REFLECTIONS ON BATTLE Volume I

Historical Conflicts in Asia-Pacific and Europe: 2019 Staff Ride Analyses



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School of Advanced Warfighting Marine Corps University Quantico, VA

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FROM THE EDITOR

The School of Advanced Warfighting (SAW) at Marine Corps University, Quantico, Virginia, offers a world-class staff ride historical battle, operation, and campaign study program unparalleled by any institution of its type. The information papers in this volume share the students' intellectual reflections on two separate international staff rides: the European staff ride to Italy and France and the Asia-Pacific staff ride to the Philippines, the Mariana Islands, and Vietnam.

This reflection book offers two different approaches to capturing lessons learned during rigorous group discussion at each historical site. The Asia-Pacific staff ride chapter provides individual summaries from the assigned site facilitator to include key takeaways from the discourse of the group members, major operational themes identified, possible future application to planning, photographs of the local terrain where the operation and subsequent discussion took place, and examples of the two-sided slide used to guide the discussion. The European staff ride chapter provides information papers summarizing major operational themes identified on the staff ride and reexamined collectively in group work after the staff ride concluded.

The facilitators of the 2019 SAW staff ride student reflections process chose the *Department* of the Navy Correspondence Manual (2018) information paper format to allow readers to pull select sections from this book as needed to inform future planning and education. The format has been adjusted to comply with MCU Press publishing standards.

Appropriate attribution of work is assigned within each individual Asia-Pacific staff ride information paper summary. Where an image source is omitted, the credit should be attributed to the students of the SAW class of 2019. The group work conducted at completion of the European staff ride should be attributed to all students of the SAW class of 2019 unless otherwise annotated.

The purpose of this volume is to both summarize and sustain the lessons learned by providing a tool for the staff ride participants to reference in the future. Additionally, this book may be used by other planners so they may benefit from the intellectual rigor offered by the SAW class of 2019. This volume may be used to inspire organization of future staff rides and staff ride reflection processes. However, the exact replication of this product's structure and this reflections process is discouraged so as to avoid the entropy of creativity that is so critical in the development of the operational artist.¹

It is the hope of the SAW class of 2019 that the *coup d'oeil* and the *fingerspitzengefühl* of all planners benefit from the lessons contained within.

Major A. B. Christman, USMC Volume I Editor School of Advanced Warfighting

¹ A. B. Christman, "Human Factors: The Operational Artist and the Exceptional Mind" (unpublished manuscript, Marine Corps University, May 2018).

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Subj: EXECUTIVE SUMMARY: AY19 ASIA-PACIFIC STAFF RIDE STUDENT REFLECTIONS

1. **Purpose**. To summarize key takeaways from student-led stops and convey major themes emerging from the staff ride which have applicability for modern military campaign and contingency planning.

2. World War II – Bataan-Luzon and Corregidor

• **Context.** In late 1941 and early 1942, besieged Allied Luzon forces on the Bataan Peninsula fielded two corps (all or parts of eight divisions) and not insignificant amounts of supporting arms. However, though strong on paper, those two corps were considerably weaker than advertised. II Corps, for example, arrayed six regiments along the eastern Abucay defensive line, but its 51st Division (along the line's pivotal left flank) contained the weakest of these, a result of the division's taxing retrograde from south Luzon. Rather than develop branch plans to transition to strong point defenses in rugged mountainous terrain or else to incrementally evacuate Allied forces from Bataan's east coast using available patrol torpedo (PT) and small civilian craft, planners committed to attritional fighting along successive linear defensive lines. Japanese forces' total strength—in terms of mobility, fires, and air/naval superiority—only amplified Allied shortcomings. In the end—on 9 April 1942—Army Major General Edward P. King surrendered nearly 80,000 Filipino and American troops. Less than a month later, Army General Jonathan M. Wainwright capitulated on Corregidor, concluding the Allies' humiliating exit from the Philippines.

• Key takeaway. Although Bataan defenders did not cease fighting until 9 April, their leaders ceased thinking as early as 26 January. Planners failed to provide options for commanders during the defense. The defeat highlights the imperative of continuous assessment and sustained planning efforts even after transitioning to execution of a major, seemingly last-ditch, defensive effort.

• Key takeaway. In directing a "fight to the last man" effort for troops on Bataan and Corregidor, Army General Douglas MacArthur risked wasting his forces in fruitless endeavor. Fortunately, King and Wainwright preserved their soldiers, sailors, and Marines rather than see them butchered for naught. However distasteful, commanders in dire straits must conceive—early on—of capitulation criteria, wherein forces fight to exhaustion and to an identifiable point and thereafter surrender with honor.

• Key takeaway. As a corollary, U.S. planners should develop narratives heralding the fighting spirit of a starved, isolated, outnumbered, and outgunned force enduring overwhelming force of arms to deliver substantial casualties to the enemy. In the wake of an honorable surrender, the heroic resistance portends the ability of America to win the war once it is better manned and armed.

• Modern applicability. The Expeditionary Advanced Base Operations (EABO) concept, in part, envisions lightly armed U.S. personnel arrayed in austere environments—whether inland ashore or on an isolated island—providing forward postured capabilities for U.S. forces to fight back across the Pacific. Should the adversary assault one of these American contingents, isolated U.S. personnel will likely face a decision to either resist and fight (and likely die), withdraw (if possible), or else surrender with honor. Planners should give due consideration to these eventualities in developing the EABO concept to ensure commanders and troops at least have options if in a Bataan or Corregidor scenario or otherwise are operating against long odds.

3. World War II – The Mariana Islands Campaign

• Context. Operation Forager was designed as an intermediate objective in route to Japan. In seizing Saipan, Tinian, and Guam, Navy Admiral Chester W. Nimitz's Central Pacific force would destroy a Japanese Pacific force headquarters (*31st Army*) and sever Japan's sea line of communication (SLOC) between Truk/Rabaul islands and the main home island of Honshu (location of Tokyo). Navy Admiral Raymond A. Spruance's 5th Fleet seized Saipan first, beginning 15 June. A three-and-a-half day prebombardment did not reduce the island's beach defenses, resulting in significant U.S. casualties during the landings. Lieutenant General Holland M. Smith's V Amphibious Corps got ashore though. Marines then faced Japanese defenders established in inland strong points and defensive pockets, compelling Lieutenant General Smith to employ his reserve—the U.S. Army's 27th Infantry Division. Japanese defenders stymied the division's advance in Saipan's "Death Valley" and Smith relieved the division's commander, Army Major General Ralph C. Smith, on 24 June. This controversial decision caused inter-Service tension that lived on after the Saipan fight.

The Battle of the Philippine Sea (19–20 June 1944) ensured V Corps and 5th Fleet's victory at Saipan and, indeed, at Tinian and Guam, following. Navy Vice Admiral Marc A. Mitscher's Task Group 58 destroyed so many Japanese aircraft and surface combatants as to ensure U.S. air and maritime superiority in the vicinity of the Mariana Islands and destroy the SLOC linking the islands' Japanese defenders to sources of sustainment and reinforcements to the west and north. Indeed, Army and Marine units cleared Saipan by 9 July, and an embittered Prime Minister Hideki Tojo resigned on 18 July. V Amphibious Corps would assault Guam on 21 July and seize that island by 10 August. The Corps finally assaulted Tinian on 24 July, and seized it on 1 August. This operation to gain Tinian, in fact, represented a series of firsts: 1) it was the shortest turn from one landing to the next; 2) U.S. forces first used napalm on Tinian; and 3) V Corps used Army corps-level artillery fired from Saipan to support the Tinian's northwestern landing beaches.

• Key takeaway. The Mariana Islands' hilly, even mountainous terrain distinguished fighting here from earlier battles to take the Gilbert and Marshall Islands. In those fights (November 1943–February 1944), Marines and soldiers gained atolls and smaller islands that were topographically less undulating and with little room to operate inland. The Mariana Islands were substantially more elevated and much larger, which afforded the opportunity to

maneuver. Rugged island interiors and jungle in the Marianas afforded Japanese defenders the ability to establish legitimate defenses-in-depth, as well. The fighting on Saipan especially was a prelude to future operations in the Pacific theater (i.e., Iwo Jima, Okinawa), where the struggle was bloody, difficult, inch-by-inch, and against a fanatical enemy who resorted to layered defenses to attempt to bleed Allied forces white.

• Key takeaway. Operation Forager nested within a much larger vision of victory in the Pacific. The sequential seizures of Saipan, Tinian, and Guam were supporting steps in Admiral Nimitz's island-hopping plan, Operation Granite II. Forager's success enabled manifestly strategic actions, chiefly an ability to use the Boeing B-29 Superfortress to bomb Japanese home islands by fall 1944. Guam's seizure, in particular, also impacted future operations; planners identified its port and airfield as a critical node for the Navy to support Operation Iceberg, the planned eventual invasion of Japan.

• Modern applicability. Regardless of who was right in the "Smith vs. Smith" debate, the important takeaways for planners are understanding that personalities matter, Service equities are always involved, and organizational cultures (Graham T. Allison's Model II)—even within the same country—can have an impact on combat operations. Joint environments have the potential to create these types of issues, and planners and commanders need to take them into consideration to maximize combat effectiveness.

4. World War II – Leyte and the United States Return to the Philippines

• **Context.** Operation King II was the largest operation to date in the Pacific. General MacArthur utilized a field army to execute simultaneous, corps-size amphibious assaults along Leyte's eastern shoreline. Sixth Army selected the Leyte Gulf for several reasons, including its deep anchorage and suitable landing beaches. X Corps' initial success in the northern landing to seize Tacloban Airfield somewhat contrasted with XXIV's assault and establishment of its beachhead 11 miles to the south. Here, Japanese *35th Army* defenders lodged in mountainous terrain immediately west of the XXIV's 96th Division's landing site resisted fiercely, which required Sixth Army to commit its floating reserve to secure the division's lodgment. As the fight progressed, X Corps would fight north and west through the Leyte Valley, and the XXIV Corps south and west through the mountains to the Ormoc Valley.

Original objectives for both corps were to seize existing airfields and otherwise develop airfield sites for use in support of the advances west across Leyte and eventually north to Luzon. However, engineers soon realized weather and gnarly terrain prevented the timely airfield development desired, forcing a reliance on carrier aviation for much of the fight across Leyte.

Additionally, U.S. planners did not foresee Japan making Leyte the decisive battle for the Philippines, and as U.S. forces struggled to fight west across the island, both sides employed significantly more forces than either originally purposed for Leyte. Elements of the Japanese *1st, 26th,* and *30th Infantry Divisions* (not already engaged on Leyte) landed on the island in late October/early November at Ormoc and joined the fighting. U.S. Sixth Army would

employ the 11th Airborne Division on 18 November on the 96th Division's left flank to control passes into Leyte Valley. About the same time, General MacArthur deployed the 32d Division and the 112th Cavalry Regimental Combat Team to X Corps' aid, as well. In late November, Sixth Army also received the 77th Division (diverted en route from Guam to Guadalcanal) to reinforce XXIV Corps. On 7 December, 77th Division would sail around the southern end of Leyte and conduct an amphibious landing south of Ormoc.

As the battle raged, Japanese will to fight remained high. The enemy used kamikaze pilots for the first time at Leyte to attack allied shipping. Ultimately, U.S. forces won through determined jungle fighting and the use of amphibious assaults as tactical end runs to turn and/or envelop Japanese defensive lines.

• Key takeaway. As allied forces moved inland, difficult terrain and inclement weather only amplified the determination and strength of Japanese defenders. The Allies overcame these obstacles through innovation of a sort—conducting amphibious end runs (1st Battalion, 34th Infantry, to break the impasse at Breakneck Ridge and 77th Division landing at Ormoc) to disorganize and attack the enemy from the rear of their defensive lines. This tactic was adapted for future use in Operation Chromite.

• Key takeaway. The Battle for Leyte was another example of how planners should never stop thinking. The fight offers several examples where U.S. forces exploited gaps provided by the enemy to maneuver and overcome stubborn defenses. An example of this was on Breakneck Ridge in X Corps' sector, where the Japanese became complacent and fixated on the friendlies to its front and enabled the Army to conduct a double envelopment—inclusive of an amphibious end run (alluded to above)—to break the Japanese defense.

• Key takeaway. The decision to accelerate operations in the Pacific impeded MacArthur's ability to establish airfields in direct support of the invasion of the Philippines. Planners mitigated the lack of land-based airpower through substituting Admiral William F. Halsey's Third Fleet, specifically the fast carriers of Task Force 34 (TF 34). MacArthur did not have operational control (OPCON) of these forces, though, and Admiral Nimitz had ordered Halsey to use them to destroy the Japanese naval fleet if the opportunity arose. When Japan's northern, central, and southern naval forces attempted an envelopment of 7th Fleet operating in Leyte Gulf in support of Sixth Army's landing, Halsey sent TF 34 to destroy the northern force, though this required the naval force foray some distance north from the gulf. This departure created havoc for 7th Fleet faced with multiple Japanese naval thrusts from the Surigao and San Bernardino straits. The 7th Fleet avoided disaster, but just barely, and Sixth Army forces ashore went without carrier aviation for a time, as Halsey's TF 34 forayed north and 7th Fleet fought off the Japanese central and southern forces.

• Modern applicability. This is a great case study for understanding the advantages and disadvantages of land-based versus naval or carrier aviation. It also serves as a reference point to distinguish between having coordinating authority to request to use a particular unit, vice being given OPCON of the unit in question (e.g., Macarthur/Vice Admiral Thomas C.

Kincaid's lack of control of Halsey). This distinction very much impacts if not determines the employment of those forces in question. Moreover, for today's planners, Sixth Army's use of amphibious and overland maneuver to overcome the enemy at Breakneck Ridge and along the coastal road south of Ormoc provides great examples to draw from. Finally, the changing situation and dynamic operations experienced by both corps highlights the need for assessment and reassessment of ongoing operations to reallocate combat power, facilitate logistics, or enable the use of joint forces.

5. The Vietnam War – The Tet Offensive and Actions at Hue City

• **Context.** In late January 1968, during the Lunar New Year (or "Tet") holiday, North Vietnamese People's Army of Vietnam (PAVN) and Communist Viet Cong forces launched coordinated attacks against targets in South Vietnam. U.S. and Army of the Republic of Vietnam (ARVN) militaries sustained heavy losses before repelling the communist assault. The Tet Offensive played an important role in weakening U.S. public support for the war in Vietnam. In particular, the fighting for Hue City crystallized the perception that the American strategy was failing.

Hue City exemplifies a tactical victory—albeit won over the course of a tough three-week fight—which became a strategic defeat due to American failure to control the narrative. The informational effects of the Viet Cong flag flying from the Citadel for several days drove operational planning on both sides. Media presence during the battle and the powerful images projected into domestic living rooms outpaced U.S. Military Assistance Command, Vietnam (USMACV) ability to control the narrative. Operation Hue City can be said to have culminated with Walter Cronkite's declaration of a stalemate in Vietnam on 27 February 1968. President Lyndon B. Johnson, arguably, determined he had lost middle America and only weeks later, in mid-April, he told the country he would not seek reelection.

• Key takeaway. The triangle fight to clear southern Hue—south of the Perfume River, north of the Phu Cam River, and west of Route 1—commenced 1 February. TF X-Ray directed 1st Battalion, 1st Marines (V11), and Company G, 2d Battalion, 5th Marines, to attack west, south of the river, to secure the Thua Thien Provincial Headquarters and the provincial prison. Because of the dynamic nature of this urban fight and ferocious PAVN resistance, companies and battalions had difficulty anticipating logistical requirements. In particular, Marines employed significant and varied direct fire ammunition. Initial sustainment requests often escalated quickly from routine, to priority, to emergency. To enable the effort, TF X-Ray began force-feeding high priority cargo, immediately, *without* requests.

• Key takeaway. The Battle of Hue demonstrates the complexity of urban terrain. Casualties in the battle of Hue were seven times higher than in nonurban operations, and within the Citadel itself casualties were 20 percent greater than in southern Hue. Beyond the obvious advantages afforded to the defense in urban terrain, which include multiple opportunities for enemy strong points, naturally occurring obstacles, and ideal terrain for defense in depth, linear

(gridded) streets offer simple solutions to tactical control measures but also give the enemy an element of predictability in determining friendly actions.

• Key takeaway. ARVN and U.S. forces rapidly adapted following the surprise attack on Hue City. They formed ad hoc organizations, employed systems and equipment in nontraditional ways (e.g., M50 Ontos and landing craft, utility [LCU]) and adjusted to the different character of the urban fighting. This stands in contrast to PAVN/Viet Cong inflexibility. Having built only one course of action to create a *fait accompli* through rapid seizure of the city, PAVN/Viet Cong forces struggled to adapt to the ARVN/U.S. response and counterattack.

