was located 220 nautical miles southeast of Kwajalein. Admiral Hill, in command of the Majuro force, decided to await the results of a final reconnaissance before choosing his course of action. Elements of the VAC Reconnaissance Company

[24] Col Louis A. Metzger ltr to Head, HistBr, G-3, HQMC, dtd 24Oct62, hereafter *Mtezger ltr.*

[25] ONI, ND, *Allied Landing Craft and Ships, Supplement No. 1 to ONI 226* (Washington, 1945), PhibVehsSec.

[26] CominCh, *Marshall Islands,* p. 2:7.


NAMUR (CAMOUFLAGE)
ENNUGARRET (ABRAHAM)
ENNUMENNET (ALBERT)
ENNUBIRR (ALLEN)
OBELLA (ANDREW)
EDGIGEN (ANTON)
ROI (BURLESQUE)
ENNUEBING (JACOB)
MELLU (IVAN)
BIGEJ (BENNETT)
(BENSON)
(BERLIN)
(BEVERLY)
(BLAKENSHIP)
(BURNET)
EBEYE
(BURTON)
(BUSTER)
(BYRON)
GEHH (CHAUNCEY)
NINNI (CECIL)
CEA (CARTER)
ENNYLABEGAN (CARLOS)
GUGEGWE
LOI
ENUBUJ (CARLSON)
KWAJALEIN (PORCELAIN)
KWAJALEIN (CARILLON)
ATOLL
NAUTICAL MILES
R.F. STIBIL

MAP 8

would land on Eroj and Calalin, the islands that guarded the entrance to Majuro lagoon, then scout the remaining islands. Once Japanese strength and dispositions had been determined, the landing force, 2/106, could make its assault.

Kwajalein Atoll, 540 miles northwest of Tarawa, is a triangular grouping of 93 small reef-encircled islands. The enclosed lagoon covers 655 square miles. Because of the vast size of the atoll, Admiral Turner had divided the Expeditionary Force into Northern and Southern Landing Forces. In the north, at the apex of the triangle, the recently activated 4th Marine Division, commanded by Major General Harry Schmidt, a veteran of the Nicaraguan campaign, was to seize Roi-Namur, twin islands joined by a causeway and a narrow strip of beach. The site of a Japanese airfield, Roi had been stripped of vegetation, but Namur, where the enemy had constructed numerous concrete buildings, was covered with palms, breadfruit trees, and brush. The code names chosen for the islands were CAMOUFLAGE for wooded Namur and for Roi, because so little of it was concealed, BURLESQUE.[27] (See Map 8.)

Crescent-shaped Kwajalein Island, objective of the Southern Landing Force, lay at the southeastern corner of the atoll, some 44 nautical miles from Roi-Namur. Major General Charles H. Corlett, who had led the Kiska landing force, would hurl his 7th Infantry Division against the largest island in the atoll. Here the enemy had constructed an airfield and over 100 large buildings. Although portions of the seaward coastline were heavily wooded, an extensive road net covered most of the island.

Throughout the planning of the Marshalls operation, General Schmidt and his staff were located at Camp Pendleton, California, some 2,200 miles from General Smith's headquarters at Pearl Harbor. The problem posed by this distance was solved by shuttling staff officers back and forth across the Pacific, but division planners continued to work under two disadvantages, a shortage of time and a lack of information. These twin difficulties stemmed from Admiral Nimitz' sudden decision to attack Kwajalein Atoll, bypassing Wotje and Maloelap. The division staff, however, proved adequate to the challenge, and by the end of December its basic plan had been approved by VAC. The timing of approval and issue was so tight, however, that some units sailed for Hawaii without seeing a copy.[28]

The Northern Landing Force plan consisted of three phases: the capture of four offshore islands, the seizure of Roi-Namur, and the securing of 11 small islands along the northeastern rim of Kwajalein Atoll. The first phase was entrusted to the IVAN Landing Group, the 25th Marines, Reinforced, commanded by Brigadier General James L. Underhill, the Assistant Division Commander. These troops were to seize ALBERT (Ennumennet), ALLEN (Ennubirr), JACOB (Ennuebing), and IVAN (Mellu) Islands as firing positions for

[27] BGen Homer L. Litzenberg ltr to CMC, dtd 31Jan53.

[28] *Metzger ltr.*

the 14th Marines, the division artillery regiment. The troops involved in this operation would land from LVTs provided by the 10th Amphibian Tractor Battalion. Company A, 11th Amphibian Tractor Battalion, which reinforced the 10th, along with Companies B and D, 1st Armored Amphibian Battalion, were chosen to spearhead the assaults. When this phase was completed, the LVT and artillery units would revert to division control, and the 25th Marines would become the division reserve for the next phase.

The 23d Marines received the assignment of storming Roi while the 24th Marines simultaneously attacked Namur. Both regiments were to land from the lagoon, the 23d Marines over Red Beaches 2 and 3 and the 24th Marines on Green 1 and 2. In the meantime, the 25th Marines could be called upon to capture ABRAHAM (Ennugarret) Island.[29] Detailed plans for the final phase were not issued at this time.

General Schmidt organized his assault waves to obtain the most devastating effect from his armored amphibians and LCI gunboats. The LCI(G)s were to lead the way until they were about 1,000 yards from the beach. Here they were to halt, fire their rockets, and continue to support the assault with their automatic weapons. Then the LVT(A)s would pass through the line of gunboats, open fire with 37mm cannon and machine guns, and continue their barrage "from most advantageous positions." [30] The troop carriers were directed to follow the armored vehicles, passing through the line of supporting amphibians if it was stopped short of the beach. The few LVT(2)s armed with rockets were to discharge these missiles as they drew abreast of the LCIs.

The 7th Infantry Division faced fewer difficulties in planning for the capture of Kwajalein Island. General Corlett was experienced in large-scale amphibious operations, and two of his regiments, the 17th and 32d Infantry, had fought at Attu, while the third, the 184th Infantry, had landed without opposition at Kiska. The Army division easily kept pace with the changes in the FLINTLOCK concept, for its headquarters was not far from General Smith's corps headquarters.

Like the Marine division in the north, General Corlett's Southern Landing Force faced an operation divided into several phases. The first of these was the capture of CARLSON (Enubuj), CARLOS (Ennylabegan), CECIL (Ninni), and CARTER (Gea) Islands by the 17th Infantry and its attached units. Once these objectives were secured and artillery emplaced on CARLSON, the 17th Infantry would revert to landing force reserve. Next, the 184th and 32d Infantry would land at the western end of Kwajalein Island and attack down the long axis of the island. The third phase, the seizing of BURTON (Ebeye), BURNET (unnamed), BLAKENSHIP (Loi), BUSTER (unnamed), and BYRON (unnamed), as well as the final oper-

[29] The attack on ABRAHAM eventually was scheduled to precede the Roi-Namur landings.

[30] 4th MarDiv LdgSked, dtd 10Jan44, Anx M to *4th MarDiv OPlan 3–44.*

ations, the landings on BEVERLY (South Gugegwe), BERLIN (North Gugegwe), BENSON (unnamed), and BENNETT (Bigej), were tentatively arranged, but the assault troops were not yet designated.[31] (See Map 8.)

The assault formations devised by Corlett's staff differed very little from those in the 4th Marine Division plan. Instead of preceding the first assault wave, the armored LVTs, amphibian tanks in Army terminology, were to take station on its flanks. Also, the Army plan called for the LVT(A)s to land regardless of Japanese opposition and support the advance from positions ashore. After the infantry had moved 100 yards inland, the amphibians might withdraw.[32]

INTELLIGENCE [33]

When Admiral Nimitz first began planning his Marshalls offensive, he had little information on the defenses of those islands. Because the enemy had held the area for almost a quarter-century, the Americans assumed that the atolls would be even more formidable than Tarawa. The first photographs of the probable objectives in the western Marshalls were not available to General Smith's staff until after GALVANIC was completed. The corps, however, managed to complete its preliminary area study on 26 November. Copies of this document were then sent to both assault divisions. Throughout these weeks of planning, the 7th Infantry Division G–2 was a frequent visitor to General Smith's headquarters, and this close liaison aided General Corlett in drafting his landing force plan. Unfortunately, close personal contact with the 4th Marine Division staff was impossible, but corps headquarters did exchange representatives with General Schmidt's command.

Carrier planes photographed Kwajalein Atoll during a raid on 4 December, but the pictures they made gave only limited coverage of this objective. Interviews with the pilots provided many missing details. Additional aerial photos of the atoll were taken during December and January. Reconnaissance planes took pictures of Majuro on 10 December. A final photographic mission was scheduled for Kwajalein atoll just two days before D-Day.

Submarines also contributed valuable intelligence on reefs, beaches, tides, and currents of Kwajalein. The *Seal* photographed the atoll in December, and the *Tarpon* carried out a similar mission the following month. Plans called for Underwater Demolition Teams, making their first appearance in combat, to finish the work begun by the undersea craft. These units were to scout the beaches of Kwajalein and Roi-Namur Islands on the night of 31 January-1 February. After obtaining up-to-date hydrographic data, the swimmers would return to destroy mines and antiboat obstacles.

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[31] 7th InfDiv FO No. 1, dtd 6Jan44, FO Phase II, dtd 6Jan44, FO Phase III, dtd 12Jan44, FO Phase IV, dtd 12Jan44, FO Phase V, dtd 12Jan44, and FO No. 5, dtd 4Feb44.