• Key takeaway. As the battle devolved into a bitter attritional fight, both sides attempted to interdict the LOCs of the other. PAVN/Viet Cong cut Route 1 and attacked fire bases and air bases to limit their ability to fuel free world forces battling in Hue City. U.S. forces attempted to cut off the LOCs supporting PAVN/Viet Cong forces running into the city from the mountainous areas to the west. Both sides adapted with ARVN/American forces turning to maritime and aerial (largely curtailed by poor weather) logistics and PAVN/Viet Cong forces coercing South Vietnamese to labor moving supplies to support the fighters.

• Modern applicability. There are no rear areas in the modern urban battlespace; every domain therein is contested, and force protection of logistical troops is no less important than riflemen closing with the enemy. Planners must design logistical networks able to surge at the outset to avoid premature culmination and subsequently fuel extended, intense urban combat. Unlike Hue's triangle clearing, which featured a U.S.-only force, the future fight is likely a coalition effort. U.S. logisticians will support American and host nation or third-country warfighters, with their attendant peculiar sustainment needs.

• Modern applicability. Command and control (C2) of joint and multinational forces will naturally tend toward diffuse efforts. Information operations should be central to military operations and planning efforts. Contingency planning should be a requirement, not a nice-to-have. Adaptation to the changing character of conflict is a fundamental characteristic of successful military forces.

6. The Vietnam War – The Fight for Khe Sanh 1967–68

• **Context**. USMACV initially built the position to anchor the McNamara line (electronic infiltration barrier) in northwest South Vietnam, only 7.5 miles from the Laotian border. The site sat along an artery of the famed Ho Chi Minh (HCM) Trail and, as expected, drew the ire of PAVN infiltrating and operating in the central highlands. At one point, planners envisioned the position as a forward base from which to conduct offensive operations against these PAVN forces, but leadership tabled the idea. However, PAVN infiltration along the HCM Trail invariably increased the threat to U.S. forces at Khe Sanh. The perception of "another Dien Bien Phu" took hold, and Khe Sanh's relative value expanded beyond the tactical to serve as a symbol of U.S. strategic resolve in the face of an unrelenting enemy.

In April 1967, a 3d Marines patrolling effort north of the position uncovered PAVN elements and triggered what came to be known as the "Hill Fights" from 24 April to 11 May. In this contest, Marines fought for control of hills 1015, 950, 881N/881S, and 861 and stymied PAVN efforts to overrun the base. Army and Marine artillery and U.S. Air Force and Marine aviation backstopped Marine infantry and kept Khe Sanh in free world forces' possession. To wit, 1st Marine Aircraft Wing (1st MAW) flew more than 1,100 sorties and expended in excess of 1,900 tons of ordnance, and artillery fired more than 25,000 rounds targeting PAVN attackers. Later, in the fall of 1967, PAVN severed Route 9 and effectively isolated Khe Sanh from U.S. artillery positions at Camp Carroll and the Rockpile; thereafter, Khe Sanh depended wholly on air resupply for all logistics and sustainment.

The siege of Khe Sanh, as it came to be known, lasted until spring 1968. That January, PAVN began harassing Khe Sanh and the Lang Vei Special Forces base located six miles southwest of Khe Sanh. On 7 February, PAVN tanks and infantry, supported by artillery, attacked and overran Lang Vei. Marines at Khe Sanh were expected to respond to a Lang Vei contingency; however, Khe Sanh's defenders did not render relief, leaving Lang Vei's U.S. Special Operations detachment, ARVN and Royal Laotian Infantrymen, and Montagnard tribal fighters to withdraw under attack. Less than a month later, on 2 March, planners developed Operation Pegasus to relieve Khe Sanh. Eight cavalry battalions, seven infantry battalions, three airborne battalions, a Ranger battalion, 100+ artillery pieces, and 1st Cavalry Division's 450 aircraft teamed to secure Route 9 and ultimately link up with Marine forces at Khe Sanh. Pegasus' initial actions began on 14 March and, one month later, U.S. forces evacuated the base.

• Key takeaway. Planners must remain sensitive to the ongoing strategic dialogue underwriting any conflict and ensure tactical actions are in line with strategic pursuits. For example, maintaining a small force at an isolated airfield in an area with only one ground line of communication (GLOC) and among a high concentration of enemy units courts tactical disaster with likely strategic consequences. The risk may not warrant the effort to keep the force in the field. At a minimum, thought should be given to ensuring alternate resupply (e.g., air) is appropriate and available for a long duration or dwell-time at the isolated site.

• Key takeaway. Regarding the PAVN overrunning Lang Vei, mutually supporting branches of the armed forces must rehearse contingency plans to confirm viability in worsening threat environments. Planners are obligated to take the plan off the shelf and review specifics to ensure the plan remains sound or, if not, the new situation demands refinement.

• Key takeaway. Pegasus, from its inception to its forces' final extraction from the area of operations, will long stand as a classic example of airmobile operations. During the engagement, the enemy did not know how to or was unable to react airmobile maneuvering of large numbers of combat troops, supported by artillery around or behind enemy positions.

• **Modern applicability**. The best defense is an active offense. Active patrolling, from a U.S. perspective, is in fact—today, in Vietnam, and in wars prior—the small unit leader's means of

uncovering enemy threats before these adversary designs mature into overwhelming force. The company occupying Khe Sanh in the winter and spring of 1967 likely would not have triggered the meeting engagement/chance encounter with PAVN forces on 24 April 1967 had this troop not maintained an aggressive patrolling and ground reconnaissance effort. This company had every excuse to go firm, take on a fortress mentality, and demand more troops before carrying out its mission. But the commander remained offensive and generated a high-tempo patrolling effort with arguably less-than-adequate forces. The meeting engagement forced PAVN to prematurely launch its master plan to overrun Khe Sanh. In this sense, those efforts in April 1967 were a form of spoiling actions at the tactical level.

• Modern applicability. For the modern planner, commanders tasked to hold arguably strategically significant terrain must be furnished with adequate forces to maintain an active saturation patrolling effort as well as secure and manage the actual base of operations. At Khe Sanh, as with Dien Bien Phu before, commanders did not retain forces adequate to managing all requirements. Only U.S. artillery and overwhelming air power brought to bear in 1967–68 avoided a catastrophe similar to the French failure at Dien Bien Phu in 1954.

Prepared by: Major Jeffrey Brewer, USMC

INFORMATION PAPER

Subj: WWII: FIRST BATAAN DEFENSIVE LINE: 9-26 JANUARY 1942

1. Belligerents. U.S. Army of the Philippines and Japan.

2. **Major themes**. All unit icons are not the same, terrain as a force multiplier, linkup with adjacent forces and C2, when to reframe, operational logistics in the defense of territory.

3. Key takeaways

- *Like-unit designators on a line diagram appear identical aside from numbering.* Units may vary drastically in their capabilities due to differences in readiness, experience, manning, equipment, morale, etc. II Corps had six regiments strung along its Abucay defensive line, but those belonging to the 51st Division along the left flank were the weakest, a result, among other things, of the long, taxing retrograde from South Luzon.
- The rugged terrain and visibility-limiting jungle canopy made things difficult for both the attackers and defenders along the Bataan first defensive line. The advancing Japanese force frequently became disoriented during movement and had some difficulty correctly identifying the Allied defensive line.
- *The first line was essentially a linear defense with a corps reserve.* Successive lines alone do not constitute a defense in depth (the Allies eventually withdrew to the second Bataan line despite being in a strong position originally).
- *Reframing would have supported a change in the logistical footprint.* Given that War Plan Orange (WPO-3) relied on eventual fleet reinforcement (just not immediate), the Allies should have *reframed* after Pearl Harbor. WPO-3 insufficiently resourced the defensive line buildup, and the defenders had difficulty building fortifications locally. An engineer, Parker, designed the line. That could perhaps explain why it was situated forward of the river, which could be used to facilitate resupply instead of as a defensive barrier.

4. **Modern application to planning**. This is a cautionary tale. The defensive line at Bataan is based on a two corps frontage with an army headquarters on the island of Corregidor. The use of the term *defense in depth* is not entirely accurate to describe the line, though it may appear that way to the casual observer. The assumption that Mount Natib would anchor the boundary proved false because the proximity of the mountain meant that both corps could not effectively link up at the boundary.

5. Recommended references

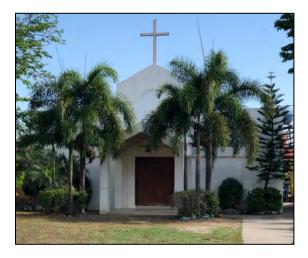
Jennifer L. Bailey, *Philippine Islands: The U.S. Army Campaigns of World War II*, CMH Pub 72-3 (Washington, DC: U.S. Army Center of Military History, 1992).

Louis Morton, *The War in the Pacific: Fall of the Philippines*, CMH Pub 5-2 (Washington, DC: U.S. Army Center of Military History, 1993).

Terrain photographs:

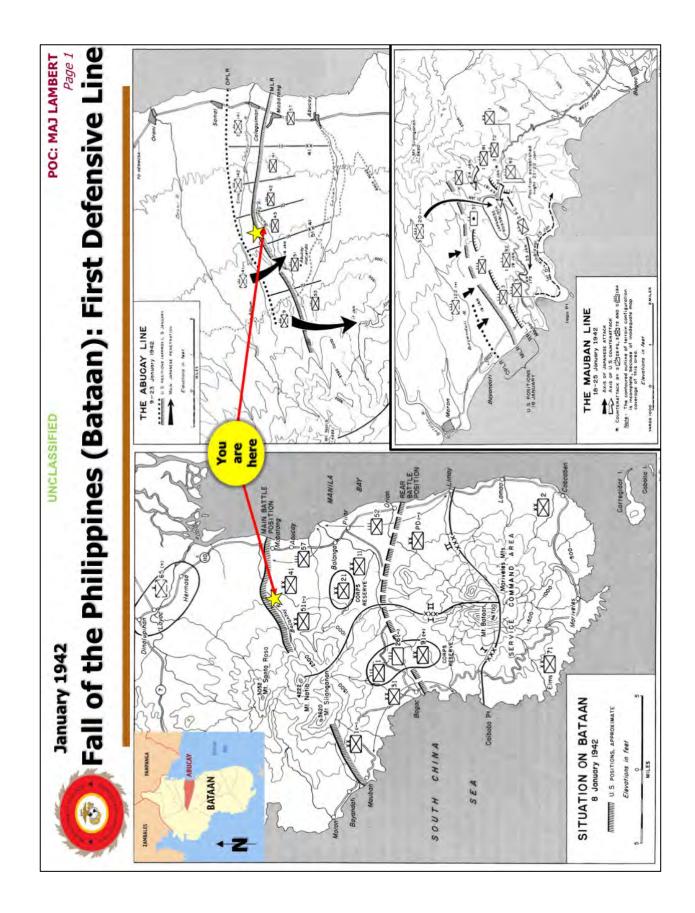


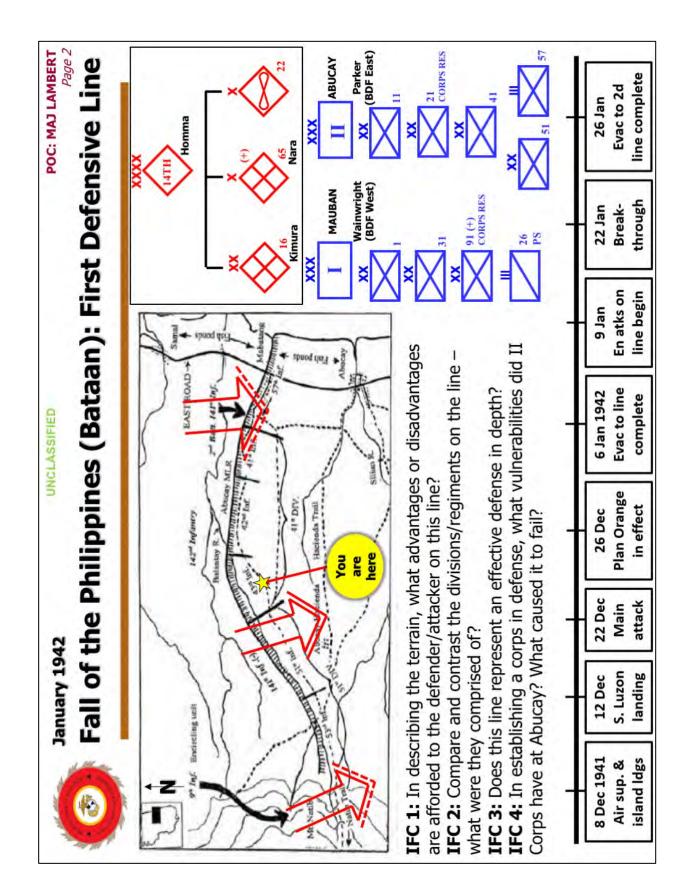
Mount Natib and associated feature complex, looking west from vicinity of 43d Infantry Regiment's position. This area was supposed to anchor the boundary between both corps' positions. It provided the opportunity for the Japanese to penetrate along the boundary. The boundary essentially ran north to south along these high features. They looked good on a map but posed many challenges for linking up between the two corps positions.



Church in vicinity of the first line within 43d Infantry Regiment's position, looking north-northeast. Beyond this church is the engagement area for the first line and to the northeast is the coastal road that the Japanese first attacked into. This position is on the reverse slope and the peninsula was characterized by a series of undulations that made obvious lines to defend from with additional dry river beds at the front.

Prepared by: Major Von Lambert, Australian Army





INFORMATION PAPER

- Subj: WORLD WAR II / SECOND BATAAN DEFENSE LINE / 26 JANUARY 9 APRIL 1942, ORION-BAGAC LINE, II CORPS SECTOR
- 1. Belligerents. U.S. Army Forces Far East, Japanese Imperial Army and Navy.
- 2. Major themes. Amphibious operations, key terrain, operational planning.

3. Key takeaways

- After receiving guidance from General MacArthur to fight to the last man along the Orion-Bagac line, U.S. Army planners ceased to consider alternative options for continuing operations against the Japanese. Thus, although units on Bataan did not cease fighting until 9 April, they ceased thinking as early as 26 January.
- Mount Samat, the dominant terrain feature along the Orion-Bagac Line, offered U.S. and Filipino forces unrestricted observation of Japanese avenues of approach and the ability to mass the effects of fires on Japanese maneuver units. Despite possession of the high ground, the entire U.S. and Filipino defenses crumbled within 72 hours.
- The Japanese conducted three amphibious end runs to turn the Orion-Bagac Line. Each operation was defeated, with the Japanese losing two infantry battalions in the effort. The failure of the Japanese amphibious operations was largely attributed to a lack of planning for sustainment, reinforcement, withdrawal, and link-up with land-based maneuver units.

4. Modern application to planning

- The failure of U.S. planners to provide additional options for their commanders during the defense of the Orion-Bagac Line highlights the importance of assessment plans, the need to continue the planning effort after transition to execution, and the requirement for well-developed branches and sequels.
- Amphibious and air assault operations offer advantages in terms of generating tempo and achieving surprise. However, these operations incur significant risk to force which must be mitigated by thorough planning to include sustainment, reinforcement, and extraction.
- Effects of terrain must be considered in concert with the enemy and friendly situation.

5. **Recommended reference**. Louis Morton, *The War in the Pacific: Fall of the Philippines*, CMH Pub 5-2 (Washington, DC: U.S. Army Center of Military History. 1993).

Terrain photographs:



Source: Vigattin Tourism.

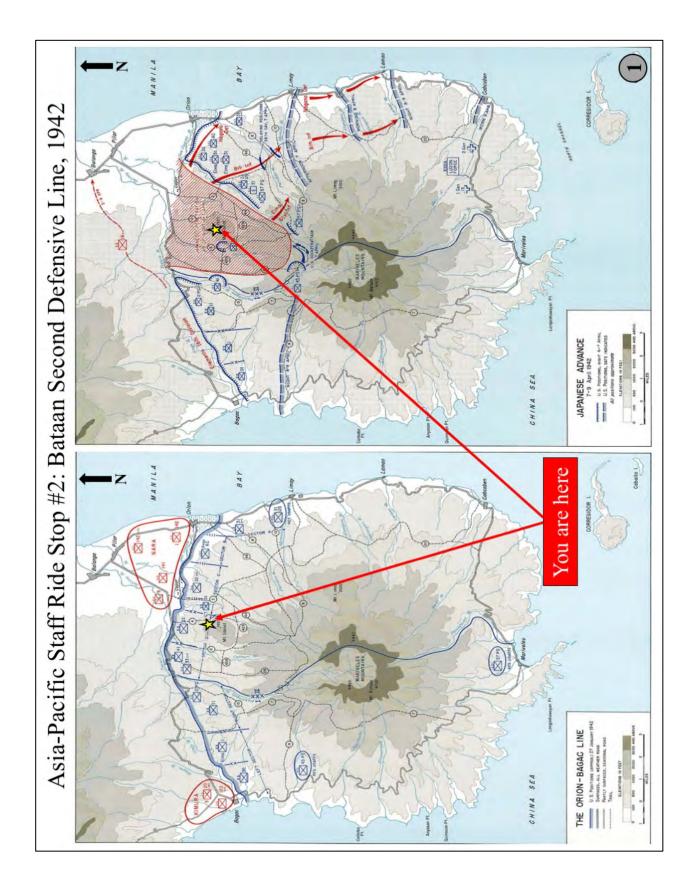
View from Mount Samat, looking east. Unrestricted observation of the entire defensive line and the ability to mass the effects of fire on the Japanese was obviated by Japanese air superiority and sea control.

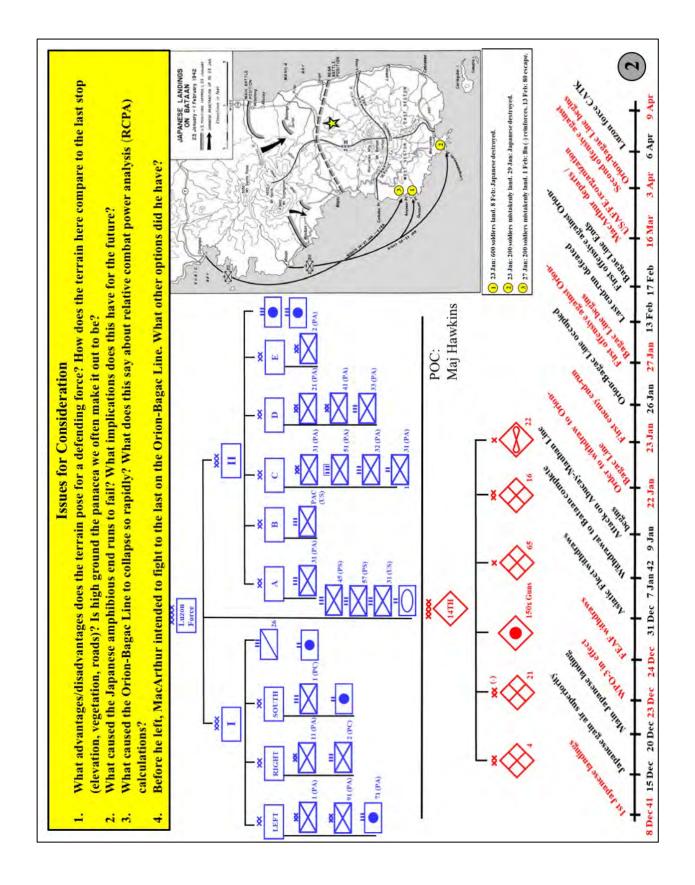


Source: Visit Philippines.

View of Mount Samat from the northwest. The Japanese conducted a combined-arms attack, preceded by a five-hour artillery and aviation bombardment, which seized the position and caused the disintegration of the Orion-Bagac line within 72 hours.

Prepared by: Major Matthew Hawkins, USMC





INFORMATION PAPER

Subj: WORLD WAR II: DEFENSE OF CORREGIDOR, 1942

1. Belligerents. Empire of Japan, United States of America, Philippines.

2. Major themes. Joint and coalition operations, political objectives, range of acceptable outcomes, culmination, capabilities and limitations.

3. Key takeaways

- General Wainwright assessed that, while he had coastal defense capabilities on Corregidor and its neighboring islands, he realized he did not have any maneuver forces to fight on the island when Japanese forces landed. He asked for support and received the 4th Marine Regiment in December 1941.
- 4th Marines commanding officer, Colonel Samuel L. Howard assumes command of all forces on the island, a force of approximately 4,000 men. Of these, only 1,300 were U.S. Marines. The rest were support personnel in the Filipino Army and Navy. Despite their lack of combat training, the force on Corregidor was trained in basic defensive tactics, martial proficiency, and developed strong defensive positions.
- Though he substantially improved his force's capabilities, Colonel Howard knew they were not as well trained as their Japanese counterparts. Consequently, he employed his defense in static positions as he did not think they could execute a dynamic mobile defense that would require both dynamic command and control as well as fire support coordination and deconfliction.
- With only weeks of supplies left, the American/Filipino force on Corregidor was bombed mercilessly from the Bataan Peninsula (116 guns shooting more than 16,000 shells). The Japanese landed the *1st Battalion*, *61st Regiment*, on the far eastern "tail" of the island. They would attack westward until they make their way to Malinta Tunnel. The situation rapidly deteriorated once Japanese tanks landed on the island. Colonel Howard never did maneuver his battalions to meet the enemy.
- This was a smart move as they were not proficient enough to execute complex maneuvers. Once the tanks reached the outside of the Malinta Tunnel, with all allied IDF, machinegun, communications, defensive wire, and minefields destroyed by Japanese forces, with no meaningful means of resistance, General Wainwright made the decision to surrender his force.
- If you do not have air or naval forces, you need to "stack the deck" against the enemy in the land domain. The 4th Marines surrendered once the Japanese landed tanks because the

Marines had no antitank capability. Had they wargamed this plan, the Marines would have seen that, given the limited size of the island, Corregidor could be dominated by a mechanized force. Antitank capability would allow for the Marines' ability to defend the island.

- Fighting to the "last man" is a stupid idea. Once your force has exhausted every means at their disposal to resist the enemy, then you should surrender with honor. The 4th Marine Regiment did everything it could (and more than most units probably could) to fight the Japanese (4th Marines inflicted more killed in action [KIA] than the Japanese inflicted on them). Know what the criteria is for being "unable to resist" and make it a commander's critical information requirement (CCIR). Do not waste the lives of your people for the sake of vanity or romance.
- There is a tremendous information operation (IO) consideration to surrendering. It can have strategic implications. The narrative should not be that the allies lost at Corregidor, but that a force that was starved, isolated, outnumbered, and completely impotent in two of the three warfighting domains was able to inflict more casualties on the enemy than they endured should speak to the fighting spirit of our force and the ability of America to win the war once it was better manned and armed. The Japanese did not get the 4th Marine Regiment guidon, the Marine Corps' colors, or America's colors. The narrative matters and there is a proper way to surrender.

4. Modern application to planning

- The battle of Corregidor is an excellent case study in understanding what are requirements for the task at hand (the allies clearly needing sea/air parity if not superiority as well as a sustainment plan). Without the ability to interdict the Japanese in the air or sea, the allies were only delaying the inevitable on Corregidor. As the Marine Corps focuses on littoral operations, distributed operations, and expeditionary advanced base operations, we need to be able to avoid the pitfalls that befell the allies at Corregidor.
- Sea and air interdiction is vital to island defense. Commanders must ensure that all forces, not just combat arms, maintain a baseline proficiency in martial tasks. This is necessary to provide the commander a necessary flexibility to employ basic tactics. While they do not need to infantrymen, support MOS's must maintain basic skills of a riflemen to be effective fighters in the expeditionary environment.

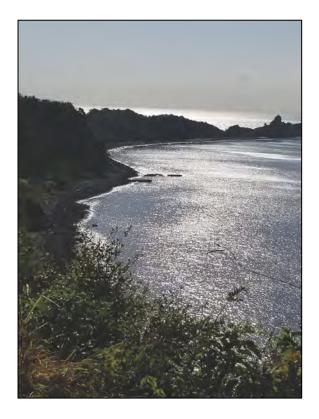
5. Recommended references

Jennifer L. Bailey, *Philippine Islands: The U.S. Army Campaigns of World War II*, CMH Pub 72-3 (Washington, DC: U.S. Army Center of Military History, 1992).

Louis Morton, *The War in the Pacific: Fall of the Philippines*, CMH Pub 5-2 (Washington, DC: U.S. Army Center of Military History, 1993).

Legacy of Heroes: The Story of Bataan and Corregidor (Quezon City, Philippines: Department of National Defense of the Philippines, 2008), 6 episodes.

Terrain photographs:





Coastal defense gun, M1895

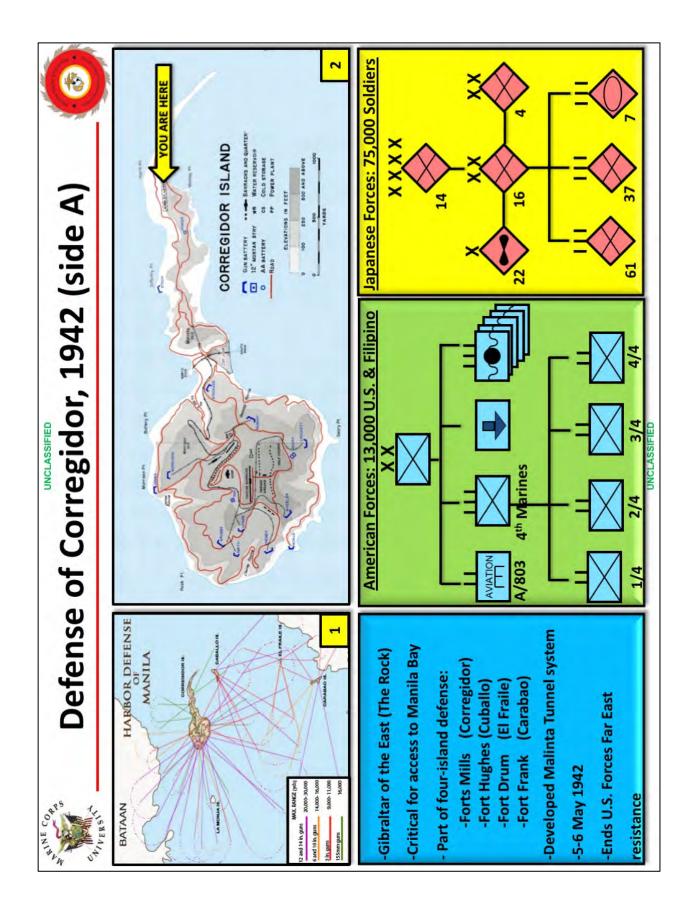


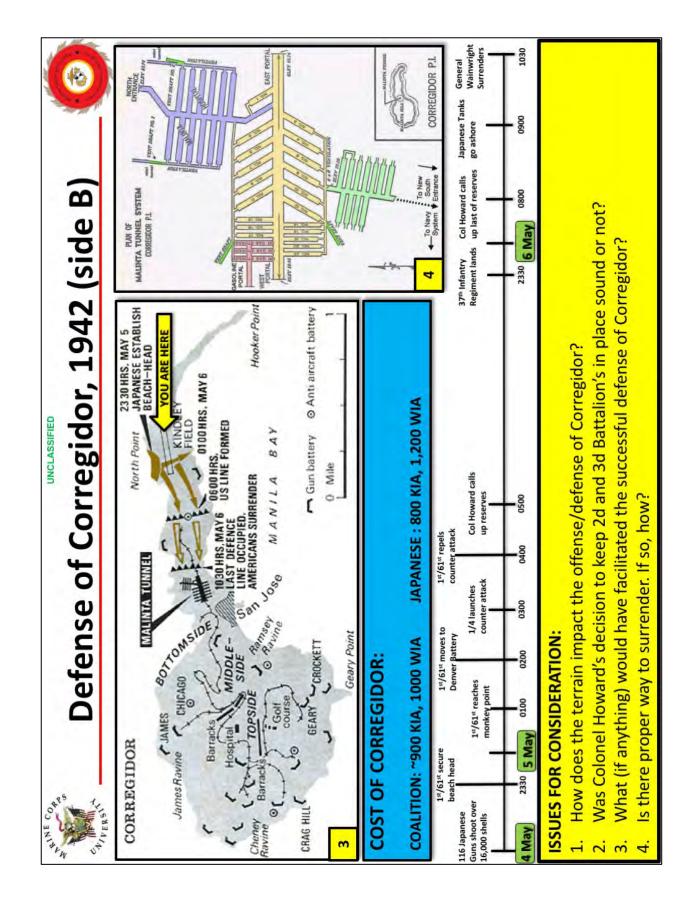
The Malinta Tunnels



Source: Department of Defense **Tail side looking west**. Kindley Airfield in the center. The Japanese established a beach head on "north point" to the center right of the photograph.

Prepared by: Major Dennis Katolin, USMC





INFORMATION PAPER

Subj: WWII: ASSAULT ON CORREGIDOR, 16–17 FEBRUARY 1945

1. Belligerents. Manila Bay Entrance Force (Japan) is the defending force, United States is the assaulting force.

2. **Major themes**. Triphibious operations, airborne assaults complementing amphibious assaults, shore-to-shore amphibious attacks, joint operations, landing beach characteristics, tightly coupled versus loosely coupled plans, intermediate objectives and decisive points, operational converging lines, surprise, deception, and chaos.

3. Key takeaways

- Triphibious operations: airborne operations are best employed to seize an objective (key LOC, node, or terrain) in support of an amphibious landing and/or when amphibious or ground forces will be able to link up with airborne forces inland in a timely manner. Airborne drops continually achieve the effect of surprise and increase chaos and friction for adversary forces.²
- Drop zones A and B were located on topside overlooking beach landing zone "Black Beach" and were determined to be the best positions from which to defend against counter attacks and provide fire support for the amphibious assault.
- Corregidor was an intermediate objective on a (Antoine-Henri) Jominian operational converging line.

4. Modern application to planning. This is a valuable case study to reference for the modern applicability and effectiveness of triphibious operations, use of intermediate objectives and decisive points in operational planning, and air and naval gunfire shaping bombardments.

5. Recommended references

Samuel Eliot Morison, *The Liberation of the Philippines: Luzon, Mindanao, the Visayas, 1944–1945.* (Annapolis: Naval Institute Press, 2012), 184–210.

Charles Willoughby and Gordon Prange, *Reports of General MacArthur: Campaigns of MacArthur in the Pacific*, vol. I, CMH Pub. 13-3 (Washington, DC: U.S. Army Center of Military History, 1966), 277–80.

Smith, Robert Ross, *The War in the Pacific: Triumph in the Philippines*. CMH Pub. 5-10 (Washington, DC: U.S. Army Center of Military History, 1963), 332–50.

² According to Merriam-Webster Dictionary, the term *triphibious* refers to employing, involving, or constituted by land, naval, and air forces and often including airborne troops in coordinated attack.

Terrain photographs: Corregidor Island is 3.5 mi x 1.5 mi

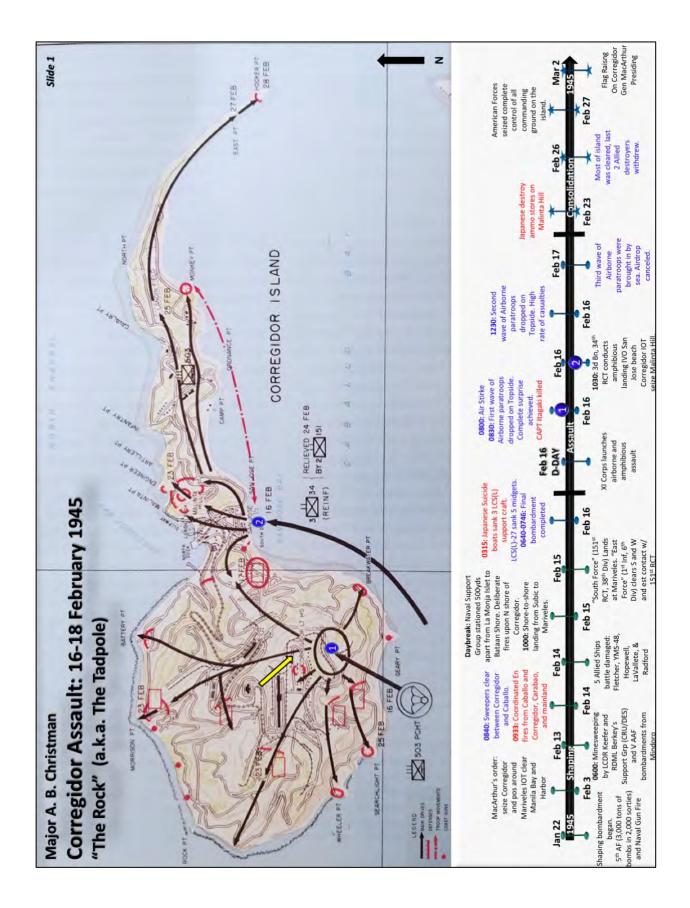


Drop zone A: The old parade deck was 325yds x 250yds. This vantage point is from topside (538' elevation) looking north-northeast. Beyond the trees is the north channel and the southern tip of the Bataan Peninsula, which contains Mariveles Harbor. At 0833, 3d Battalion, 503d Parachute Regimental Combat Team (503d PRCT) was dropped here and drop zone B in the first wave. At 1230, 2d Battalion, 503d PRCT, was dropped in the second wave. Both drop zones were covered with splintered trees, wrecked buildings, and bomb craters and surrounded by steep cliffs into the water.