[32] LVT Anx, dtd 8Jan44, Anx 8 to 7th InfDiv FO No. 1, dtd 6Jan44, hereafter *7th InfDiv FO 1.*

[33] Additional sources for this section include: 4th MarDiv Est of Sit for Kwajalein Island, n.d.; IntelPlan, n.d., Anx 3 to *7th InfDiv FO 1.*

By mid-January, VAC intelligence officers had concluded that Kwajalein Atoll, headquarters of the *6th Base Force* and, temporarily, of the *Fourth Fleet*, was the cornerstone of the Marshalls fortress. Originally, most of the weapons emplaced on the larger islands of the atoll had been sited to protect the ocean beaches, but since the Tarawa operation, in which the Marines had attacked from the lagoon, the garrisons were strengthening and rearranging their defenses. Except for Kwajalein Island, where photographs indicated a cross-island line, the Japanese had concentrated their heaviest installations along the beaches. In general, the assault forces could expect a bitter fight at the beaches as the enemy attempted to thwart the landing. Once this outer perimeter was breached, the defenders would fight to the death from shell holes, ruined buildings, and other improvised positions.

The atoll garrison was believed to be composed of the *6th Base Force, 61st Naval Guard Force,* a portion of the *122d Infantry Regiment,* and a detachment of the *4th Civil Engineers.* Intelligence specialists believed that reinforcements, elements of the *52d Division,* were being transferred from the Carolines to various sites in the Marshalls. The enemy's total strength throughout Kwajalein Atoll was estimated to be 8,000–9,600 men, 6,150–7,100 of them combat troops.

General Smith's intelligence section predicted that the 7th Infantry Division would face 2,300–2,600 combat troops and 1,200–1,600 laborers. The enemy appeared to have built a defensive line across Kwajalein Island just east of the airfield, works designed to supplement the pillboxes, trenches, and gun emplacements that fringed the island. Photographs of Roi-Namur disclosed coastal perimeters that featured strongpoints at each corner of both islands. Very few weapons positions were discovered in the interior of either island. Namur, however, because of its many buildings and heavy undergrowth, offered the enemy an excellent chance to improvise a defense in depth. At both Kwajalein and Roi-Namur Islands, the installations along the ocean coasts were stronger than those facing the lagoon. No integrated defenses and only a small outpost detachment were observed on Majuro. (See Map V, Map Section.)

Corps also had the task of preparing and distributing the charts and maps used by the assault troops, naval gunfire teams, defense battalions, and other elements of FLINTLOCK Expeditionary Troops. Each division received 1,000 copies of charts (on a scale of one inch to one nautical mile) and of special terrain maps (1:20,000), and as many as 2,000 copies of another type of special terrain map (1:3,000). On the 1:3,000 maps, the particular island was divided into north, east, west, and south zones. Within each zone, known gun positions were numbered in clockwise order, each number prefixed by N, E, W, or S to indicate the proper zone. All crossroads and road junctions also were given numbers. Besides the customary grid system, these maps also showed the number and outline of all naval gunfire sectors. By compressing so much information onto a single sheet, the corps devised a map that suited a variety of units.

The information gathered, evaluated, and distributed by Admiral Nimitz' Joint Intelligence Center, General Smith's amphibious corps, and Admiral Turner's amphibious force was both accurate and timely. Sound intelligence enabled Nimitz to alter his plans and strike directly at Kwajalein. A knowledge of the enemy defenses made possible an accurate destructive bombardment and, together with hydrographic information, guided attack force and landing force commanders in the selection of assault beaches.

COMMUNICATIONS AND CONTROL [34]

Generals Corlett and Schmidt planned to destroy the enemy garrison in a series of carefully coordinated amphibious landings. For this reason, success depended to a great extent upon reliable communications and accurate timing. Although the introduction of command vessels had given attack force and landing force commanders a better means of controlling the different phases of the operation, not every communications problem had been solved.

The Marine assault troops assigned to FLINTLOCK used much of the same communications equipment that had proved inadequate in the Gilberts. The radios in the LVTs were not waterproofed, a fact which would greatly reduce communication effectiveness during the landing.[35] Both the TBX and TBY radios, neither type adequately waterproof, had to be used again in the Marshalls. Eventually, it was hoped, these sets could be replaced, the TBX by some new, lighter, and more reliable piece of equipment and the TBY by the portable SCR 300 and mobile SCR 610 used by the Army. Although intended for infantrymen rather than communications men, the hand-carried MU radios were too fragile to survive the rugged treatment given them in rifle units. The SCR 610 worked well, but it too was vulnerable to water damage. No waterproof bags were available for either spare radio batteries or telephone equipment.

In an attempt to insure unbroken communications, both the 4th Marine Division and the 7th Infantry Division were assigned Joint Assault Signal Companies (JASCOs). The Marine 1st JASCO was activated on 20 October 1943 at Camp Pendleton, California. The primary mission of this unit was to coordinate all supporting fires available to a Marine division during an amphibious operation. In order to carry out this function, the company was divided into Shore and Beach Party Communications Teams, Air Liaison Parties, and Shore Fire Control Parties. Early in December, the company joined VAC and was promptly attached to the 4th Marine Division. During training, the various teams were attached to the regiments and battalions of the division. Thus each assault battalion could become familiar with its shore and beach party, air liaison, and fire control teams. The Army 75th JASCO was attached in the same manner to the battalions of the 7th Infantry Division.

Communications equipment, how-

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[34] An additional source for this section is CominCh, *Marshall Islands*, pp. 6:1–6:4, 8:1–8:13.

[35] *Metzger ltr.*

ever, was but a means of control. If the landings were to succeed, they would have to be precisely organized and accurately timed. Unit commanders and control officers would have to be located where they could see what was happening and influence the conduct of the battle. For FLINTLOCK, the movement of assault troops from the transports to the beaches was carefully planned, and an adequate system of control was devised.

Instead of transferring from transports to landing craft and finally to LVTs, as had been done at Tarawa, the first waves of assault troops were to move from the transports directly to the LSTs that carried their assigned tractors.[36] The men would climb into the assault craft as the LSTs steamed to a position near the line of departure from which the ships would launch the amphibians. Next, the LVTs were to form waves, each one guided by a boat commander. At the line of departure, the commander of each wave reported to the control officer, a member of the V Amphibious Force staff.

Among other vessels, each control officer had at his disposal two LCCs (Landing Craft Control vessels), steel-hulled craft similar in appearance to motor torpedo boats. These carried radar and other navigational aids and were designated as flank guides for the leading assault waves. After the first four waves had crossed the reef, the LCCs, which were incapable of beaching and retracting, would take up station in a designated area 2,000 yards from shore. Since reserve units were to follow a transfer scheme similar to that planned for Tarawa, officers in the LCCs now had to supervise the shifting of men from landing craft to returning LVTs, as well as the formation of waves, and the dispatch of tractors to the beach.

A submarine chaser was assigned the control officer to enable him to move wherever he might be needed in the immediate vicinity of the line of departure. A representative of the landing force commander, the commander of the amphibian tractor battalion, a representative of the division supply officer, and a medical officer were embarked in the same craft. These men were given power to make decisions concerning the ship-to-shore movement, the landing of supplies, and the evacuation of wounded.

A second submarine chaser, this one stationed continuously at the line of departure, carried a representative of the transport group commander. This officer saw to it that the waves crossed the line either according to the prearranged schedule, as the control officer directed, or in the case of later waves as the regimental commander requested.

Off the beach his troops were assaulting, the regimental commander was to establish a temporary floating command post in a submarine chaser. While in this vessel, he would be able to contact by radio or visual signals the landing force commander, the various boat waves, and his battalions already ashore. As soon as the regimental commanders had established command posts ashore, the submarine chasers

[36] This method was to be used on D plus 1. The troops bound for the outlying island were scheduled to transfer at sea from LCVPs to LVTs.

could be used by the division headquarters.

LOGISTICS [37]

The geographical separation of the units assigned to FLINTLOCK affected logistical planning as well as tactical training. The 4th Marine Division trained at Camp Pendleton and prepared to sail from San Diego, the 7th Infantry Division and 106th Infantry trained on Oahu, and the 22d Marines made ready in Samoa prior to its movement to the Hawaiian Islands. In spite of the distance involved, General Smith later reported that in the field of logistics "no major difficulties were encountered." [38]

There were, however, several minor problems. The 22d Marines, for example, was unable to obtain from Marine sources either 2.36-inch rocket launchers and ammunition for them, or shaped demolitions charges, but a last-minute request to Army agencies was successful.[39] The 4th Marine Division had to revise its logistical plans in the midst of combat loading. Originally, Admiral Nimitz had prescribed that each division carry to the objective five units of fire for each of its weapons except antiaircraft guns. Officers of the 7th Infantry Division requested additional ammunition, but the admiral was reluctant to accept their recommendations. Not until 5 January did he approve 10 units of fire for 105mm howitzers and 8 for all other ground weapons. Nor was the 7th Infantry Division without its troubles, for the water containers provided by Army sources proved useless, and drums had to be obtained from the Navy.