Drop zone B: The old golf course is in the foreground (left); it was 350yds x 198yds. Vantage point is from the edge of topside, looking east-northeast into Manila Bay. Malinta Hill (and tunnel system), the primary objective for 34th Infantry Regiment, is pictured in the center. On 16 February at 1030, 3d Battalion, 34th Regimental Combat Team conducted an amphibious landing on San Jose Beach, or Black Beach, at Bottomside located over the cliff on the right edge of the photo and south center of the island.

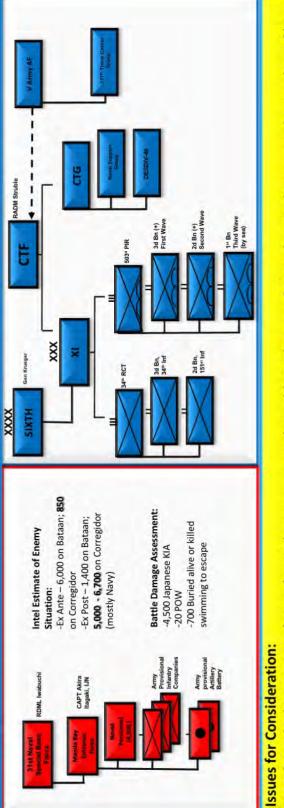
Prepared by: Major Ashley B. Christman, USMC



"The Rock should be taken by a shore-to-shore amphibious operation or parachute drop, or both." ~ General MacArthuistide 2 XI Corps: seize Corregidor and positions around Mariveles on the southern end of the Bataan Peninsula to secure the entrances to Manila Bay.

503d Parachute RCT: seize positions on topside to achieve surprise and defend against counterattacks and secure and hold fire support for the assault of the 3d Battalion, 34th Infantry, at bottomside; and finally, establish physical contact with the the DZs for subsequent waves. Prepare to move out and clear all of topside upon the arrival of the second wave; provide latter unit as soon as possible.

34th RCT: on D-day, 34th RCT conducts an amphibious landing in vicinity of San Jose beach on the south side of Corregidor to seize high ground on Malinta Hill and contain the Japanese on the eastern end of the island.



1. Let's study the terrain in front of us. What can we see that adds to the maps? How does it alter our understanding of how the tactics and operation unfolded? What appreciation do you gain for the effect of the environment on the operation? 2. What was the operational significance of seizing Corregidor? How did this objective support the overall plan? Was Corregidor an operational or strategic decisive point?

3. How successful was the airborne operation in supporting the amphibious assault? How does the Corregidor assault compare to the airborne and amphibious assaults in Operation Dragoon?

4. Was the Corregidor assault a tightly coupled or loosely coupled plan? Was that design beneficial to the conduct of the operation? Why?

INFORMATION PAPER

Subj: WWII: 24TH INFANTRY DIVISION AMPHIBIOUS ASSAULT LEYTE, 20 OCTOBER 1944

1. Belligerents.	Allies: United States, Australia		
	Key leaders:	CINCSWPA – General MacArthur	
		CINCPOA – Admiral Nimitz	
		COM THIRDFLEET – Admiral Halsey	
	Axis: Japan		
	Key leaders:	COM SOUTHERN ARMY – Field Marshal Terauchi 16th Division (defense of Leyte) – General Makino	

2. Major themes. Joint operations, naval airpower, landing beach characteristics, planning assumptions.

3. Key takeaways

- This operation occurs after all the amphibious assaults of the war have taken place in the European theater of operations and Mediterranean theater or operations and multiple assaults in both southwest Pacific areas and Pacific Ocean areas. It is the largest operation to date in the Pacific, utilizing a field army, and 24th Infantry Division is a highly experienced unit.
- The decision to accelerate operations in the Pacific impeded MacArthur's ability to establish airfields to allow land-based air to support the invasion of the Philippines. In planning, this was mitigated by substituting Halsey's 3d Fleet, specifically the fast carriers of TF-38. MacArthur did not have OPCON of these forces and Nimitz had ordered Halsey to use them to destroy the Japanese naval fleet if the opportunity arose, creating conflicting requirements for these naval air forces. Furthermore, naval air is not an exact substitute for land-based air; each force has different capabilities and limitations.
- The Leyte Gulf provided a deep anchorage that allowed naval vessels to get close to the beaches, reducing the travel of connectors from ship to shore. Red Beach was slightly concave, with approximately 100m of beach depth before running into swampy terrain. The beach was targetable by enemy artillery on Hill 522, and despite significant preparatory naval fires, enemy positions were not silenced until infantry took the hill.
- The United States did not foresee that Japan would consider Leyte the decisive battle. Both sides employed significantly more forces that originally assigned. U.S. engineers warned that the impending monsoon and Leyte Valley soil would severely extend airfield construction timelines. This proved problematic when naval air was retasked. Finally, U.S. planners did not envision that Japanese will to fight would result in the employment of kamikaze aircraft.

4. **Modern application to planning**. This is a great case study for understanding the advantages and disadvantages of land-based versus naval air. It also serves as a reference point for how coordinating authority versus OPCON can impact the employment of forces.

5. **Recommended reference**. M. Hamlin Cannon, *Leyte: The Return to the Philippines*, CMH Pub. 5-9-1 (Washington, DC: U.S. Army Center of Military History, 1993).

Terrain photographs:

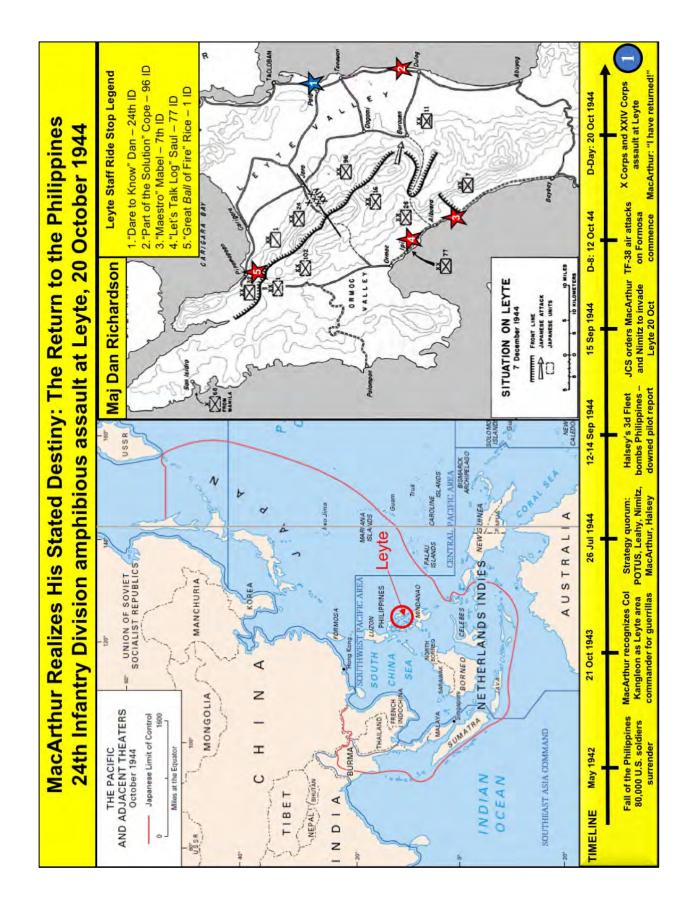


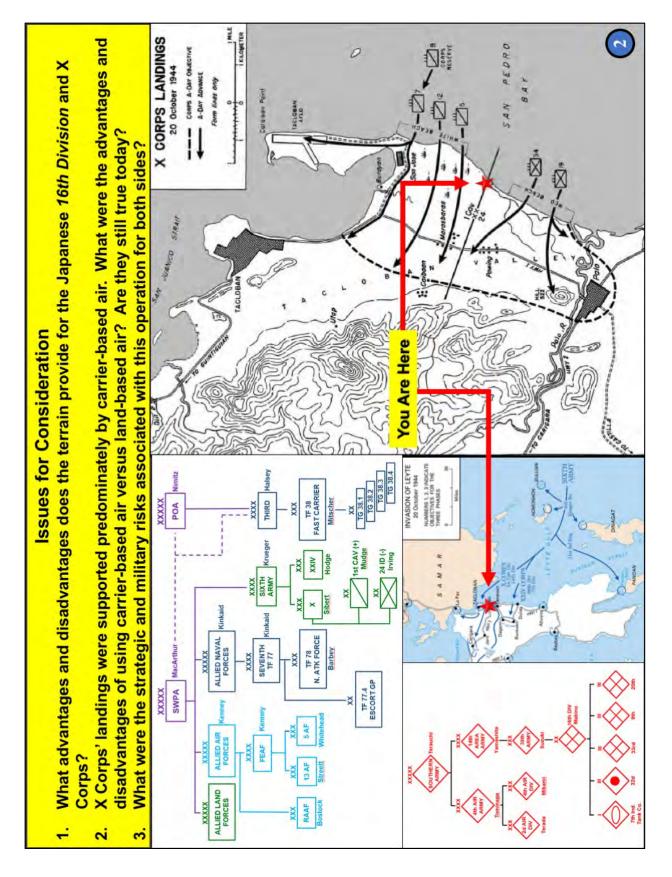
Red Beach, looking north, northeast. The 24th Infantry Division landed here with two regiments landing abreast.



MacArthur Landing Memorial National Park, looking east, northeast. MacArthur landed at Red Beach just hours after the landing took place to make a formal radio address to the people of the Philippines, announcing his return and the impending freedom of the Filipino people.

Prepared by: Major Dan Richardson, USAF





INFORMATION PAPER

Subj: 96TH INFANTRY DIVISION, XXIV CORPS: OPERATION KING II, 20 OCTOBER 1944

1. **Belligerents**. Sixth Army (Lieutenant General Walter Krueger) landing with X & XXIV (Major General John R. Hodge) Corps landing simultaneously. 96th Division (Major General James L. Bradley) is the focus of the stop.

2. Major themes. Landing beach characteristics, beach exits, inland terrain, task organization of reserve, mutual support at corps level.

3. Key takeaways

- The 96th Division landed with two brigades abreast and the last brigade designated as the Army-level reserve. The 381st Brigade was not released back to the division for operations ashore until D+7 when it became apparent that 96th Division needed the extra assets and forces to secure key terrain inland.
- Large rivers bisected the XXIV Corps landing with 7th Calvary Division landing south of 96th Division. There are two dominant terrain features that naturally drove the 96th Division into actions: Catmon Hill and Hill 120. For Hill 120, we climbed right off the road to see what an enemy observation point could see from the landing sights. Catmon Hill is the taller than Hill 120 by a factor of 10 and took nine days to secure once the 381st Brigade landed.
- 96th Division as a brand new division in the Pacific with no combat experience became the obvious choice to not attract a key role for Operation King II. However, the initial fighting and terrain that awaited the division as it crossed the beach required an accelerated return of the Sixth Army floating reserve to secure the beach landing sites.

4. Modern application to planning. This terrain very near a beach exit can be challenging to secure even for the most veteran of units. Consider the effects to mission support elements as a senior planning headquarters when the desire to maintain a reserve severely hampers the ability of a subordinate unit to execute their required tasks. Look at the terrain not simply from your planning level, but down multiple levels to anticipate how the upcoming fight will unfold.

5. Recommended references

M. Hamlin Cannon, *Leyte: The Return to the Philippines*, CMH Pub. 5-9-1 (Washington, DC: U.S. Army Center of Military History, 1993).

Robert Ross Smith, *The War in the Pacific: Triumph in the Philippines*, CMH Pub 5-10 (Washington, DC: U.S. Army Center of Military History, 1963).

Charles Willoughby and Gordon Prange, *Reports of General MacArthur: Campaigns of MacArthur in the Pacific*, vol. I, CMH Pub. 13-3 (Washington, DC: U.S. Army Center of Military History, 1966).

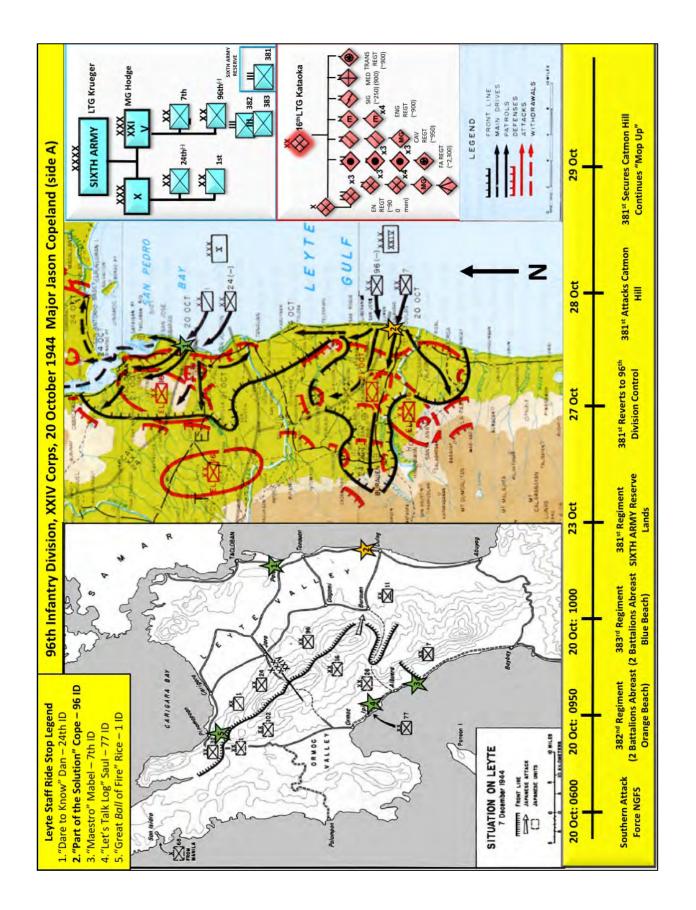


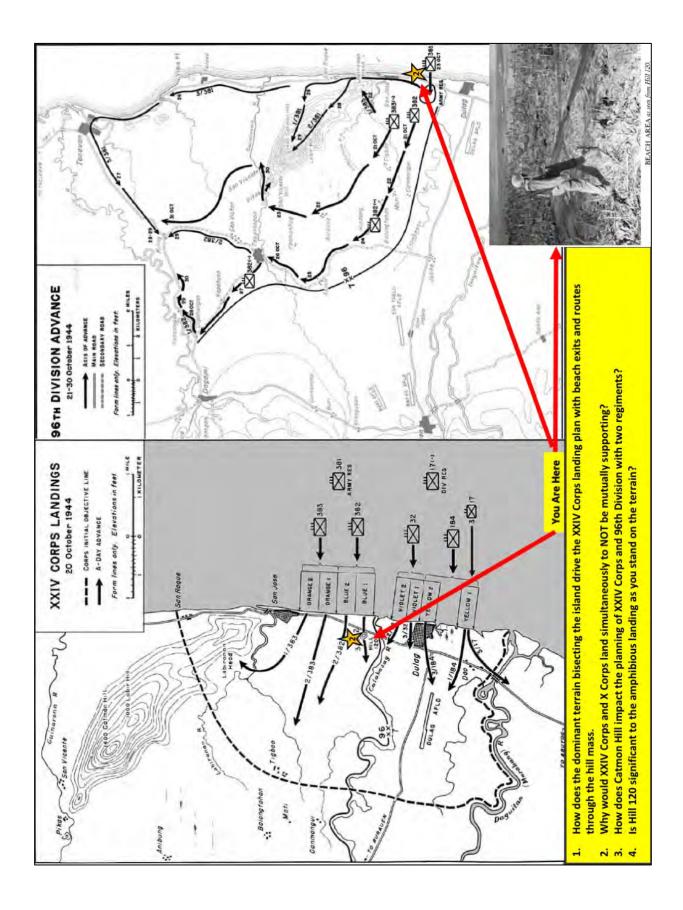
Beach landing sites for 96th Division with perfect grade and composition.



The 1944 view of **Catmon Hill** being shelled from the Leyte Gulf. Source: M. Hamlin Cannon, *Leyte: The Return to the Philippines*, CMH Pub 5-9-1.

Prepared by: Major Jason C. Copeland, USMC





INFORMATION PAPER

Subj: LEYTE – BATTLE OF THE RIDGES – 1ST INFANTRY DIVISION

1. **Belligerents**. U.S. 7th Infantry Division; commander, General Archibald V. Arnold; Japanese *26th Infantry Division*; commander, General Sōsaku Suzuki

2. Major themes. Joint operations, adaptation and innovation, effects of terrain, underestimation of enemy resolve, operational meeting engagement.