A total of 42 days' rations was scheduled to be carried to Kwajalein Atoll. Each Marine or soldier was to land with 2 days' emergency rations. A 4-day supply of the same type of food was loaded in LSTs, and an additional 6-day amount was lashed to pallets for storage in the transports. The cargo ships assigned to the expedition carried enough dried, canned, and processed food to last the assault and garrison troops for 30 days. Five day's water, in 5-gallon cans and 55-gallon drums, was stowed in the LSTs and transports. Logistical plans also called for a 30-day quantity of maintenance, medical, and aviation supplies, as well as fuels and lubricants. The assault divisions and the garrison units also brought with them large amounts of barbed wire, sandbags, and light construction material.

Not all of this mountain of supplies and ammunition was combat loaded. Those items likely to be needed early in the operation were stowed in easily accessible places according to probable order of use. The remaining supplies were loaded deep within the cargo vessels in a manner calculated to conserve space. Some emergency supplies, including ammunition, water, and rations, were placed in LSTs.

Admiral Conolly divided his trans-

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[37] Additional sources for this section include: VAC Rpt of LogAspects of FLINTLOCK Op, dtd 23Mar44 hereafter *VAC Rpt of LogAspects;* LtCol S. L. A. Marshall, USA, "General and Miscellaneous Notes on Central Pacific: Supply." (Hist MS File, OCMH); CominCh, *Marshall Islands,* pp. 5:1–5:25, 6:13–6:16.

[38] *VAC Rpt of LogAspects.*

[39] *Greene ltr I.*

ports into three groups, one per infantry regiment, each with four transports and a cargo vessel. The 105mm howitzers of the 4th Marine Division were loaded into LCMs, landing craft that would be ferried to Roi-Namur in an LSD. The 75mm pack howitzers were placed in LVTs, and these tractors embarked in LSTs. A second LSD carried the LCMs in which the 15 Shermans of the division medium tank company were loaded. All 36 light tanks of the 4th Tank Battalion were stowed in the transports. Admiral Turner, who had retained responsibility for conducting the 7th Infantry Division to Kwajalein Island, organized his shipping in much the same way.

At Tarawa, the flow of supplies to the assault units had been slow and uncertain. Admiral Turner, in an effort to prevent a similar disruption, directed that beach party and shore party units sail in the same transports, draw up joint plans, and land rapidly. Skeleton beach parties and elements of shore parties were assigned to the fourth wave at each beach, and the remainder of the units were ordered to follow as quickly as possible.

The corps directed the 7th Infantry Division to form shore parties from its 50th Engineer Battalion and elements of the Kwajalein Island garrison force, while the 4th Marine Division was to rely upon men from the 20th Marines, its engineer regiment. One shore party, reinforced by medical, quartermaster, ordnance, and other special troops, was attached to each infantry battalion. The principal weakness in this phase of the supply plan was the use of men from reserve combat units to bring the shore parties to their authorized strength of approximately 400. Pontoon causeways, broken into sections and loaded in LSTs, were made available for use at Roi-Namur, Kwajalein, and CARLSON Islands, and at Majuro Atoll. The pontoons could be joined together to serve as piers for the unloading of heavy equipment.

Enough emergency supplies were loaded in LSTs to sustain the battle until the beaches were secured. At Roi-Namur, LVTs, the only amphibious cargo vehicles available to the Marine division, were to serve as the link between the LSTs and the battalions advancing inland. After the beaches had been secured, the transports would begin unloading.

The 7th Infantry Division had, in addition to its amphibian tractors, 100 DUKWs. These 2½-ton amphibian trucks were called upon to perform at Kwajalein Island much of the work expected of LVTs at Roi-Namur. Sixty DUKWs were assigned to land the division artillery, and 40 of them, also stowed in LSTs, were to give logistical support to infantry units by bringing ashore emergency supplies. Some of the critical items were loaded in the trucks before the parent LSTs sailed from Hawaii.

Admiral Turner's medical plan gave beachmasters authority over the evacuation of wounded. Theirs was the task of selecting the boats or amphibious vehicles that would carry away casualties. The medical section of the beach party was responsible for distributing the wounded among the cargo ships and transports. All of these vessels could receive the injured, but by D plus 3 all casualties

would be collected in specified vessels or transferred to the hospital ships scheduled to arrive on that day.

TRAINING FOR FLINTLOCK

The 4th Marine Division was able to undergo amphibious training in conjunction with Admiral Conolly's support ships and transports. A division exercise was held on 14–15 December, before either the admiral or General Schmidt were certain what course FLINTLOCK would follow. Another exercise took place at San Clemente Island off the California coast on 2–3 January 1944. This second landing was in effect a rehearsal, for all amphibious shipping joined many of Conolly's warships and carriers in the exercise.

The January landing also gave the division a chance to test its aerial observers. These were the ground officers who would be flown over Roi-Namur to report throughout the day on the progress of the battle. This aspect of the exercise was a complete success, but the work of the LVTs and LSTs was far less impressive.

On 5 December, the division's 4th Amphibian Tractor Battalion was broken up, and four/seventh's of its men were used to form the cadre of the 10th Amphibian Tractor Battalion, reinforced by Company A, 11th Amphibian Tractor Battalion.[40] The two units were then brought up to authorized strength by the addition of recruits and the transfer of trained crews from the 1st Armored Amphibian Battalion. By the time these changes had been made, less than a month remained in which to check the tractors, install armor plate, waterproof radios, train the new crews, lay plans for the landings, take part in the San Clemente rehearsal, load the vehicles into amphibious shipping, and make a final check to determine that the LVTs were fit for combat. These varied tasks had to be carried out simultaneously with the obtaining of supplies, processing of men, and the other duties routine to a unit preparing for action.

Unfortunately, many of the LSTs were manned by sailors as inexperienced as the Marine tractor crews. Admiral Conolly recalled:

> A number of these ships were rushed from their Ohio River building yards straight to the West Coast. They had inadequate basic training, little or no time to work with their embarked troops, and, in some cases, arrived in San Diego a matter of a few days before final departure for the Marshalls.[41]

Although the San Clemente exercise was staged to promote close cooperation between the LSTs and LVTs, the sailors and Marines gained little confidence in one another. Some of the ships refused to recover any tractors except those they had launched; as a result several tractors ran out of gas and were lost. There also was one collision between an LST and an LVT. "All this," one participant drily ob-

[40] LtCol Victor J. Croizat ltr to Drs. Jeter A. Isely and Philip A. Crowl, dtd 30Apr51, encl to Col Victor J. Croizat ltr to Head, HistBr, G–3, HQMC, dtd 13Sep62.

[41] VAdm Richard L. Conolly ltr to Dr. Jeter A. Isely, dtd 31Aug49, encl to Gen Harry Schmidt ltr to CMC, dtd 22Oct62.

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served, "was very poor for morale just before combat." [42]

The LSTs, loaded with amphibian tractors, sailed from San Diego on 6 January, to be followed a week later by the remainder of Admiral Conolly's attack force. At the time of its departure, the first convoy had not yet received copies of the final operations plans issued by Admirals Spruance, Turner, and Conolly. These documents did not arrive until 18 January, two days before the LSTs set sail for the Marshalls and two days prior to the arrival of the rest of Conolly's ships in Hawaiian waters. Since the two groups shaped different courses toward the objective, there was no opportunity for last-minute coordination.[43]

General Corlett, like General Schmidt, had carefully studied the lessons of Tarawa, so the 7th Infantry Division also was thoroughly trained for atoll warfare. The Army unit, however, had its share of problems in finding crews for its amphibian tractors. On 25 November, the division established a school to train members of the regimental antitank companies as LVT drivers and mechanics. The graduates of this course were selected to man the tractors that would carry the assault waves. The landings would be supported by the 708th Amphibian Tank Battalion which was attached to the division early in December. For FLINTLOCK the amphibian tractors were incorporated into the Army tank battalion and the resultant organization called the 708th Provisional Amphibian Tractor Battalion.[44]

By the time of its attachment to VAC for operational control, the 7th Infantry Division was well grounded in tank-infantry-engineer teamwork. The amphibious training of General Corlett's troops took place in December and January, with the most attention devoted to the comparatively inexperienced 184th Infantry. The division and the 22d Marines conducted their final rehearsals between 12 and 17 January. The troops landed at Maui's Maalaea Bay and made a simulated assault on Kahoolawe Island. The Majuro landing force, 2/106, made a practice landing on the shores of Oahu on 14 January.

PRELIMINARY OPERATIONS [45]

Aircraft of all services joined surface ships in a series of raids planned to batter Kwajalein Atoll, neutralize the Japanese bases that surrounded it, and gain information on the enemy's defenses. Mille, Jaluit, and Maloelap were the principal targets hit during November and December by Army and Navy planes of Admiral Hoover's command. During January, after the Gilberts fields had been completed, the heaviest tonnage fell on Kwajalein and Wotje. Land-based planes in De-

[42] LtCol Louis Metzger ltr to CMC, dtd 13Nov52.

[43] *Ibid.;* Col William R. Wendt ltr to CMC, dtd 19Feb53; LtCol Victor J. Croizat ltr to CMC, dtd 10Nov52, hereafter *Croizat ltr.*

[44] Marshall notes, *op. cit.*, pp. 41–42.

[45] Additional sources for this section include: CinCPac–CinCPOA WarDs, Nov43–Feb44 (CinCPac File, HistBr, HQMC); ComCenPac Rpt on FLINTLOCK Op, n.d.; CominCh, *Marshall Islands*, pp. 1:1–1:4; Craven and Cate, *Guadalcanal to Saipan;* Morison, *Aleutians, Gilberts, and Marshalls.*

cember and January dropped 326 tons of explosives on targets in Maloelap Atoll, 313 on Kwajalein, 256 on Jaluit, 415 on Mille, and 367 on Wotje. The Japanese retaliated by loosing a total of 193 tons of bombs on Makin, Tarawa, and Apamama. In the meantime, patrol bombers from Midway were active over Wake Island.

On 4 December, while Army bombers were raiding Nauru Island and Mille, carrier task groups commanded by Rear Admirals Charles A. Pownall and Alfred E. Montgomery launched 246 planes against Kwajalein and Wotje Atolls. The aviators sank 4 cargo ships, damaged 2 old light cruisers, shot down 19 enemy fighters, and destroyed many other planes on the ground. Japanese fliers, stung by this blow, caught the retiring carriers, and in a night torpedo attack damaged the USS *Lexington.*

Except for an attack by carrier aircraft and surface ships against Nauru on 8 December, land-based planes swung the cudgel until 29 January. On that day, carriers and fast battleships returned to the Marshalls, attacking the Japanese bases in an unexpected thrust from the westward.[46] Rear Admiral Samuel P. Ginder's carriers hit Maloelap, and Rear Admiral John W. Reeves sent his aircraft against Wotje, while carrier task groups commanded by Rear Admiral Frederick C. Sherman and Admiral Montgomery attacked Kwajalein and Roi-Namur Islands. Surface ships bombarded the targets in conjunction with the air raids.

On 30 January, Reeves took over the preparatory attack against Kwajalein Island, while Sherman began a 3-day effort against Eniwetok Atoll.[47] Ginder maintained the neutralization of Wotje, refueled, and on 3 February replaced Sherman. The task groups under Reeves and Montgomery continued to support operations at Kwajalein Atoll until 3 February.

As these preparations mounted in intensity, the Northern and Southern Attack Forces drew near to their objectives. On 30 January, fire support ships of these forces paused to hammer Wotje and Maloelap before continuing onward to Roi-Namur and Kwajalein. Meanwhile, the supporting escort carriers (CVEs) joined in the preparatory aerial bombardment of the objectives. On 31 January, the 4th Marine Division and 7th Infantry Division would begin operations against island fortresses believed to be stronger than Betio.

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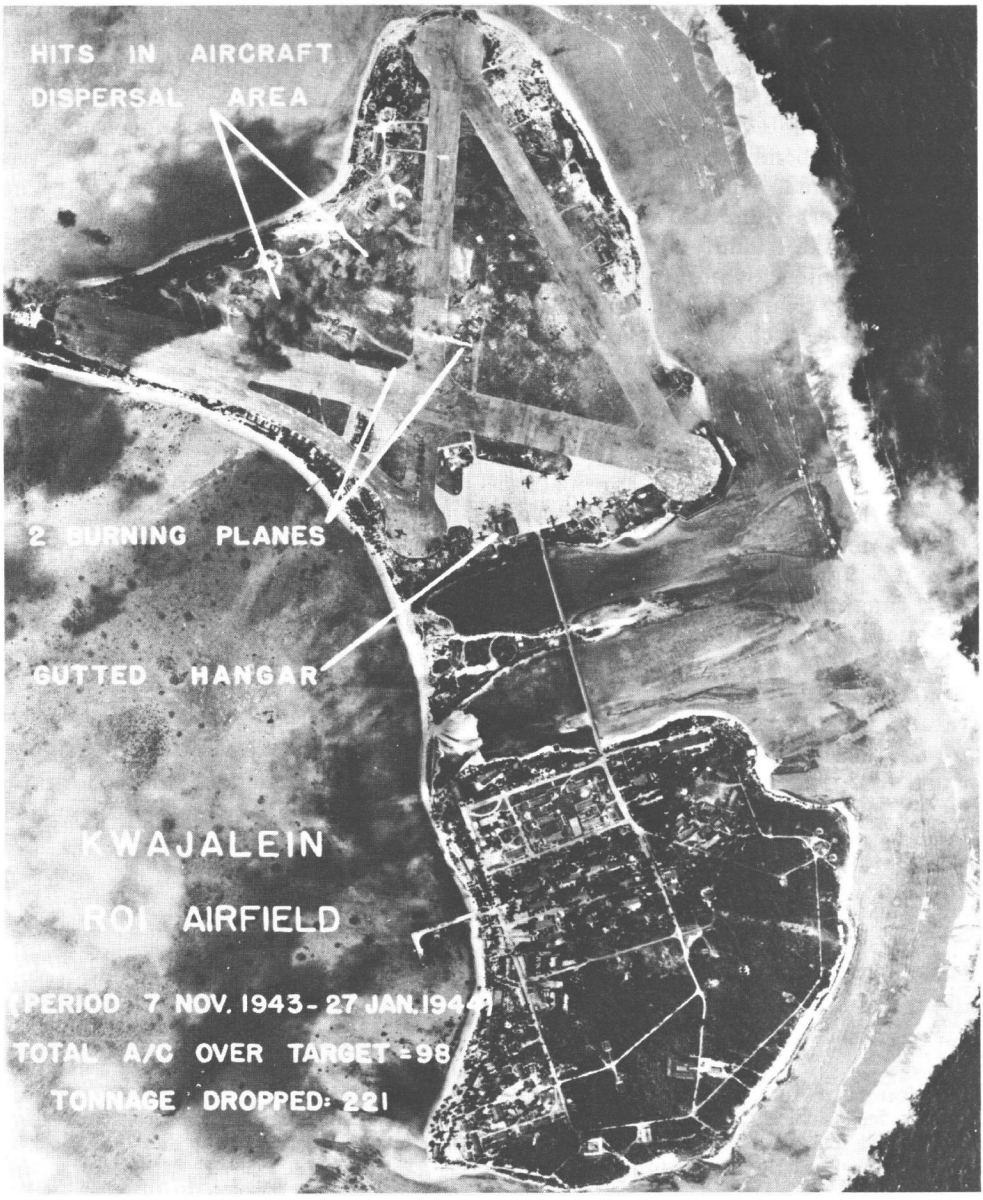
[46] A feature of Admiral Spruance's plan was that the fast battleships and carriers would form up at Funafuti in the Ellice Islands well to the southeast of the Marshalls. Battleships arriving from the Atlantic anchored there in time to join the carriers and launch the pre-invasion attack. Japanese searches were conducted to the eastward. *Moore comments Marshalls.*

[47] The original CinPac plan for air support had called for the fast carriers to make a 2-day strike and then withdraw for several days before returning to cover the landings. Admiral Spruance objected to this plan and substituted his own, which insured that Japanese air was "taken out on all positions except Eniwetok on the first day," and that the airfields on Wotje, Taroa [Maloelap], and Kwajalein were "kept immobilized thereafter by naval gunfire on the runways." He sent Sherman's group to hit Eniwetok and "keep the air pipeline . . . inoperative while we captured Kwajalein." *Spruance 62 ltr.*



ROI-NAMUR, *under bombing attack by Seventh Air Force planes, appears in an intelligence photo taken just prior to the pre-landing bombardment (USAF B50003AC)*

THE DEFENSES OF KWAJALEIN ATOLL [48]

Just as he had startled his subordinates by proposing an immediate attack on Kwajalein, Nimitz also surprised his adversaries. "There was divided opinion as to whether you would land at Jaluit or Mille," a Japanese naval officer confessed after the war. "Some thought you would land on Wotje, but there were few who thought you would go right to the heart of the Marshalls and take Kwajalein." [49]

Unlike their leaders, the defenders of Kwajalein Atoll, dazed by a succession of air raids, quickly became convinced that their atoll ranked high on Nimitz' list of objectives. "I welcome the New Year at my ready station beside the gun," commented a squad leader in the *61st Guard Force*. "This will be a year of decisive battles. I suppose the enemy, after taking Tarawa and Makin, will continue on to the Marshalls, but the Kwajalein defenses are very strong." [50]

Actually the Japanese high command had been slow to grasp the importance of the Marshalls. Prewar plans called principally for extensive mine-laying to deny the atolls to United States forces, but the effectiveness of medium bombers during the war against the Chinese had indicated that similar planes based on atolls could be a grave threat to shipping. A survey showed that the best sites for air bases were Wotje, Maloelap, Majuro, Mille, and Kwajalein. This last atoll, now the target of the American expeditionary force, was selected as administrative and communications center for the Marshalls area.

During 1941, the *6th Base Force* and the *24th Air Squadron* of the *Fourth Fleet* [51] were made responsible for defending the islands. The base force immediately set to work building gun emplacements and other structures at Kwajalein, Wotje, Maloelap, and Jaluit. By December 1941, the various projects were nearly complete, and the Japanese forces employed against the Gilberts and Wake Island were able to operate from the Marshalls.[52]

The number of troops assigned to the Marshalls grew throughout 1942, but the islands themselves began to diminish in strategic importance. Japanese planners came to regard the Marshalls, like the Gilberts, as outposts to protect the more important Carolines and Marianas. Although the *Imperial Navy* began, in the fall of 1943, to speed work on the defenses of the Carolines and Marianas, the Marshalls were not neglected. If attacked, the outlying atolls were to hold out long enough for naval forces and aircraft to arrive on

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[48] Additional sources for this section include: JICPOA Bul 48–44, Japanese Defs, Kwajalein Island, dtd 10Apr44; 4th MarDiv IntelRpt on FLINTLOCK Op, n.d.; USSBS, *Campaigns of the Pacific War* (Washington, 1946), hereafter USSBS, *Campaigns of the Pacific War*.