3. Key takeaways

- Although there was an anticipated shift in the plans, the Army and Navy worked jointly and conducted a series of successful amphibious assaults of the eastern coast of Leyte. Based on the changes in the original plan, 7th Infantry Division was not equipped and resourced for the myriad of tasks and terrain challenges they faced through the operation.
- The terrain and monsoon weather in Leyte impacted operations as much as the enemy threat. 1st Infantry Division contended with swamp lands in the Leyte Valley, restricted mobility corridors across the island and a series of sharply edged ridges that did not allow the full employment of division forces or the ability to leverage the all Allied combined arms capabilities (aviation/NSF). 7th Infantry Division was forced to maneuver in a two-regiment leap frog around the island and throughout the battle of the ridges.
- General Arnold adapted to the situation by placing the 77th Amphibian Assault Battalion at sea to cover the assault force and destroy enemy firing positions by leap-frogging north along the coast 1,000 yards ahead of the ground units. This tactic effectively disorganized the defenders, except where the enemy prepared artillery positions on the inland reverse slopes.

4. **Modern application to planning**. 7th Infantry Division operations in Leyte demonstrated the diversity of terrain and weather challenges that must be considered during planning. The 7th Infantry Division was not equipped or resourced for their follow-on operations beyond the amphibious assault. The restricted terrain and weather further constrained logistics support and the division conducted operations with "shoestring" logistics and sustainment. This caused a delay in securing their final objective. As the Japanese escalated their response, Sixth Army made the decision to commit the operational reserve (77th Infantry Division). This highlights the importance of a thorough terrain analysis and the necessity for reconnaissance prior to conducting operations.

5. Recommended references

Gordon Prange, *Reports of General MacArthur: Campaigns of MacArthur in the Pacific*, vol. I, CMH Pub. 13-3 (Washington, DC: U.S. Army Center of Military History, 1966). Robert Ross Smith, *The War in the Pacific: Triumph in the Philippines*, CMH Pub. 5-10 (Washington, DC: U.S. Army Center of Military History, 1963). Nathan N. Prefer, Leyte 1944: The Soldiers' Battle (Philadelphia, PA: Casemate, 2012).

Terrain photographs:

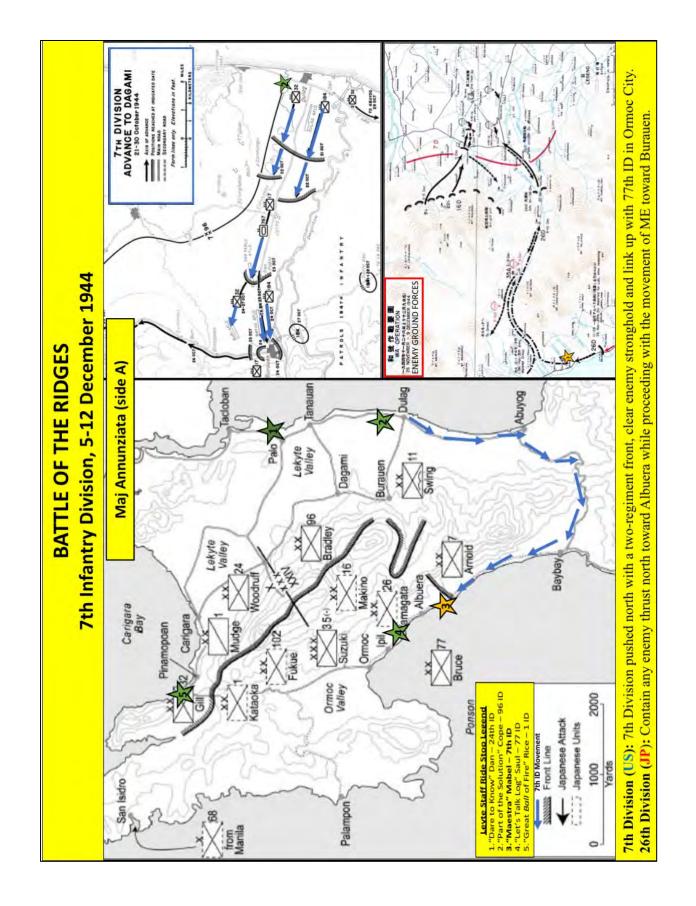


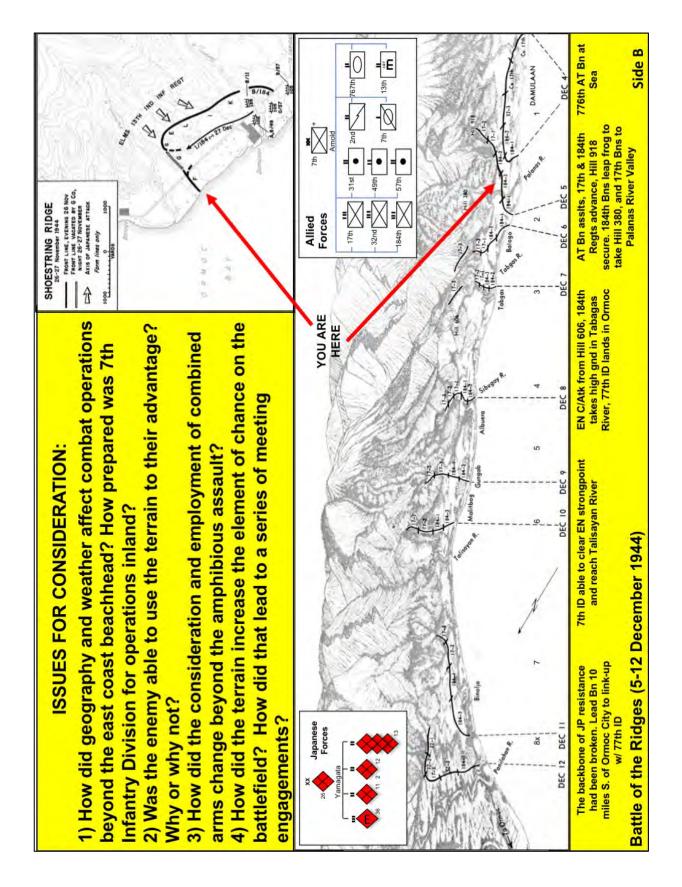
Shoe String Ridge. Depicted here are the rice patties at the foot of Shoestring Ridge and across from MSR 2. There were three artillery positions in the 32d Infantry in the ridge depicted. The main body of the ridge is covered with cogon grass, interspersed with palms and bamboo. Approximately 3,000 yards northeast of the road and the ridge, the terrain falls into a saddle and then rises to join Hill 918 (key terrain), where the enemy was able to observe the entire coast to Ormoc City.



Ridges in Damula-an, Leyte. The ridges in Damula-an is where 7th Infantry Division postured their forces to begin their The ridges assault. are approximately 1,000 meters from the shoreline. This allowed General Arnold to employ the 77th Amphibian Assault Battalion to support the assault forces. As the division maneuvered north the ridges opened up and allowing the employment of two regiments at a time.

Prepared by: Major Mabel B. Annunziata, USMC





INFORMATION PAPER

Subj: LEYTE – FALL OF ORMOC – 77TH INFANTRY DIVISION

1. Belligerents

0	
Japanese force:	Japanese 35th Area Army, Lieutenant General Suzuki
	26th Division, Lieutenant General Yamagata
	12th Independent Infantry Regiment (-), Colonel Oishi
Allied forces:	Sixth Army, Lieutenant General Walter Krueger
	77th Infantry Division, Major General Andrew D. Bruce
	TG-78.3, Admiral Arthur D. Struble
	5th Army Air Force, Major General Ennis C. Whitehead

2. Major themes. Terrain, airpower, naval support, and committing the reserve.

3. Key takeaways

- The actions taken by General Krueger for this surprise amphibious assault were unique to the environment of the Battle of Leyte. As a result of the difficulties and delays suffered by the allies' forces on the eastern coast of Leyte Island. The bold and daring attempt to land on the enemy's rear would be the foreshadow of Operations Chromite and Corporate years later.
- Terrain was especially favorable for the amphibious assault group, although the Navy and some Army leaders protested. The gentle slope and enclosed (concave beach) gravel soil approach made for a perfect connection to the near beach road of Highway 1. Additionally, the enemy had little presence in the Camotes Sea (from the south). Lastly, based on the staff ride, looking at the beach approach from east to west, one can see that there were several miles of gentle rise in the terrain before it became too difficult for an assault to be as any utility. Although a narrow beach entrance, Beaches White 1 and White 2 were the primary landing sites for the Ormoc assault.
- Amphibious operations are solely a naval affair—this operation (as most amphibious operations) required a significant investment by the 5th Army Air Force. Due to a tightly coupled plan for required for the seizure of Leyte and follow on operations to Mindoro, there was no aviation to spare for a new Ormoc amphibious assault. Once MacArthur cancelled the assault to Mindoro, the Army Air Force had shifted fighters, bombers, and Marine air to support the landing. The difficulty for the allies was that the Japanese army air force still maintained sorties to defend the beach with limited local air superiority. Ultimately, the diminishing Japanese air forces could no longer interdict due to effective kamikaze attrition.
- Similar to the airpower, naval support was critical to the amphibious assault. Unlike the 77th Infantry Division, which was trained and remained a cohesive unit throughout Hawaii training

and fought for the reclamation of Guam, TG-78.3 was a cobbling of ships to create hasty task group. The lack of naval intelligence and charting for this part of the word added to the hide tidal difference during the month of December. Also, without a large fleet of shooters (destroyers and cruisers), this task group would have to rejoin the fleet in the deep water regardless of LF status to prevent being run aground or being vulnerable to enemy Japanese task group. Additionally, there was no guarantee of maritime superiority. This jeopardized the landing force and the overly exposed task group.

• Planning for the reserve. This operational reserve was required at a decisive moment in the battle of Leyte. Normally an Army or Corps reserve would be employed at the prerogative of the respective commander. However, this one division's employment was briefed up to the Joint Chiefs of Staff and required MacArthur's approval.

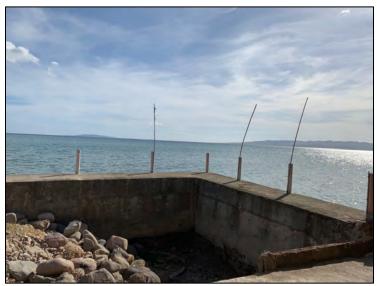
4. Modern application to planning

- This is a case study in audacious and risky missions that turn out for the better (worse for the Japanese) for the Allied forces. This was at a time (shortly after MacArthur landed with the Philippine President at Tacloban) when the stakes of failure or success were evidenced. If Leyte was one objective for the larger operation, a part of a larger campaign then the success of Ormoc was a strategic objective.
- Joint operations are difficult but necessary. Maritime weapons standoff, sortie generation, and integration with a landing force are not limited to Marine Expeditionary Units (MEU). TG-78.3 made significant time from aggregating on the East Coast and racing into the sea utilizing the EMPRA steps—embarkation, planning, rehearsal, movement, and action—very useful for today's crisis.

5. Recommended reference. Nathan N. Prefer, *Leyte 1944: The Soldiers' Battle* (Philadelphia, PA: Casemate, 2012).

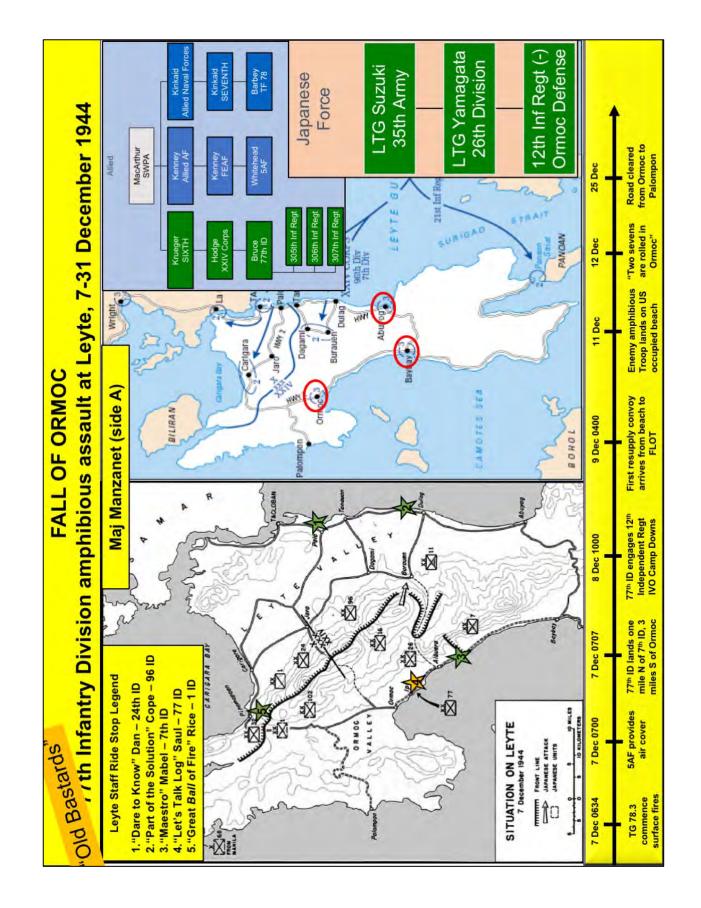


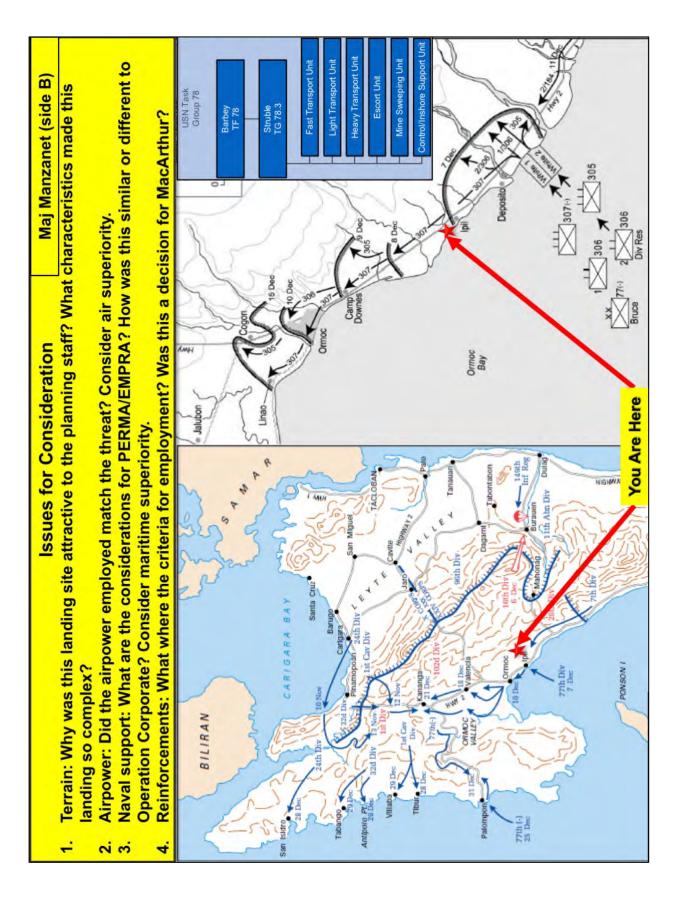
Ormoc Beach (White 1), looking southeast. Concave beach ranging from 25 to 400 yards in width or 1,800 meters. The beach terrain consists of a gentle slope, gravel and hard sand, multiple exits. This is the site of 307th Regiment, 306th Regiment, and Major General Bruce's command vessel (arrived at 0930).



Ormoc Beach (White 1), looking north. This would be the location where the eighth and last Tokyo express shuttle arrived into the awaiting 77th Infantry Division.

Prepared by: Major Saul Manzanet, USMC





5 March 2019

INFORMATION PAPER

Subj: LEYTE – 1ST DIVISION JAPANESE IMPERIAL ARMY (WWII PACIFIC THEATER/ BATTLE OF BREAKNECK RIDGE/17 OCTOBER – 26 DECEMBER 1944) [STAIRS TO STOP AT 11°18'06.6"N 124°34'04.3"E. OVERVIEW SITE NORTH INTO CARIGARA BAY AT 11°18'10.4"N 124°34'02.3"E]

1. **Belligerents**. ALLIES – United States, Commonwealth of the Philippines, and Australia. AXIS – Japan (*35th Army*, Lieutenant General Suzuki; Japanese Imperial Army *1st Division*, Lieutenant General Tadasu Kataoka).

2. **Major themes**. Chance and friction, adaptation in contact, weather and terrain impact on operations, criticality of lines of communication, predictability in operations, small unit tactics, timing and sequencing of combined arms.