[49] USSBS (Pac), NavAnalysis Div, *Interrogations of Japanese Officials*, 2 vols (Washington, 1946), Interrogation Nav No. 34, Cdr Chikataka Nakajima, IJN, dtd 21Oct45, I, p. 144, hereafter *USSBS Interrogation* with relevant number and name.

[50] JICPOA Item No. 5913, Diary of Mimori.

[51] Chief, WarHistOff, DefAgency of Japan, ltr to Head, HistBr, G–3, HQMC, dtd 14Jan63.

[52] MilHistSec, Japanese RschDiv, HqAFFE, Japanese Monograph No. 173, *Inner South Seas Islands Area Naval Operations, Part II: Marshall Islands Operations (Dec44–Feb44)*.

the scene and destroy the American warships and transports. These were the same tactics that had failed in the Gilberts.[53]

Late in 1943, large numbers of Army troops began arriving in the Marshalls, and by the end of that year 13,721 men of the *1st South Seas Detachment, 1st Amphibious Brigade, 2d South Seas Detachment,* and *3d South Seas Detachment* were stationed on atolls in the group, on nearby Wake Island, and at Kusaie. Of these units, only the *1st South Seas Detachment* had seen combat. Its men had been incorporated into the *122d Infantry Regiment* and had fought for three months on Bataan Peninsula during the Japanese conquest of the Philippines.

The enemy also sent the *24th Air Flotilla* to the threatened area. This fresh unit served briefly under the *22d Air Flotilla* already in the area, but at the time of the first preparatory carrier strikes, the remaining veteran pilots of the *22d* were withdrawn and their mission of defending the Marshalls handed over to the newcomers.[54] As the Kwajalein operation drew nearer, progressively fewer Japanese planes were able to oppose the aerial attacks. By 31 January, American pilots had won mastery of the Marshalls skies.

At Roi-Namur, principal objective of the 4th Marine Division, was the headquarters of the *24th Air Flotilla,* commanded by Vice Admiral Michiyuki Yamada, who had charge of all aerial forces in the Marshalls. The enemy garrison was composed mainly of pilots, mechanics, and aviation support troops, 1,500-2,000 in all. Also, there were between 300 and 600 members of the *61st Guard Force,* and possibly more than 1,000 laborers, naval service troops, and stragglers.[55] Only the men of the naval guard force were fully trained for ground combat.

In preparing the defenses of Roi-Namur, the enemy concentrated his weapons to cover probable landing areas, an arrangement in keeping with his goal of destroying the Americans in the water and on the beaches. The defenders, however, failed to take full advantage of the promontories on the lagoon shores of both Roi and Namur, sites from which deadly flanking fire might have been placed on the incoming landing craft. Both beach and antitank obstacles were comparatively few in number, although a series of antitank ditches and trenches extended across the lagoon side of Namur Island.[56] Ten pillboxes mounting 7.7mm machine guns, a 37mm rapid-fire gun, a pair of 13mm machine guns, and two 20mm cannon were scattered along the beaches over which General Schmidt intended to land. Most of these positions were connected by trenches. Although two pair of twin-mounted 127mm guns were emplaced on Namur, these weapons covered the

[53] Hattori, *Complete History,* v. 3, pp. 50–51; Sako Tanemura, *Confidential Diary of the Imperial General Staff Headquarters,* tr by 165th MIS Co, 1952, hereafter Tanemura, *Confidential Diary.*

[54] *USSBS Interrogation* Nav No. 30, Cdr Goro Matsuura, IJN, dtd 20Oct45, I, p. 132.

[55] The 4th Marine Division counted 3,472 enemy dead on the various islands in the northern part of the atoll. Since other bodies lay sealed in bunkers, it was impossible to reconstruct the exact strength of the various components of the Roi-Namur garrison.

[56] *Metzger ltr.*

ocean approaches to the island. The enemy had no integrated defenses within the coastal perimeter, but he could fight, on Namur at least, from a myriad of concrete shelters and storage buildings. (See Map V, Map Section.)

Kwajalein Island was the headquarters of Rear Admiral Monzo Akiyama's *6th Base Force*,[57] and its garrison was stronger in ground combat troops than that at Roi-Namur. About 1,000 soldiers, most of them from the Army *1st Amphibious Brigade*, fewer than 500 men of the Navy *61st Guard Force*, and a portion of a 250-man detachment from the *4th Special Naval Landing Force* were the most effective elements of the defense force. A few members of the base force headquarters and a thousand or more laborers also were available. In the southern part of the atoll, the enemy had some 5,000 men, fewer than 2,000 of them skilled combat troops.

The defenses on Kwajalein Island, like those on Roi-Namur, lacked depth and were strongest along the ocean coast. The western end of Kwajalein Island, where General Corlett planned to land, was guarded by 4 twin-mounted 127-mm guns (weapons emplaced to protect the northwest corner of the island), 10 pillboxes, 9 machine gun emplacements, and a few yards of trenches. The cross-island defenses noted in aerial photographs actually consisted of an antitank ditch, a trench system, and seven machine gun positions. The trenches, though, began near a trio of 80mm guns that were aimed seaward. Although he had few prepared positions in the interior of the island, there were hundreds of buildings from which the enemy might harry the attackers.

Both of the principal objectives were weak in comparison to Betio Island. Few obstacles protected the assault beaches, and work on many installations was not yet finished. In spite of these deficiencies, the soldiers and Marines could expect bitter fighting. "When the last moment comes," vowed one of the atoll's defenders, "I shall die bravely and honorably." [58] In happy contrast to Kwajalein Atoll was Majuro, where a Navy warrant officer and a few civilians had been left behind when the Japanese garrison was withdrawn.[59]

[57] For a brief time just prior to the American attack, Vice Admiral Mashashi Kobayashi had maintained on the island temporary headquarters for his *Fourth Fleet*.

[58] JICPOA Item No. 5913, *op. cit.*

[59] Aerial photographs of Majuro showed a fair-sized barracks area. Since the atoll seemed to be abandoned, Admiral Spruance's chief of staff suggested to Admiral Hill that these buildings not be bombarded. They were found in excellent shape and were useful to U. S. Forces. *Moore comments Marshalls.*

D-Day in the Marshalls[1]

The final version of the FLINTLOCK plan called for three distinct operations, each of which required several amphibious landings. The capture of Majuro Atoll, correctly judged to be the simplest of the three, was entrusted to the VAC Reconnaissance Company and 2/106. Each of the others was believed to require an entire division.

In the northern part of Kwajalein Atoll, the 4th Marine Division had the mission of seizing on 31 January IVAN (Mellu), JACOB (Ennuebing), ALBERT (Ennumennet), ALLEN (Ennubir), and ABRAHAM (Ennugarret). On the following day, D plus 1, this division was scheduled to storm Roi-Namur. In the southern sector, the 7th Infantry Division was to attack CARTER (Gea), CECIL (Ninni), CARLSON (Ennubuj), and CARLOS (Ennylabegan) on D-Day, then assault the beaches of Kwajalein Island on 1 February. Once these principal objectives were secured, the assault divisions were to overcome enemy resistance throughout the remainder of the atoll. (See Map 8.)

MAJURO: BLOODLESS VICTORY[2]

An irregularly shaped collection of islands and partially submerged reefs, Majuro lies approximately 265 nautical miles southeast of Kwajalein Atoll. Majuro lagoon, 24 miles long by 5 miles wide, was a tempting prize, and Dalap Island, at the easternmost point of the atoll, seemed suitable for an airfield. Other large islands thought useful for military installations were Majuro, to the south, as well as Uliga and Darrit, just north of Dalap. Calalin and Eroj, midway along the northern rim of the atoll, were important, for they guarded the two entrances to the lagoon. (See Map 7.)

In planning the operation, Hill faced the problem of employing deep draft ships in an area for which he had only a small segment of a hydrographic chart. He ordered high angle vertical

[1] Unless otherwise noted, the material in this chapter is derived from: TF 51 Rpt of FLINTLOCK and CATCHPOLE Ops, dtd 25Feb44, hereafter *TF 51 AR; TF 53 AR Roi-Namur; 4th MarDiv AR* (which includes rpts of IVAN LdgGru, 23d, 24th, 25th, 14th, and 20th Mar); 4th MarDiv Jnl, 13Jan–2eb44, hereafter *4th MarDiv Jnl;* 10th AmTracBn Rpt on FLINTLOCK, dtd 12Apr44, hereafter *10th AmTracBn Rpt;* 1/25 Rpt of Activities, D–Day and D plus 1, dtd 16Feb44; 2/25 Rpt of Activities, dtd 20Feb44; 3/25 Hist, 11Jan44–8Mar44, n.d.; DesRon 1 AR, dtd 9Feb44; CominCh, *Marshall Islands;* Crowl and Love, *Gilberts and Marshalls;* Morison, *Aleutians, Gilberts, and Marshalls;* Heinl and Crown, *The Marshalls.*

[2] Additional sources for this section include: TG 51.2 Majuro AR, dtd 15Feb44; VAC ReconCo WarD, Majuro, dtd 16Mar44, Encl I to *VAC AR FLINTLOCK.*

aerial photographs made of the lagoon for use by a Coast and Geodetic Survey team attached to his staff and with its help prepared a detailed chart. With this as a navigation guide, he was able to move into the lagoon, once the operation was underway, without difficulty.[3]

To overwhelm what was known to be a small garrison, Admiral Hill could employ 2/106, commanded by Lieutenant Colonel Frederick B. Sheldon, USA, and carried in the task group command ship, *Cambria*. This battalion had been reinforced by the VAC Reconnaissance Company led by Captain James L. Jones. To transport, protect, and defend his landing force, Hill had a heavy cruiser, four destroyers, two escort carriers, two destroyer transports, three minesweepers, and an LST.

One of the transports, the converted destroyer (APD) USS *Kane* left the convoy on 30 January to steam directly to the objective. That night, the ship reached the twin entrances to Majuro lagoon and by 2300 had landed a small detachment from the reconnaissance company. This group found both Eroj and Calalin to be unoccupied. A native told the Marines that 300–400 Japanese were located on Darrit, and this information was relayed to Admiral Hill at 0608. Other inhabitants of Calalin, however, had noted the withdrawal of the enemy troops. They reported that a lone warrant officer and a few civilians were the only Japanese in the atoll.

The *Kane* next landed the remainder of Jones' company on Dalap. Patrols fanned out over the island but discovered no Japanese. At Uliga, an English-speaking native confirmed the earlier reports that the enemy garrison had been evacuated.

At this time, the reconnaissance company lost radio contact with the task force. Unaware that the enemy had abandoned Darrit, Admiral Hill ordered the USS *Portland* to shell the island at 0634. Within 20 minutes, contact was regained, the bombardment was stopped, and a scheduled air strike was cancelled. The troops then occupied Darrit, raising the American flag for the first time over prewar Japanese territory at 0955.[4]

On the night of 31 January, a platoon from Jones' company landed on Majuro Island and captured the naval warrant officer who was responsible for Japanese property left behind on the atoll. The civilians who assisted him in caring for the equipment escaped into the jungle. Thus ended the only action at Majuro Atoll.

About midnight on 1 February, a detachment of VAC Reconnaissance Company, investigating reports of a downed American plane, landed from the *Kane* on Arno Atoll, about 10 miles east of Majuro. The Marines found no Japanese, and natives told them that the plane crew had been removed to Maloelap. Reembarking their APD, the men returned to Majuro on the 2d.

NORTHERN KWAJALEIN: IVAN AND JACOB

During darkness on the morning of 31 January, ships of the Northern Attack Force steamed into position in the

[3] *Hill comments/interview Marshalls.*

[4] *Ibid.*

vicinity of Roi-Namur. The schedule for D-Day called first for the capture of IVAN and JACOB, two islands southwest of Roi-Namur, between which lay a deep-water passage into Kwajalein lagoon. Elements of Lieutenant Colonel Clarence J. O'Donnell's 1/25 were to land at 0900 on both objectives. For the day's action, the battalion had been reinforced with Company D, 4th Tank Battalion, the division's scout company. (See Map 8.)

Because they commanded the lagoon entrance, both IVAN and JACOB had to be attacked from the seaward side. Company B of O'Donnell's battalion was to assault Beach Blue 1 on JACOB, while Company C and the attached scout company struck Blue 2 on neighboring IVAN. Once these landings had been made, the ships supporting the IVAN force, led by mine sweepers, could enter the lagoon to carry out the remaining parts of the D-Day plan. In the meantime, artillery batteries from the 14th Marines would begin arriving on the Blue Beaches to move into positions from which to assist the next day's operation.

Unlike the men who were to make the main landings, the Marines of General Underhill's IVAN group had to transfer at sea from LCVPs to LVTs. O'Donnell's troops entered the landing craft at 0530 and began their journey to the transfer area where they would meet the LVTs of Company B, 10th Amphibian Tractor Battalion. The wind was brisk and the sea rough as the LCVPs plowed toward their rendezvous. By the time the boats reached the tractors, many of the assault troops were soaked by the spray.

The preparatory bombardment of northern Kwajalein Atoll got underway at 0651. In addition to shelling IVAN and JACOB, supporting warships pounded Roi-Namur and stood ready to blast ABRAHAM if necessary. Naval gunfire was lifted at 0715 to permit an 8-minute strike by carrier planes and then resumed.

During the battering of the northern islands, the remainder of Colonel Samuel C. Cumming's 25th Marines was preparing for action later in the day. Both 2/25, under Lieutenant Colonel Lewis C. Hudson, and 3/25, commanded by Lieutenant Colonel Justice M. Chambers, were scheduled to load into LCVPs. Hudson's battalion was to transfer to the LVTs of Company C, 10th Amphibian Tractor Battalion, and seize ALLEN. Tractors released by the IVAN and JACOB forces were to land Chambers' men on ALBERT. After overrunning ALBERT, 3/25 was to prepare to attack on order across the shallow strait separating that island from ABRAHAM.

At 0800, while 1/25 was forming to assault IVAN and JACOB, Admiral Conolly confirmed 0900 as H-Hour. He selected 1130 as A-Hour, the time of the landings on ALBERT and ALLEN, and designated 1600 as B-Hour, when Chambers' battalion would storm ABRAHAM. Adhering to this timetable, the supporting warships ceased firing at 0825 to permit a second aerial attack. At this point, the effects of choppy seas and makeshift rehearsals made themselves felt, and it soon became obvious to Admiral Conolly that the assault waves could not meet his deadline.

The postponement of H-Hour was

partially the fault of the elements. Swells, aided by a 14-knot wind, complicated the transfer of troops, cut the speed of the LVTs almost in half, and raised spray that drowned the radios carried by the tractors. Yet many of the misfortunes that hounded Company B, 10th Amphibian Tractor Battalion, could be traced to the improvised rehearsals that had been held off the California coast.

"A rehearsal with complete plans and orders," the company commander later suggested, "would be of much value prior to D-Day landing." [5] Unfortunately the tractor battalion had received the revised plans long after its final exercise.

For these reasons, the transfer area soon became the site of an amphibious traffic jam. Tractors were slow in leaving the LSTs, landing craft had difficulty in finding the proper amphibians, and rumored changes of plan could not be verified because of the drenched radios.[6] Order, however, eventually prevailed, and the troop-laden LVTs were directed into formation.

Conolly, alerted by a destroyer astride the line of departure that the troop carriers were late, at 0903 issued orders delaying H-Hour until 0930. Within a few minutes of this change, the LCI gunboats and LVT(A)s that were to spearhead the assault crossed the line of departure. Now the aerial observers and air coordinator undertook the task of timing the final strikes according to the progress of the approaching tractors.

"Will hold up attack until boats are in proper position," radioed the air coordinator at 0854 after he had noted that the approaching landing craft were 5,000–6,000 yards from IVAN and JACOB.[7] At 0917, when the LVT(A)s and LCI gunboats were about 3,000 yards from shore, the coordinator ordered the waiting planes to begin their attack. The bombing attacks pinned down the defenders of both objectives until the LCIs were in position to launch their rockets. No strikes were made against the beaches while the rocket bombardment was being delivered, but when the LCIs had accomplished this task, the coordinator directed fighter planes to strafe the islands. Air observers kept close watch over the approaching troops and carefully reported the distance that remained to be covered. Since the force bound for JACOB made better speed, the final strafing of that island was halted shortly after 0940, while the final strike against IVAN continued past 1000.

As the bombing attacks were beginning, a 127mm battery on Roi rashly opened fire on warships supporting the preliminary landings. A cruiser silenced the enemy position but did not destroy the twin-mounted guns. For the time being, though, this threat was removed.

[5] Rpt of CO, Co B, 10th AmTracBn, dtd 17Mar44, Encl A to *10th AmTracBn Rpt.*

[6] The transport division commander noted that the "short delay in How hour was the result of inability of certain LCVPs loaded with troops to locate the LVTs into which they were to transfer. Indications are that all LSTs were not in designated areas and that some LVTs wandered away from the launching LST." ComTransDiv 26 AR, ser no. 0013, dtd 18Feb44 (OAB, NHD).

[7] *4th MarDiv Jnl*, msg dtd 0854, 31Jan44.

105MM AMMUNITION *is unloaded from landing craft at Mellu Island for the bombardment of Roi-Namur. (USA SC324729)*

24TH MARINES *assault troops on the beach at Namur await the word to move inland. (USMC 70450)*

"Good luck to the first Marines to land on Japanese soil," radioed Colonel Cumming to the elements of his regiment that were approaching JACOB and IVAN.[8] The gunboats halted, the armored LVTs passed through the line of LCIs to take up positions just off the beach at JACOB, and at 0952 the tractors carrying Company B, 1/25, rumbled onto the island. Off neighboring IVAN, Company C and the attached scouts were encountering serious difficulties.