3. Key takeaways

- AS A PLANNER...DO NOT STOP THINKING. *1st Division, 57th Regiment, Japanese planners became stagnant in their defense of Breakneck Ridge. They had such great success as division delaying X Corps' advance south along Highway 2 into the Ormoc Valley with only a regiment on their flank that they got complacent. This provided the X Corps the opportunity to innovate and the commander decided to conduct a double envelopment with an amphibious end run west to seize the high ground at Kilay Ridge at the Japanese rear to establish a road block on Highway 2 and prevent enemy reinforcements or egress.*
- IMPACT OF WEATHER AND TERRAIN. The Japanese heavily fortified the area, taking advantage of the dense wooded pockets that served as natural fortifications and created pill boxes at the end of natural lines of drift. They built an elaborate system of trenches, foxholes that were mutually supporting, and spider holes to hide and surprise the enemy. Some defensive positions were on reverse slopes some distance below the crests and were protected from direct fire. In front of each spider hole, the enemy had cut fire lanes through the cogon grass, which was left so short that even a crawling soldier would be exposed to fire. Rainfall made the hills and road slippery and treacherous, and provided a limited visibility in the day and covered movements of the Japanese at night.
- TIMING AND SEQUENCING OF COMBINED ARMS. The X Corps commander ordered the 52d Field Artillery Battalion to mass its fire immediately in front of the troops for 15 minutes just before they jumped off and then to shift its fire to the ridge. This was a consistent tactic, technique, and procedure (TTP) employed by the Americans to the point that they became

predictable. Varying the implementation of combined arms to avoid predictability unless shaping a deception through the Magruder principle is good planning at any level of planning.³

3. Modern application to planning. As a modern-day planner working in a dynamic environment either in peacetime or war, being rooted in the basics of military offense and defense provides a solid shift from known point for innovation adaptability. Continuous assessment and reassessment throughout planning and execution prevents stagnation and complacency.

4. Recommended references

M. Hamlin Cannon, *Leyte: The Return to the Philippines*, CMH Pub. 5-9-1 (Washington, DC: U.S. Army Center of Military History, 1993).

Wesley Craven and James Cate, eds., *The Army Air Forces in World War II*, vol. V, *The Pacific: Matterhorn to Nagasaki, June 1944 to August 1945* (Washington, DC: Office of Air Force History, 1983).

George W. Garand and Truman R. Strobridge, *History of the U.S. Marine Corps Operations in WWII*, vol. IV, *Western Pacific Operations* (Washington, DC: Historical Division, Headquarters Marine Corps, 1971).

Samuel E. Morison, *The Two-Ocean War: A Short History of the United States Navy in the Second World War* (Boston, MA: Brown, Little, 1963).

Robert Ross Smith, *The War in the Pacific: Triumph in the Philippines*, CMH Pub 5-10 (Washington, DC: U.S. Army Center of Military History, 1963).

Charles Willoughby and Gordon Prange, *Reports of General MacArthur: Campaigns of MacArthur in the Pacific*, vol. I, CMH Pub. 13-3 (Washington, DC: U.S. Army Center of Military History, 1966).

Terrain photographs:



Source: Google Maps.

Japanese Cemetery. Left side of the road headed north on Highway 2 at the T-intersection for 11°16'48.1"N 124°33'51.3"E

³ Confederate Army Gen John B. Macgruder believed that it is generally easier to induce a target to maintain a preexisting belief than to deceive them for the purpose of changing their belief



Source: Google Maps.

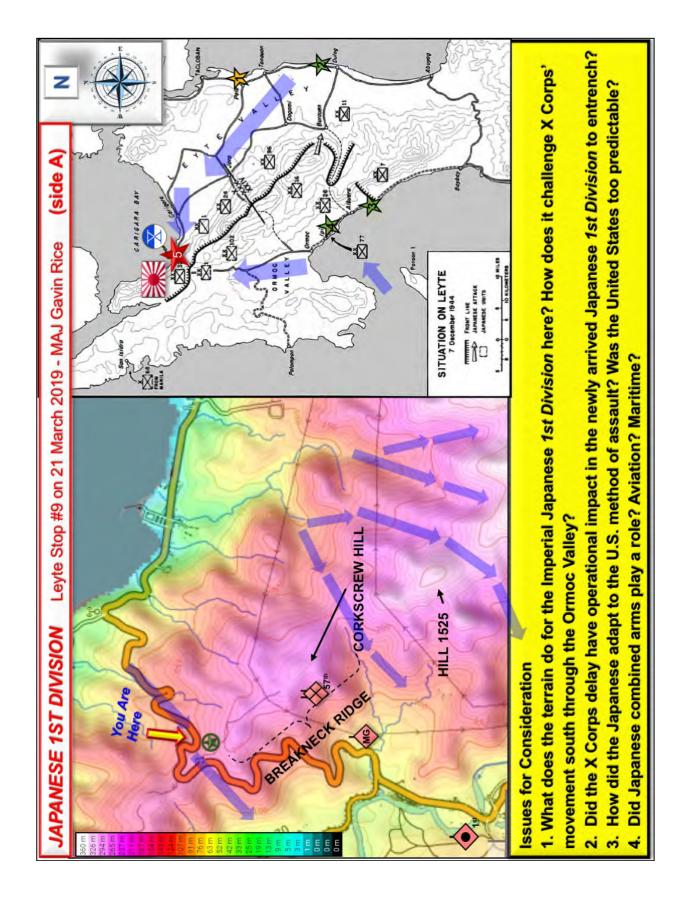
View of Breakneck Ridge looking south from Highway 2 along Carigara Bay. This would have been the perspective of X Corps moving from Leyte Valley from East to West along highway 2.

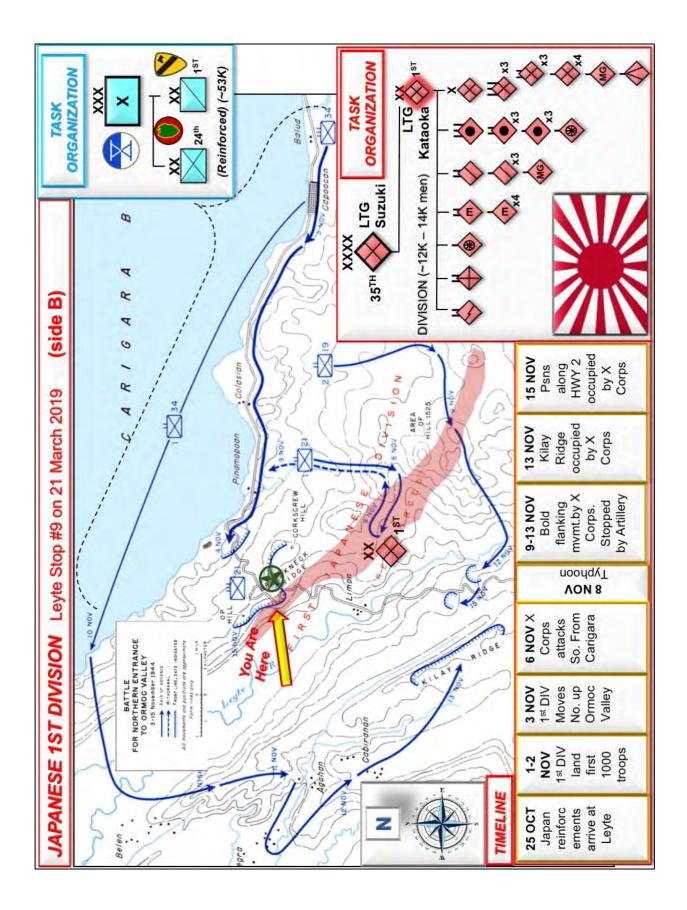


Source: Google Maps.

View of Leyte River Valley where the 24th Infantry Division conducted a bold end run to the west, flanking *1st Division*. The 24th Infantry Division had to cross mountains, a river in the open, and more mountains not knowing the disposition of the enemy. A very bold move to come behind the enemy and cut off their GLOC from the rear.

Prepared by: Major Howard G. Rice, USA





INFORMATION PAPER

Subj: SAIPAN – ASSAULT BEACHES 15 JUNE – 22 JUNE 1944

1. **Belligerents**. Japanese (*31st Army*) and Naval Forces (*5th Special Base Force*) commanded by Lieutenant General Yoshitsugu Saito, against the V Amphibious Corps commanded by Lieutenant General Holland M. Smith.

2. Major themes. Geostrategic location of Mariana Islands, two divisions abreast in opposed beach landing, commitment of reserve, supporting fires, principles of joint forcible entry operations (JFEO).

3. Key takeaways

- Saipan was to support the Central Pacific campaign plan to defeat Japan. Operation Forager the plan to seize the Mariana Islands was an intermediate objective that would allow the continued thrust of combat power west toward Japan. By taking Saipan first, the major Japanese headquarters (*31st Army*) would be destroyed and the Japanese main SLOC to Truk and Rabul would be cut.
- Saipan was the first large island to be seized as part of the Central Pacific campaign. This produced challenges for the preparatory naval and air bombardment. The three-and-half-day prebombardment did not effectively reduce many of the Japanese beach defenses and supporting arms that resulted in significant casualties in the first day.
- The 27th Infantry Division (Corps Reserve) was committed due to the casualties upon landing and the threat of Japanese fleet in the Philippine Sea forced the Amphibious Task Force to depart the amphibious objective area. Command and control issues arose with the 27th Infantry Division due to how it was brought piecemeal into the battle.

4. **Modern application to planning**. By looking at the battle for Saipan through the lens of JFEO, we are able to analyze past actions through modern concepts. Additional points that can be applied today were: 1) service equities matter and will drive Model II thinking; 2) logistics planning for JFEO needs to be adaptable and flexible based on changes to the plan driven by enemy or environmental factors; and 3) command and control of forces maintained even unit leaders are killed or wounded can only be accomplished through dedicated training and strong subordinate unit leaders.

5. **Recommended reference.** Maj Carl W. Hoffman, *Saipan: The Beginning of the End* (Washington, DC: Historical Division, Headquarters Marine Corps, 1950).

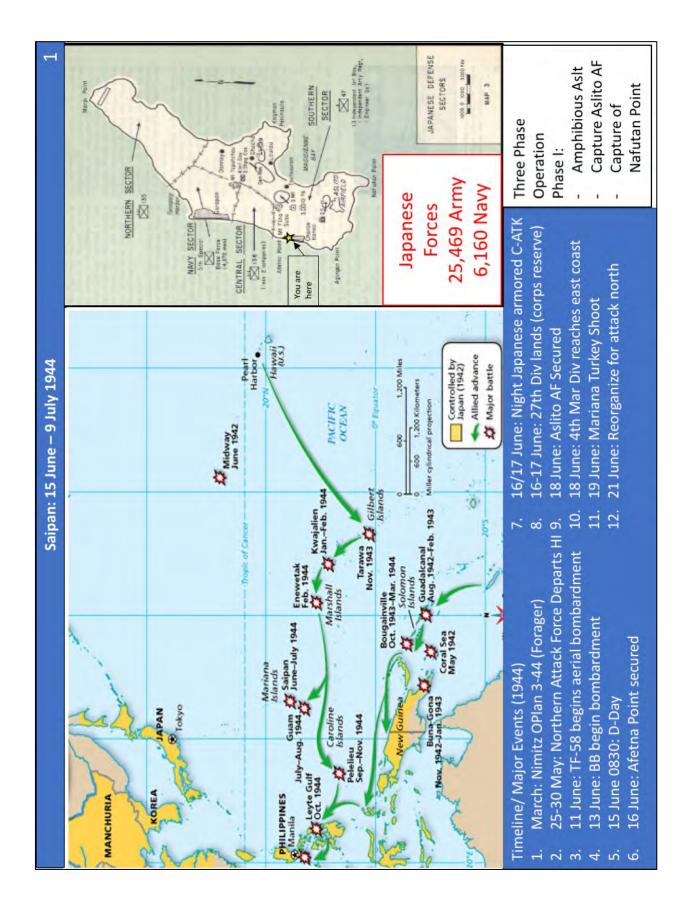


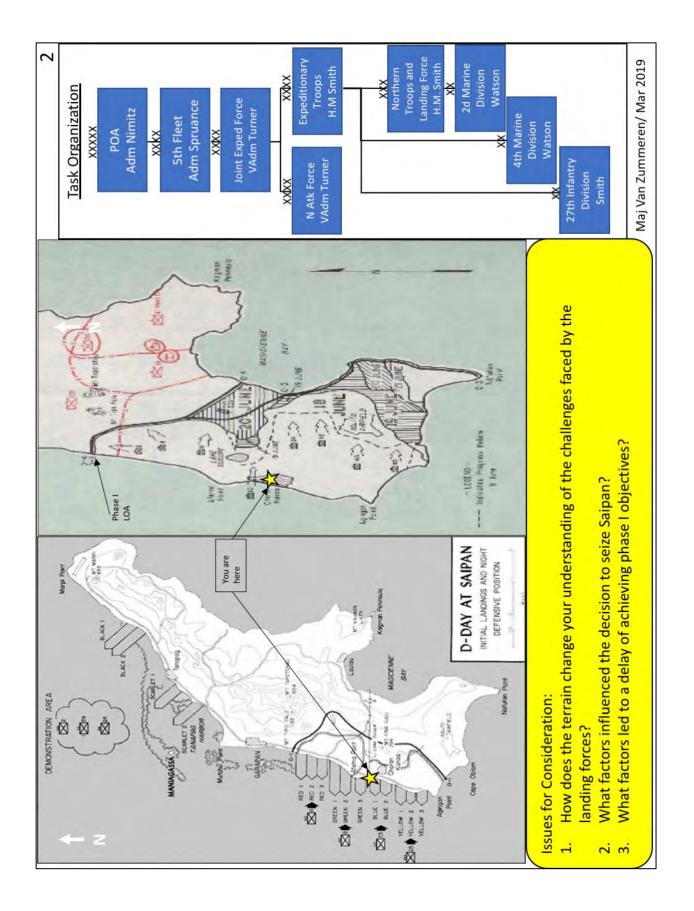
Saipan Beaches and objective area overview, looking south. Landing beach for 2d and 4th Marine Divisions, with Lake Susupe east of beaches.



Afetna Point, looking north. Here, the Japanese had a strong point. This also was the boundary between 2d and 4th Marine Divisions.

Prepared by: Major Troy Van Zummeren, USMC





INFORMATION PAPER

Subj: OPERATION FORAGER – INVASION OF TINIAN BY V AMPHIBIOUS CORPS

1. Belligerents. 50th Infantry Regiment (Colonel Kiyochi Ogata), 29th Infantry Division, Japanese Army 31st Division.

2. **Major themes**. Amphibious operations, innovation and adaptation, unity of command, role of air power and combined effects.

3. Key takeaways

- There were two drives across the Pacific: General MacArthur in the southwest Pacific; Admiral Nimitz in the Central Pacific. Operation Forager was the invasion of the Mariana Islands. Phase I was the capture of Saipan and Tinian for the purpose of advanced airbases. V Amphibious Corps assaulted Saipan on 15 June and Tinian on 24 July. Tinian is unique in that is just 3.5 miles south of Saipan, thus allowing unprecedented reconnaissance prior to assault as well as artillery support fired from Saipan during the assault.
- Naval gunfire support missions provided naval destruction, harassing, interdiction, neutralization fires on entire island. Counterbattery fires, area bombardments and interdiction were used to protect the landing force at White Beaches 1 and 2 that were not determined by the enemy as viable landing sites.
- Tinian provided a "series of firsts:" it was the shortest turn from a landing on Saipan to followon operation on Tinian, the first use of napalm, the first use of corps-level artillery in support of landing operations, and would later launch the B29 Enola Gay with "Little Boy" to drop the bombs on Hiroshima and Nagasaki.

4. **Modern application to planning**. Tinian proves a useful case study of JFEO from an island to an adjacent island utilizing artillery and aviation to shape the enemy occupied terrain. It provides a clear use of naval sector bombardment and may be tied to option for conceptual EABO and littoral operations in a contested environment (LOCE).

5. Recommended references

Wesley Craven and James Cate, eds., *The Army Air Forces in World War II*, vol. V, *The Pacific: Matterhorn to Nagasaki, June 1944 to August 1945* (Washington, DC: Office of Air Force History, 1983).

Philip A. Crowl, *The War in the Pacific: Campaign in the Marianas*, CMH Pub. 5-7-1 (Washington, DC: U.S. Army Center of Military History, 1993).