A rugged segment of reef, brisk winds, and adverse seas had slowed to a crawl the speed of the LVTs carrying Company C. Continuous strafing attacks prevented the defenders of IVAN from taking advantage of the delay, but the persistent battery on Roi resumed firing until silenced a second time. Finally, Colonel Cumming was able to hasten the landing by diverting the tractors carrying the scout company around the island and onto its lagoon beaches.[9]

While Company C was struggling in vain to reach the ocean shore, the scouts at 0955 landed on southeastern beaches of IVAN and set up a skirmish line facing toward the north. A few minutes later, a regimental staff officer reached Company C and directed it to land in the wake of the scout company. At 1015, the tardy company landed to support the scouts.[10]

The fighting on JACOB and IVAN was brief and not especially violent. JACOB was overrun within a quarter of an hour. After the mop up that followed, a total of 17 enemy dead, 8 of them apparent suicides, were found on the island. Two prisoners were taken. IVAN yielded 13 dead and 3 prisoners.[11]

As soon as the two islands were secured, LVTs from Company A, 10th Amphibian Tractor Battalion began landing elements of the 14th Marines. The 75mm howitzers of 3/14 were carried to JACOB in the tractors and a few LCVPs. Equipped with 105mm howitzers, weapons too bulky to be carried by LVTs, 4/14 landed from LCMs on IVAN. IVAN was selected for the command post of the Colonel Louis G. DeHaven's artillery regiment, but sites on JACOB were chosen by the commanding officers of both the 25th Marines and 1/25.

ALLEN, ALBERT, AND ABRAHAM

Once 1/25 had seized IVAN and JACOB, the scene of action shifted across the lagoon to ALLEN, ALBERT, and ABRAHAM, three islands that ascend the northeastern rim of the atoll toward Roi-Namur. This trio of islands was needed to serve as artillery positions and to secure the flank of the boat waves that would assault the main objective. General Underhill's IVAN Landing Group, the conqueror of IVAN and JACOB, had also been assigned to make these later landings. When landing on ALLEN and ALBERT, the assault forces were to strike from the lagoon, but 3/25 was to approach

[8] *4th MarDiv Jnl*, msg dtd 0920, 31Jan44. Actually, the VAC Reconnaissance Company had already begun the conquest of Majuro.

[9] MajGen Samuel C. Cumming interview with HistBr, G-3, HQMC, dtd 24Nov52.

[10] *Ibid.*

[11] *Ibid.;* LtCol Arthur E. Buck, Jr., ltr to CMC, dtd 21Jan53; LtCol Michael J. Davidowitch ltr to CMC, dtd 26Nov52.

ABRAHAM by moving parallel to and just inside the reef.

A-Hour, the time of the landings on ALLEN and ALBERT, had been tentatively set by Admiral Conolly for 1130. The manner of execution was similar to that used during the earlier D-Day landings. One destroyer was assigned to support each of the two assault battalions, while rockets from LCIs, automatic weapons from LVT-(A)s, and the strafing by aircraft insured the neutralization of the beaches.

The Marines of 2/25, chosen as reserve for the IVAN-JACOB phase of the operation, had loaded into LCVPs at 0530 and within two hours had completed their transfer to LVTs. They spent the remainder of the morning being rocked ceaselessly by the pitching waves. More fortunate were Chambers' men, for they did not begin loading in LCVPs until after dawn. Almost two hours were lost when the transport carrying the battalion was twice forced to get underway in order to maintain station in the buffeting seas. During the morning, the landing craft carrying 3/25 plowed through the swells to the vicinity of the transfer area where they were to meet tractors returning from the IVAN and JACOB landings.

Once they had embarked in the landing craft, the men of 3/25 were as roughly treated by the sea as their fellow Marines of Hudson's battalion. "The sea was not too calm," reads the report of 3/25, "and as a result, many of the Marines found themselves wishing the boats would head for the beach instead of circling in the transport area." [12] The men did not get their wish, but at midday the LCVPs moved the short distance to the transfer area. Here the unit encountered still other misadventures.

In spite of the morning's delays, Admiral Conolly believed that 1430, three hours later than his earlier estimate, was an attainable A-Hour. The passes into the lagoon and the boat lanes were cleared by minesweepers, and supporting ships continued the bombardment of ALLEN, ALBERT, and Roi-Namur. Namur in particular rocked under the hammering of naval guns, but Roi was not slighted. Admiral Conolly signaled to the warships blasting Roi: "Desire *Maryland* move in really close this afternoon for counterbattery and counter blockhouse fire. . . ." [13] This message earned the admiral his nickname of "Close-in" Conolly.

As the minesweepers were clearing JACOB Pass, they had discovered that it was too shallow to permit the entry of the destroyer *Phelps*, the control vessel for all the D-Day landings. As a result, the ship was routed through IVAN Pass, for it was thought necessary to have the *Phelps* inside the lagoon in time to protect the ships sweeping mines from the boat lanes leading to the objectives. The *LCC 33*, a specially equipped shallow-draft vessel, had been selected to shepherd the assault craft in the absence of the destroyer, but the alternate control craft failed to learn of the change in plans. As a result, responsibility for control temporarily passed to *SC 997*,

[12] 3/25 Hist, *op. cit.*, p. 4.

[13] *4th MarDiv Jnl*, msg dtd 1210, 31Jan44. At one point on the afternoon of 31 January, the *Maryland* moved to within 1,000 yards of Roi.

the submarine chaser in which General Underhill and his staff had embarked.

Although the general had neither copies of the control plan nor adequate radio channels to coordinate the movement of the waves, he attempted to restore order. First, the *SC 997* rounded up the tractors carrying 2/25, which had mistakenly attempted to follow the *Phelps*. These strays, as well as some LVTs carrying 3/25 that had wandered from their proper station, were herded back to the transfer area.

The naval officers assigned to guide the various waves cooperated to the best of their ability in reorganizing the assault force, and Admiral Conolly soon steamed onto the scene to supervise. "This was to prove," the admiral commented, "the only case in my experience before or later where I had any difficulty controlling the craft making the landing." [14]

While the waves were being reformed in the transfer area, a few additional LVTs arrived, and these were used to carry Marines of 3/25. There were, however, enough tractors for less than half of Chambers' battalion.[15] By now, JACOB Pass was known to be free of mines, so, rather than wait for additional LVTs, General Underhill ordered both battalions to follow the submarine chaser through the passage toward the line of departure.

The *Phelps,* which had finished her support mission, was now nearing the line of departure within the lagoon where she would again take over as control vessel. Observers in the destroyer viewed the progress of the approaching tractors and reported to Admiral Conolly that A-Hour could not be met.[16] He then postponed the time of the landings to 1500.

The delay imposed a strain on the system of aerial control, for the planes assigned to attack just prior to the landings could not be held on station for the additional 30 minutes. Such a decision would have disrupted the schedule worked out for the carriers and possibly have prevented later flights from arriving on time. To insure complete coverage throughout the day, the Commander Support Aircraft directed the planes then on station to attack targets of opportunity. The relieving flight of bombers was employed to support the landings, but it seemed that no fighters would be on hand to deliver the final strafing. The combat air patrol on station over the northern part of the atoll lacked enough fuel for the attack. Fortunately, another group of fighters arrived as the landings were about to begin. Since these relief pilots were familiar with the air support plan and the radar screen was free of hostile aircraft, they were able to sweep low over the islands and keep the enemy pinned down during the crucial moments just prior to the assault.

At 1432, the assault waves began

[14] VAdm Richard L. Conolly ltr to CMC, dtd 26Nov52.

[15] Rpt of CG, IVAN LdgGru, dtd 29Feb44, Encl C to *4th MarDiv AR*, p. 4, states that 1½ waves were in LVTs, but 3/25 History, *op. cit.*, p. 4, says three or four.

[16] Admiral Conolly reported that the slow progress of the tractors was "due to the low speed of the LVTs proceeding against the wind and the inexperienced LVT drivers permitting their vehicles to drift down wind while waiting for waves to form up." *TF 53 AR Roi–Namur*, p. 5.

crossing the line of departure along which the *Phelps* had taken station. The LCI(G)s led the way, followed by armored amphibians and finally by the troop-carrying LVTs. The gunboats discharged their rockets, raked the beaches with cannon fire, and got clear of the boat lanes. Company D, 1st Armored Amphibian Battalion, plunged past the LCIs to maintain the neutralization of the islands with fire from cannon and machine guns. The supporting destroyers ceased their shelling to permit planes to execute the revised schedule of aerial strikes, and at 1510 3/25 reached ALBERT. The Marines of 2/25 landed on ALLEN just five minutes later.

Both objectives were quickly taken. Chambers' 3d Battalion secured ALBERT by 1542, killing 10 Japanese in the process at a cost of 1 Marine killed and 7 wounded. Hudson's men, their progress impeded by the dense undergrowth in the northern part of ALLEN, needed help from a platoon of tanks to wipe out the Japanese platoon defending the island. By 1628, ALLEN too had been captured.

When it became apparent that Company G, Hudson's reserve, would not be needed at ALLEN, that unit was dispatched to ANDREW (Obella). The unit landed at 1545 and found the island unoccupied. Although opposition had so far been light, the operation had moved slowly. Before darkness, ABRAHAM had to be seized and additional artillery landed.

After a prolonged stay in the rough seas of the lagoon, 1/14 and 2/14 with 75mm pack howitzers came ashore on ALBERT and ALLEN in time to move into firing positions just before dark. Registration, however, was postponed until the morning of D-Day. Although the weapons were emplaced promptly, Colonel William W. Rogers, division chief of staff, was not entirely pleased with the conduct of this phase of the operation. He felt that not enough ammunition was on hand at ALBERT and ALLEN. Forced to buck heavy seas all the way from the transport area to the islands, many of the LVTs that were loaded with ammunition had run out of gas short of their destination. Tractors, however, labored throughout the night to ferry an adequate number of artillery rounds to ALBERT and ALLEN.[17]

While the howitzer battalions were preparing to land, Chambers was readying 3/25 for the seizure of ABRAHAM, the last of the day's objectives. Although this island was not to be a site for howitzer batteries, its capture was important, for Japanese guns emplaced there could fire into the flanks of the assault waves bound for Roi-Namur.[18] Chambers, however, had a difficult time mounting the attack.