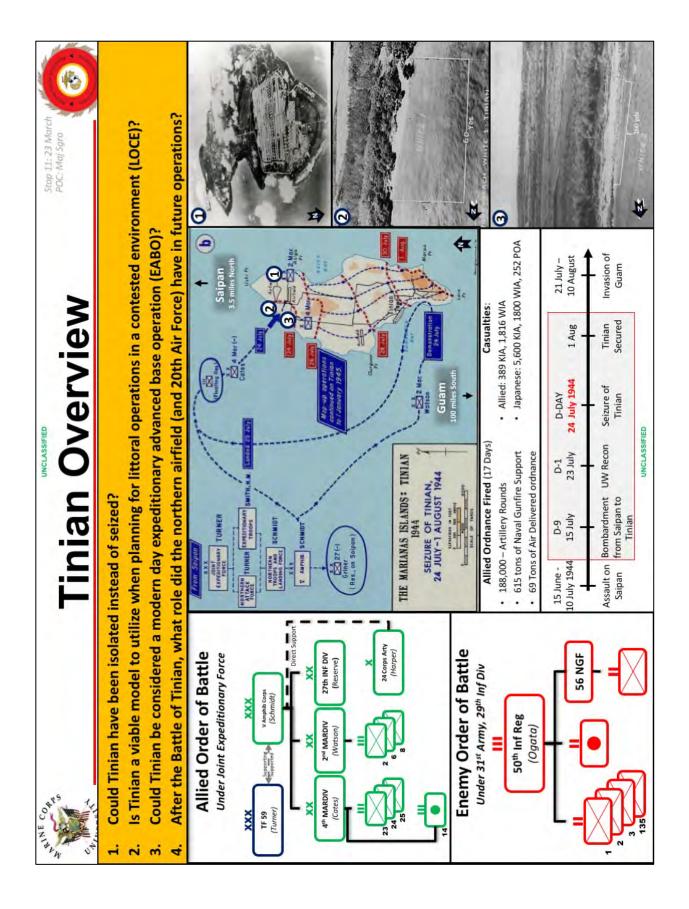
Jeter A. Isely and Philip A. Crowl, U.S. Marines and Amphibious Warfare: It's Theory and It's Practice in the Pacific (Princeton, NJ: Princeton University Press, 2016).

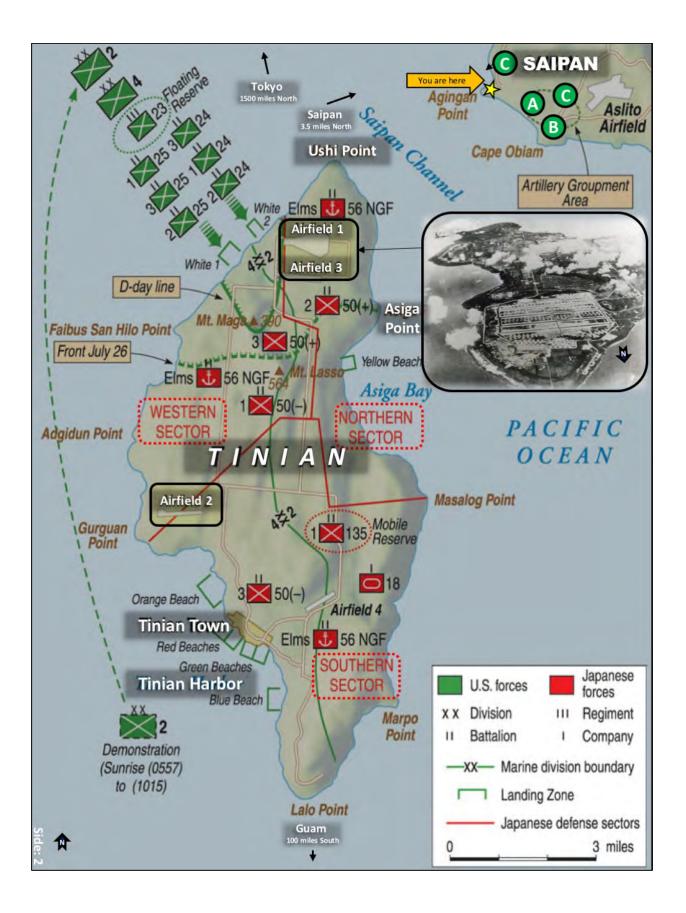
Samuel E. Morison, *The Two-Ocean War: A Short History of the United States Navy in the Second World War* (Boston, MA: Brown, Little, 1963).



None of Tinian applicable. We were standing on **Agingan Point, Saipan,** looking at the ocean with Tinian in the distance as shown above. This perspective provides context for the fire support range.

Prepared by: Major Joseph F. Sgro Jr., USMC





INFORMATION PAPER

Subj: SAIPAN – DEATH VALLEY, WORLD WAR II PACIFIC, 15 JUNE–9 JULY 1944

1. **Belligerents**. Allied Forces – V Amphibious Corps under Lieutenant General Holland M. Smith consisting of: 2d Marine Division under Major General Thomas E. Watson, 4th Marine Division under Major General Harry Schmidt, 27th U.S. Army Infantry Division under Major General Ralph C. Smith, and the XXIV Corps Artillery under Brigadier General Arthur Harper. Total Allied forces approximately 66,779 troops. Japanese Forces – *43d Division* of the Imperial Japanese Army under Lieutenant General Yoshitsugu Saito with a mixed force of infantry, artillery, antiair defense, tanks (approximately 48 light and medium tanks), and engineers. Total Japanese forces approximately 30,000 troops.

2. **Major themes**. Geography/terrain, resources/sustainment, learning/adapting, joint operations, organizational/Service cultures, leading/command, combined arms operations.

3. Key takeaways

- Complexity of terrain on Saipan compared to that of the Gilbert and Marshall Islands. Saipan was a large enough landmass for maneuver, defense-in-depth, and combined arms operations ashore. After failing to stop the Allied assault on the beaches, the Japanese took advantage of the terrain on Saipan to establish strong points and defensive pockets that slowed the Allied advance and forced them to take significant casualties. The Allied forces had to adapt quickly to overcome the Japanese defenses and had to fight through mountainous terrain, volcanic rock, sugar cane fields, swamps, and urban terrain with civilian populations and dense jungle vegetation. The terrain and fighting on Saipan was a prelude to future operations in the Pacific theater (i.e., Iwo Jima, Okinawa) where fighting was bloody, difficult, inch-by-inch, and against a fanatical enemy that increasingly resorted to a defense-in-depth to attempt to bleed the Allied forces white.
- Learning and adaptation took place with both the Allied forces and Japanese on Saipan. For the Allied Forces, tank-infantry integration, tactics associated with reducing pillboxes and cave positions (antiair guns in direct fire mode, flame throwers, clearing every inch) and combined arms operations were key adaptations. Additionally, the Allied forces adapted to the difficult terrain in Death Valley by moving away from linear frontal attacks and accepted temporarily losing contact with flank units to attack diagonally, conduct envelopments, and bypass strongholds to cut-off and isolate enemy strongpoints. The Allied forces also got exposure to urban operations, fighting a defense-in-depth, and fighting a fanatical enemy that would not surrender (i.e., suicide cliffs, "seven lives for my country"). The Japanese mainly adapted by moving to inland defense-in-depth arrangements in the face of Allied amphibious assaults.
- Command and leadership and Service cultures/conflicts. During fighting on Saipan in Death Valley, Marine Lieutenant General Holland Smith relieved Army Major General Ralph Smith, which created significant friction that lasted even after the conclusion of World War II. Regardless of who was right in the "Smith vs. Smith" debate, the important takeaways for

planners are the importance of understanding that personalities matter, Service equities are always involved, and organizational cultures—even within the same country—can have an impact on combat operations. Joint environments have the potential to create these types of issues and planners and commanders need to take them into consideration to maximize combat effectiveness.

4. Modern application to planning

- Geography/terrain always matter and have an immense impact on strategy and tactics employed by belligerents. Geography and terrain must always be studied and taken into account by planners formulating plans.
- Resources/sustainment are critical to operational success. In Saipan, the Japanese's fate was sealed with the Battle of the Philippine Sea (19–21 June 1944), which ensured Allied air and maritime superiority and ensured open SLOCs to sustain and reinforce forces ashore, while at the same time cutting off and completely isolating the Japanese forces on Saipan.
- Learning/adaptation due to the terrain and enemy on Saipan forced the Allies to adjust and adapt their tactics to defeat the Japanese forces. The enemy always has a vote; thus, ensuring plans are flexible enough to adjust and that forces are trained and prepared to learn and adapt on the fly in combat will set conditions for success in challenging environments against enemy forces.
- Organizational/Service culture means understanding that personalities matter, Service equities are always involved, and organizational cultures—even within the same country—can have an impact on combat operations. Joint environments have the tendency to create these issues and planners and commanders need to take them into consideration to maximize effectiveness.

5. Recommended references

Philip A. Crowl, *The War in the Pacific: Campaign in the Marianas*, CMH Pub. 5-7-1 (Washington, DC: U.S. Army Center of Military History, 1993).

Jeter A. Isely and Philip A. Crowl, U.S. Marines and Amphibious Warfare: It's Theory and It's Practice in the Pacific (Princeton, NJ: Princeton University Press, 2016).

Samuel E. Morison, *The Two-Ocean War: A Short History of the United States Navy in the Second World War* (Boston, MA: Brown, Little, 1963).

Wesley Frank Craven and James Lea Cate, eds., *Army Air Forces in World War* II, vol. IV, The *Pacific: Guadalcanal to Saipan, August 1942 to July 1944* (Washington, DC: Office of Air Force History, 1950).

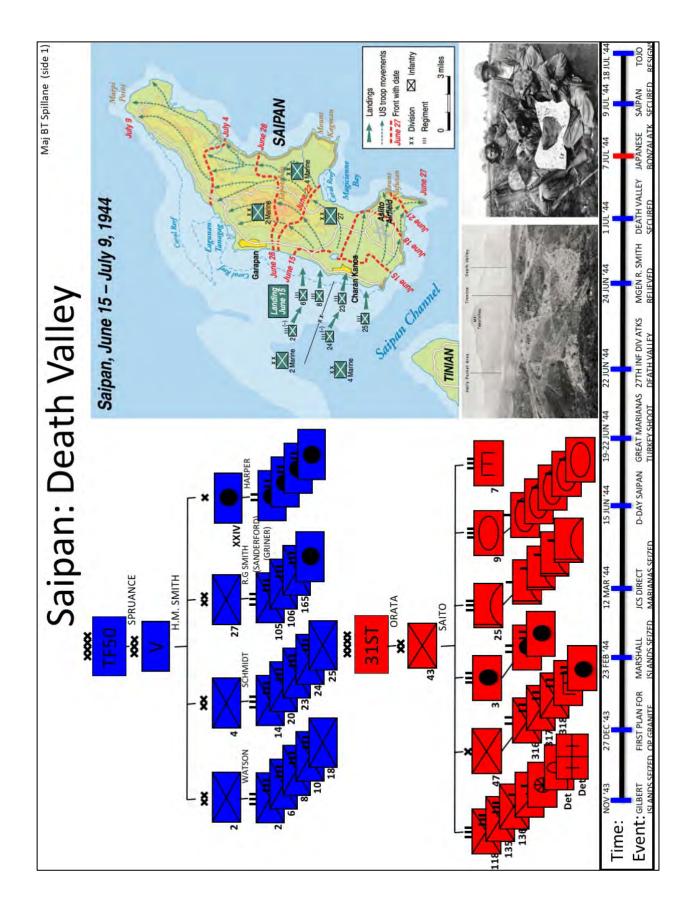


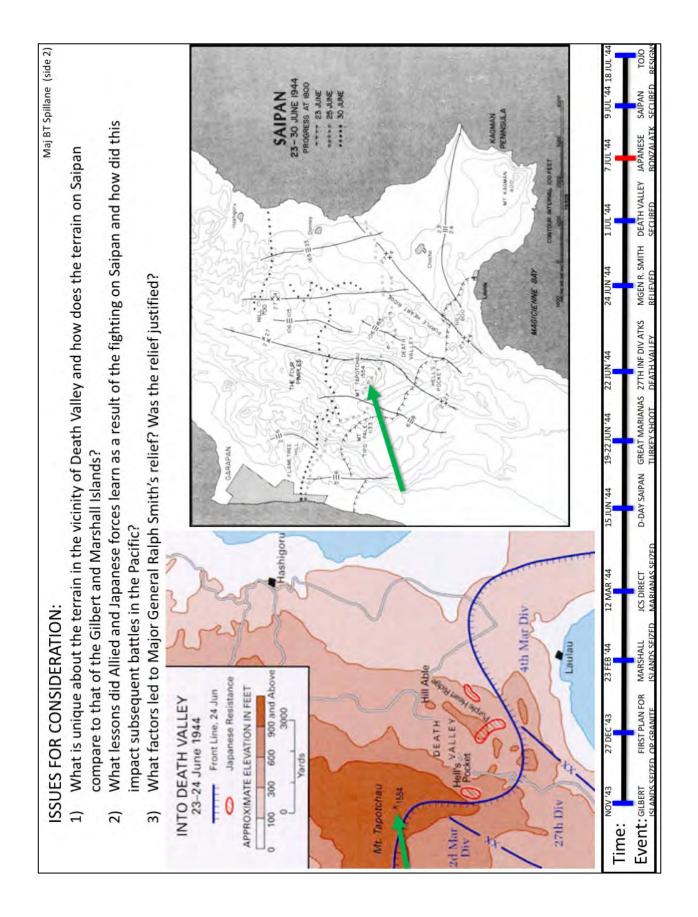
Mount Tapochau, looking east. Death Valley, Purple Heart Ridge, and Hell's Pocket are visible.



Mount Tapochau, looking southeast. Avenues of approach are visible.

Prepared by: Major Brian Spillane, USMC





INFORMATION PAPER

Subj: GUAM – ASAN BEACHES, OPERATION FORAGER, 21 JULY-10 AUGUST 1944

1. Belligerents

- Joint Expeditionary Troops, TF-51: Vice Admiral Richmond Kelly Turner
 - Southern Attack Force: Rear Admiral Richard L. Conolly
 - Southern Troops and Landing Force: Major General Roy S. Geiger
- Japanese Imperial Army's *31st Army*: General Hideyoshi Obata
 - 29th Infantry Division (+): General Takeshi Takashima

2. Major themes. Joint operations, amphibious operations, landing beach characteristics, key terrain, operational planning.

3. Key takeaways

- The seizure of Guam was one stage of Admiral Nimitz's Campaign Plan Granite II. During the Casablanca Conference in January 1943, increased importance was placed on the Mariana Islands due the development of B29s. Operation Forager called for the seizure of Saipan, Tinian, and Guam to support the establishment of airbases for B29s and the ability to cut the SLOC of the Japanese to Rabaul and Truk.
- Guam offers multiple, layered challenges to the execution of any amphibious operation. A coral reef extends from 25 to 700 yards surrounds the entirety of the island. Much of the coastline is prone to dangerous surf conditions and hampered by cliffs that prevent any large amphibious force from landing. Beaches in vicinity of Agat and Asan offer the best beaches to land an amphibious force, but present challenging follow-on terrain. It was described as "attacking into an amphitheater." Finally, the enemy recognized the limited landing sites and were therefore established in the defense along both of these beaches.
- Preassault fires from the joint force, combined with a near simultaneous landing on two separate landing sites, caused systemic shock to the Japanese defenders on Guam. Successful linkup of the two landing forces enabled a quick isolation and clear of the Orote Peninsula (LF Objective 1). Following the landings and seizure of LF Objective 1, a joint force (3d MarDiv and 77th Infantry Division) efficiently cleared Guam from south to north.

4. Modern application to planning

- The nesting of objectives and effects from tactical to strategic. The seizure of Guam was one stage of seizing the Mariana Islands. Seizing the Marianas was one phase of Admiral Nimitz Campaign Plan Granite II. The seizure of Guam impacted future operations (critical node for the Navy to support Operation Iceberg) and strategic objectives (Marianas supported the B29 bombing of Japan).
- Limited landing sites in amphibious operations incur significant risk to force that must be mitigated by thorough planning to include fires, sustainment, and reinforcement.

- The impact of successful preassault fires, combined with a multilanding site amphibious operation to gain a cognitive and physical advantage over the enemy.
- Effects of terrain cannot be discounted and must be considered in relation to both the enemy and friendly situation.

5. Recommended references

Philip A. Crowl, *The War in the Pacific: Campaign in the Marianas*, CMH Pub. 5-7-1 (Washington, DC: U.S. Army Center of Military History, 1993).

Cyril J. O'Brien, *Liberation: Marines in the Recapture of Guam* (Washington, DC: History and Museums Division, Headquarters Marine Corps, 2015).