The battalion commander suddenly found himself desperately short of assault craft. Because the amphibian tractor unit had received no orders concerning the ABRAHAM landing, its vehicles withdrew to refuel immediately after ALBERT had fallen.[19] The only tractors that remained behind were the two that carried Chambers and his headquarters.

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[17] MajGen William W. Rogers ltr to Dir DivPubInfo, HQMC, dtd 3Feb48.

[18] *Ibid.*

[19] *Croizat ltr.*

Admiral Conolly had directed that the attack upon ABRAHAM be launched at 1600 or as soon thereafter as practicable. B-Hour had already passed when Colonel Cumming landed on ALBERT to confer with the battalion commander on the quickest method of completing the D-Day operations. Chambers decided to attack at 1800 if landing craft were available by then. Three self-propelled 75mm guns from the Regimental Weapons Company, the battalion's attached 37mm guns, and its organic mortars were to support the landing.

Prior to the advance against ABRAHAM, 3/25 occupied ALBERT JUNIOR, a tiny island 200 yards north of ALBERT. Although no Japanese were posted on ALBERT JUNIOR, the ABRAHAM garrison opened fire on the occupation force. Machine guns were then mounted on the island to support the scheduled landing.

A patrol waded toward ABRAHAM and returned with information concerning the route over which Chambers would attack. In the meantime, the battalion commander had gained the services of two additional tractors that wandered near the ALBERT beaches. He decided to load 120 of his Marines into the four amphibians, dispatch them in a single wave to seize a small beachhead, and then use the same vehicles to shuttle the remainder of his troops across the shallow strait.

The assault began on schedule. A smoke screen laid by the battalion 81-mm mortars concealed the approaching LVTs, and the enemy chose not to defend the southern beaches. By 1830 two companies had reached the island and carved out a beachhead 250 yards deep. In 45 minutes, the island was under American control, but mopping-up continued into the night. Six Japanese were killed on ABRAHAM; one Marine was wounded during a misdirected strafing attack by a friendly plane.[20]

Since this last objective was a scant 400 yards from the southeast shoreline of Namur, it could provide a base of fire for the next morning's attack. During the night, as many weapons as possible were rushed into position. By morning, 5 self-propelled 75mm guns, 17 37mm antitank guns, 4 81mm mortars, 9 60mm mortars, and 61 machine guns stood ready to assist planes, ships, and field pieces in their deadly work.

General Underhill's IVAN Landing Group had executed all its D-Day assignments, but the operation had not been without its flaws. Writing some years after FLINTLOCK, an officer of the 10th Amphibian Tractor Battalion attempted to analyze the work of his battalion in northern Kwajalein. During World War II, he served at Guadalcanal and Saipan as well as in the Marshalls and as a result felt "somewhat qualified to appreciate confusion." He maintained that the period from the organization of his unit through the securing of Roi-Namur was the most exhausting both physically and mentally of any operation in which he took part.[21]

The numerous landings scheduled for

[20] This account of the ABRAHAM landing is based on an interview with Colonel Justice M. Chambers, dtd 6May48, cited in Heinl and Crown, *The Marshalls*, pp. 50–52. No transcript of the interview is available.

[21] *Croizat ltr.*

D-Day placed a grave burden on the LVTs, their crews, and the officers who were to control their employment. The control system, moreover, depended upon reliable communications, and the radios carried in the tractors were vulnerable to water damage. In a heavy sea, such damage was unavoidable.

In commenting on the employment of LVTs on 31 January, the 4th Division chief of staff observed that problems were anticipated and tentative plans were made to insure the success of the operation. He wrote:

> The Commanding General and Staff of the Northern Landing Force were well aware that things might not go as planned on D-Day. In fact the 4th Amphibian Tractor Battalion was withheld entirely on D-Day in spite of urgent requests from subordinate units, in order that we would be sure to be able to land the 23d Marines on Roi on D+1, either from the outside or from the inside of the lagoon. In other words, it was considered that the mission could have been accomplished by the capture of IVAN and JACOB and the subsequent landing on Roi by the 23d Marines utilizing the 4th Amphibian Tractor Battalion, even if the landings on the east side of the lagoon had not been possible on D–Day. This would have involved the subsequent capture of Namur by assault from Roi, with or without a landing from the lagoon. Possession of the Eastern Islands naturally made the entire operation easier.[22]

In the words of Admiral Conolly, the plan for D-Day, "under the sea conditions prevailing, was . . . too complicated and beyond the state of training and discipline of the LVT units to execute *smoothly*, especially when the unexpected complications were imposed. However, the plans were made to work and that is the final test of a command and its organization." [23] In spite of the unfavorable seas, the difficult reefs, and the lapse in control that occurred while the *Phelps* entered the lagoon, the Marines had taken all their objectives. More reliable radios, closer cooperation between LSTs and LVTs, and a tighter rein by control officers would have resulted in a less hectic operation, but these facts were of no consolation to the Japanese killed on the outlying islands.

THE ARMY IN SOUTHERN KWAJALEIN [24]

On D-Day, while the Marines were seizing the islands near Roi-Namur, General Corlett's Army troops were to make a similar series of landings in the immediate vicinity of Kwajalein Island. The 7th Reconnaissance Troop, reinforced by part of the garrison force, men from Company B, 111th Infantry, was scheduled to occupy CECIL (Ninni) and CARTER (Gea), two small islands believed to be undefended. When this task was done, the troop might be called upon to reconnoiter CHAUNCEY (Gehh) not far from CECIL. CARLSON (Enubuj), which was thought to be defended by a force of 250–300, and less formidable CARLOS (Ennylabegan) were the objectives of the 17th Infantry. (See Map 8.)

[22] BGen William W. Rogers ltr to CMC, dtd 1Dec52.

[23] Conolly ltr, *op.cit.*

[24] A detailed account of Army operations on D-Day may be found in Crowl and Love, *The Marshalls and Gilberts*, pp. 219–229.

Although artillery was to be emplaced on CARLSON only, all of these islands figured in General Corlett's plans. CECIL and CARTER were important because they bounded a passage into the lagoon, while a wider deep-water channel lay between CARLOS and CARLSON. In addition, CARLOS was considered a suitable site for the 7th Infantry Division supply dumps.

The invasion of southern Kwajalein, like the operation in the north, was not without its moments of frustration. Attempting to land from rubber boats on a moonless night, that portion of the reconnaissance troop destined for CARTER started off toward neighboring CECIL. The error was detected, the men landed on the correct island, and after a brief fire fight they secured the objective.

While the APD USS *Manley* was launching the boats bound for CARTER, her sister ship USS *Overton* was attempting to locate CECIL. "Intelligence received gave a good picture of both Gea and Ninni Islands," reported the skipper of the *Overton*, "but little of Gehh, the contour of which was, in a way, similar to Ninni." [25] In the darkness, the attackers mistook CHAUNCEY (Gehh) for CECIL (Ninni) and landed there instead. A brief skirmish followed, but before the island had been secured General Corlett learned of the error and ordered the reconnaissance troop to move to the proper island.

Leaving a small force to contain the Japanese on CHAUNCEY, the soldiers re-embarked and occupied CECIL shortly after noon. The group left behind soon encountered a larger number of the enemy and had to be withdrawn. Taking CHAUNCEY was postponed until an adequate force was available.

Off the two objectives assigned to the 17th Infantry, the assault waves began forming in the morning darkness. Poor visibility resulted in confusion, and the attack had to be postponed from 0830 to 0910. At CARLOS, 1/17 landed without opposition and rapidly overran the mile-long island. The few defenders, who lacked prepared positions from which to fight, were either killed or captured. The Americans suffered no casualties.

The CARLSON landing force, 2/17, expected to meet skillfully organized resistance. The LVTs carrying the assault waves reached the island at 0912, and the soldiers promptly began moving inland. Contrary to intelligence estimates, not a single Japanese was found on the island, although 24 Korean laborers were taken prisoner. The most serious opposition came from artillery on Kwajalein Island, but these pieces were silenced by naval gunfire before they could do the attackers any harm.

Army artillery, four battalions of 105mm howitzers and a battalion of 155mm howitzers, promptly landed on CARLSON, moved into position, and began registering. Some of the lighter pieces fired for effect during the night, but not all of the 155mm howitzers were emplaced when darkness fell. Meanwhile, a medical collecting station and LVT maintenance shop were being set up on CARLOS.

In spite of the numerous delays, the D-Day landings in both the north and

[25] USS *Overton* AR, dtd 8Feb44, p. 4.

south had been successful. Roi-Namur and Kwajalein Islands had been isolated, battered, and brought within range of field artillery. The enemy garrisons were given no rest during the night, for warships continued shelling the objectives. Although Army 105s joined in the shelling of Kwajalein Island, the Marine howitzers, scheduled to register at dawn on Roi-Namur, were temporarily silent. Under cover of darkness, Underwater Demolition Teams examined the assault beaches at both islands. Neither mines nor other artificial obstacles were found. The way was clear for the next day's operations.[26]

[26] Com V PhibFor msg to CinCPac, ser no. 00334, dtd 13Mar44 (AR File, OAB, NHD).