Terrain photographs:



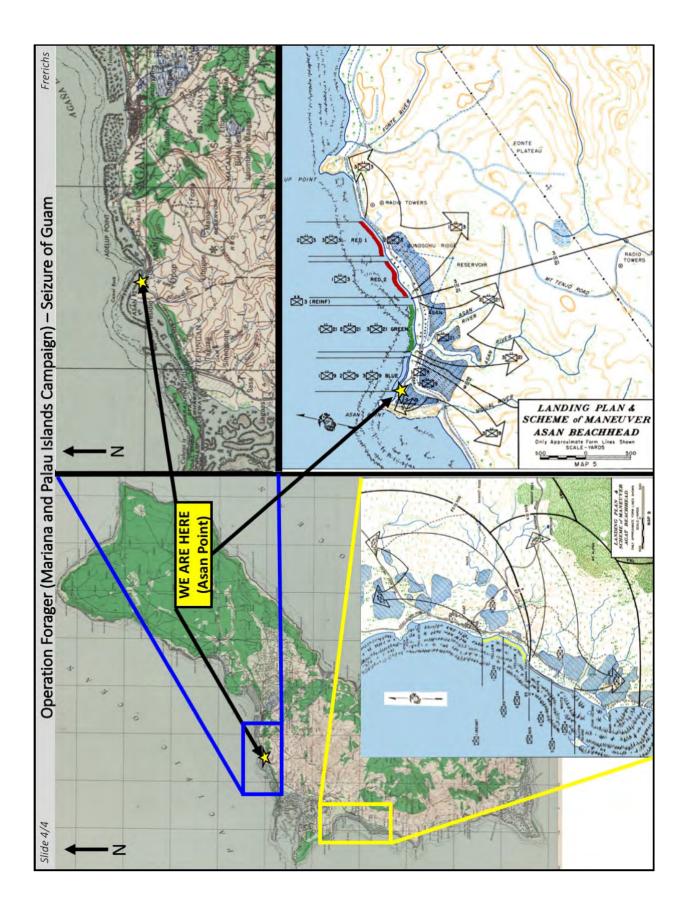
Source: National Park Service.

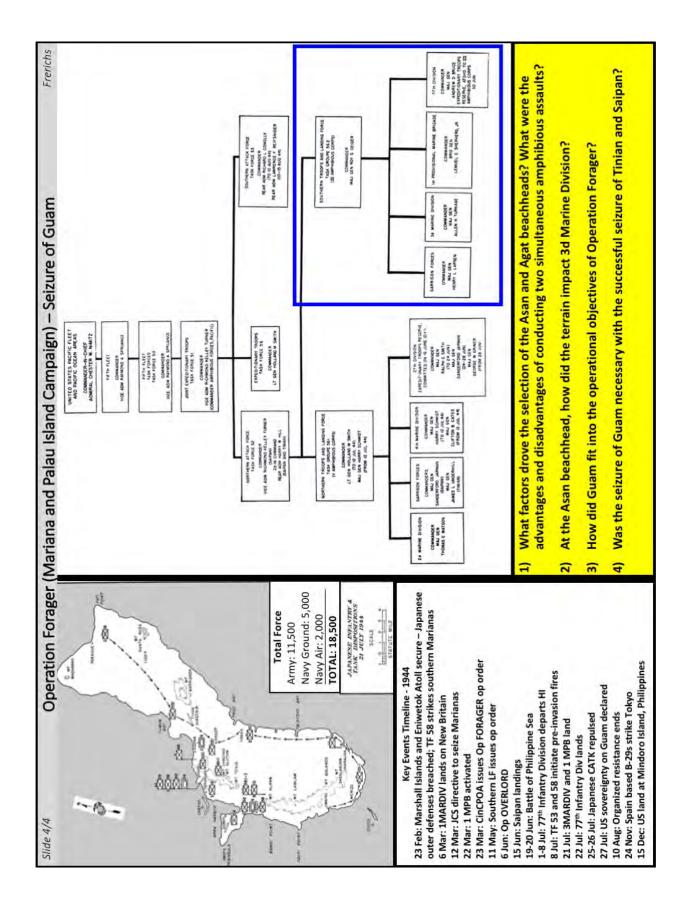
Asan Beach landing site (Blue, Green and Red Beaches), looking north. The entire landing site of 3d Marine Division. Japanese defended from a series of defensive positions from the BLS up and through the surround terrain.



Asan Beach landing site, looking east. Concave beach with a series of hills and increasing elevation amphitheater effect. Preassault fires neutralized the immediate beach defensive positions, but had limited effects on the defensive positions in the surrounding elevated terrain.

Prepared by: Major Jonathon Frerichs, USMC





INFORMATION PAPER

Subj: LONG BIEN (PAUL DOUMIER) BRIDGE, HANOI, VIETNAM

1. Belligerents. U.S. Air Force and Navy against North Vietnamese Key Terrain.

2. Major themes. Joint operations, targeting, key terrain, airpower, innovation and adaptation, level of war linkage.

3. Key takeaways

- Identifying key terrain in planning is critical, especially when employing the joint targeting process. Battle damage assessments (BDA) and operational assessments are an important part of the process to ensure that the destruction of targets achieve the operational objectives. The enemy may shift resources and focus efforts in other areas so it is important to reframe and constantly analyze the effects of targeting.
- Adaptation and innovation occurred on both sides as the two forces fought against each other. The United States struggled to destroy the two bridges during the bombings from 1965 to 1968, but innovation occurred with the creation of laser guided bombs (LGBs), which led to success during the 1972 bombing campaign. The Vietnamese adapted to the situation and shifted both defensive and repair tactics to ensure success. Air Force and Navy pilots also adapted to the situation and adjusted their bombing tactics to the new defensive measures.

4. **Modern application to planning**. The destruction of the two bridges offers a case study that we do not routinely discuss at SAW. The scenario provides valuable insight to operational planning, especially when compared and contrasted to current operations. The themes of joint operations, targeting, key terrain, airpower, innovation and adaptation, and level of war linkage remain relevant in the character of today's conflicts. Additionally, although not an actual theme throughout the curriculum, this case study offers perspective to the discussion of how symbolic resistance can impact operational planning.

5. **Recommended reference.** Major A. J. C. Lavalle, *The Tale of Two Bridges and the Battle for the Skies Over North Vietnam*, vols. 1 and 2 (Washington, DC, Office of Air Force History, 1985).

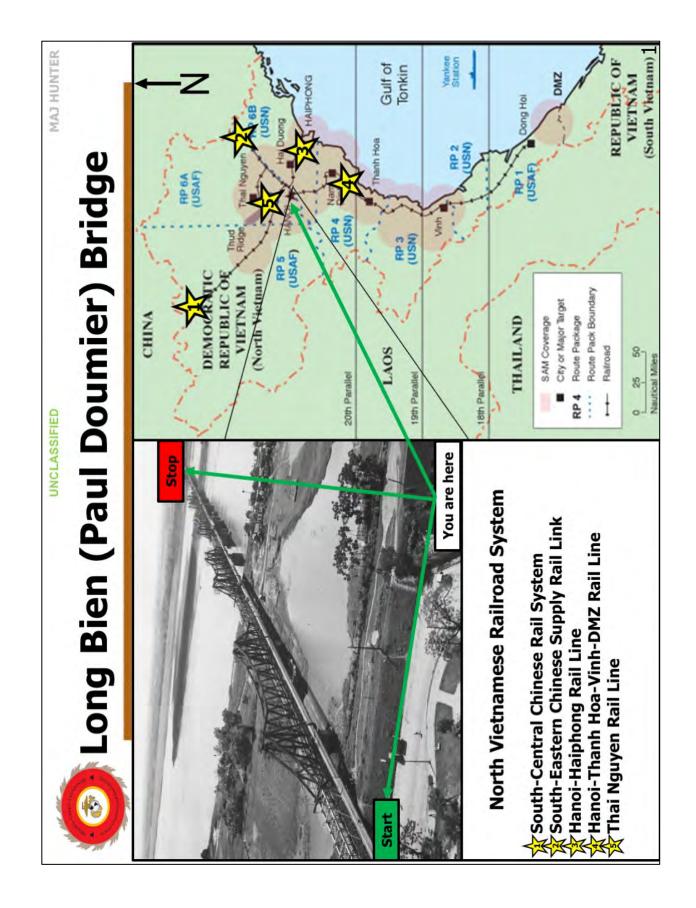


Long Bien Bridge, looking northeast from the south side of the Red River. Bridge is 1.5 miles long and 38 feet wide. It was the only bridge in Hanoi to cross the river during the Vietnam War.



Looking southwest from the bridge. Junction of old and new bridge is seen where ornamental hand railing ends and repair begins. Crack along the road surface also shows the seam.

Prepared by: Major Justin Hunter, USMC





INFORMATION PAPER

Subj: BATTLE OF HUE OVERVIEW (JANUARY 31–FEBRUARY 25, 1968)

1. **Belligerents**. People's Army of Vietnam and Viet Cong vs. Army Republic of Vietnam and U.S. Army/Marine Corps.

2. **Major themes**. Adaptation and innovation, command and control in a joint/multinational environment, operations in the information environment, changing character of conflict.

3. Key takeaways

- Optics, imagery, and narratives can have strategic effects that transcend battlefield realities. In a military sense, the ARVN/American forces defeated a bold COSVN gambit, grabbing the initiative and temporarily pushing PAVN/Viet Cong forces out of the country. However, poor use of friendly messaging and the influence of simple images like the Viet Cong flag that flew from the citadel for 30 days undermined the narrative of an ARVN/American victory.
- ARVN and Army/Marine Corps forces demonstrated adaptability following the surprise attack on Hue. They formed ad hoc organizations, employed systems and equipment in nontraditional ways, and adjusted to the different character of the fighting rapidly. This stands in contrast to PAVN/Viet Cong inflexibility. Having built only one course of action on the assumption that the initial attack would be completely successful, the PAVN/Viet Cong forces struggled to adapt to the ARVN/American defense and counterattack.
- As the battle devolved into a bitter attritional fight, urban and rural, limitations of sustainment became clear. Both sides attempted to interdict the LOCs of the other. PAVN/Viet Cong cut Route 1 and repeatedly attacked fire bases and air bases to limit their ability to support. American forces attempted to cut off the LOCs supporting PAVN/Viet Cong forces running into the city from the mountainous areas to the west. Both sides adapted with ARVN/American forces turning to maritime and aerial (largely curtailed by poor weather) logistics and PAVN/Viet Cong forces coercing South Vietnamese to labor moving supplies to support the fighters.
- C2 of ARVN, Army, Marine Corps, Air Force, and Navy forces conducting the counteroffensive proved difficult and largely failed to create a unity of effort. The joint and multinational nature of the situation added to the complexity of fighting in depth across the region and across terrain types in poor weather conditions. Command relationships adjusted throughout the rapidly changing situation to meet the needs of the moment but failed to achieve a unity of effort until after USMACV forward reached initial operational capability on or about 18 February 1968.

4. Modern application to planning. Hue offers a number of points still relevant today. C2 of joint and multinational forces will naturally tend toward diffuse efforts. Information operations should be central to military operations and planning efforts. Contingency planning should be a requirement,

not a nice-to-have. Adaptation to the changing character of conflict is a fundamental characteristic of successful military forces.

5. **Recommended reference**. Erik Villard, *The 1968 Tet Offensive Battles of Quang Tri City and Hue* (Washington, DC: U.S. Army Center of Military History, 2008).

Terrain photographs:

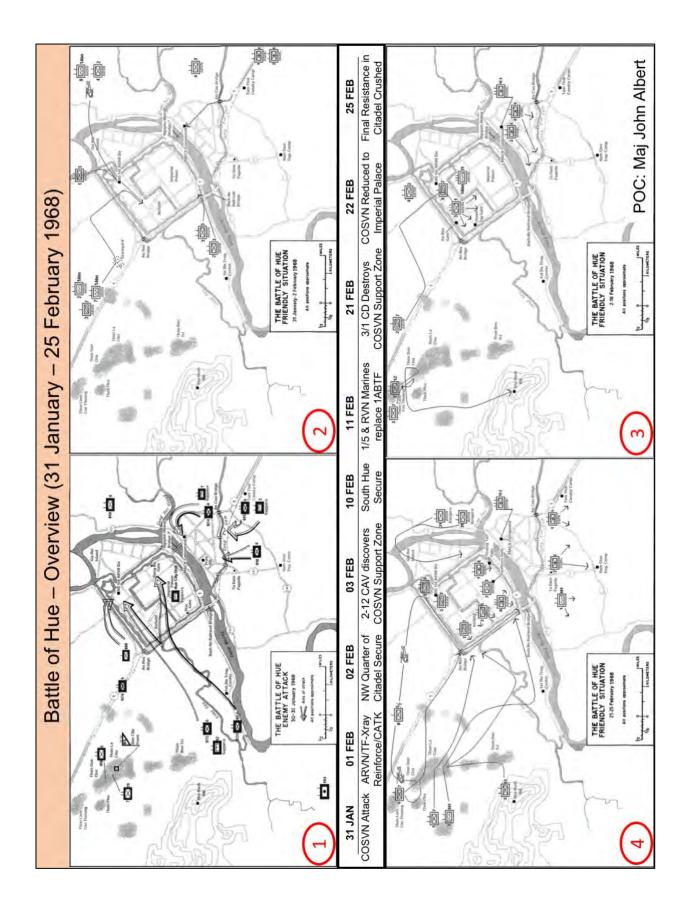


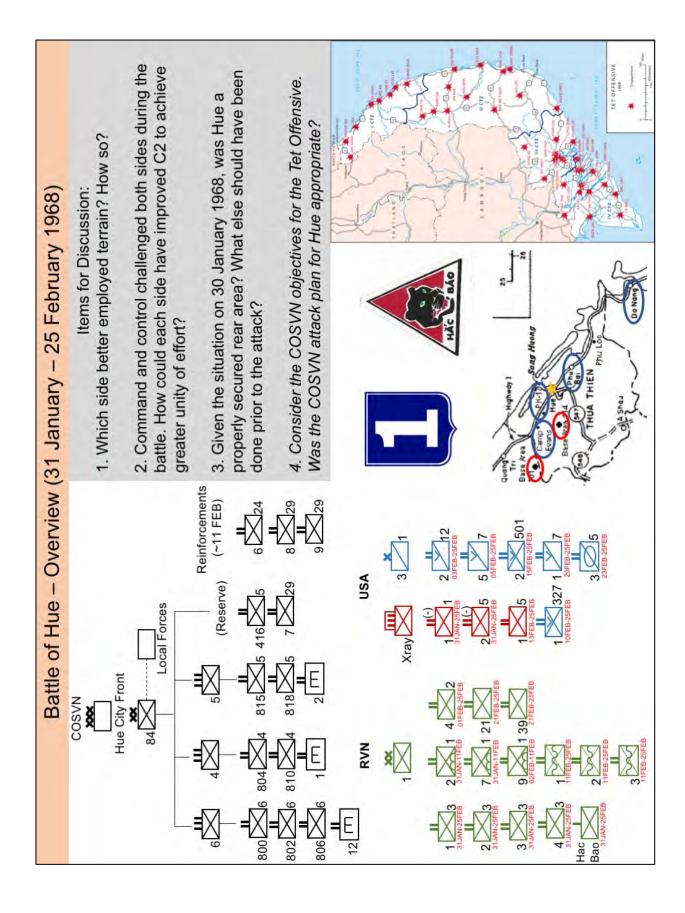
View from the Imperial Hotel (southern Hue), looking north. The Huong River Bridge is centered in the picture. The university is pictured foreground. 1st Battalion, 5th Marines, joined eight ARVN battalions in clearing the fortress north of the river. Note: western bridge (left side) was not present during the battle.



View from the Imperial Hotel (southern Hue), looking southwest. This area was known as the Triangle and housed the provincial government headquarters. 1st Battalion, 1st Marines, and 2d Battalion, 5th Marines, cleared this area.

Prepared by: Major John Albert, USA, and Major Tom Carey, USMC





INFORMATION PAPER

Subj: LOGISTICALLY SUPPORTING OPERATION HUE CITY'S TRIANGLE FIGHT, 1 – 11 FEBRUARY 1968

1. Belligerents. TF X-Ray (U.S. forces) - COSVN's Hue City Front (5th PAVN Regiment).

2. Major themes. Single battle concept applied to urban environment, logistics, role of firepower, planning for culmination.

3. Key takeaways

- The Triangle fight to clear southern Hue—south of the Perfume River, north of the Phu Cam River, and west of Route 1—commenced 1 February. TF X-Ray directed 1st Battalion, 1st Marines (V11), and Company G, 2d Battalion, 5th Marines, to attack west, south of the river, to secure the Thua Thien provincial headquarters and the provincial prison. Because of the dynamic nature of this urban fight and ferocious PAVN resistance, companies and battalions had difficulty anticipating logistical requirements. In particular, Marines employed significant and varied direct fire ammunition. Initial sustainment requests often escalated quickly from routine, to priority, to emergency. To enable the effort, TF X-Ray began force-feeding high priority cargo, immediately, without requests.
- 1st Marines assumed command of the Triangle fight on 3 February. The regiment owned sustainment on behalf of its battalions—V11 and V25—and established an logistics support area in southern Hue. The 1st Marines used, primarily, heliborne and overland convoys from Phu Bai along Route 1 to sustain various classes of supply. However, low cloud ceilings limited helicopter and close air support throughout the fight, and PAVN sappers blew the Au Cuu Bridge along Route 1 the evening of 4 February. Thereafter, TF X-Ray used Navy LCUs from Tan My along the Perfume River to deliver crucial sustainment to the Hue boat ramp on the river's south bank. Between 5 and 8 February, 1st Marines would receive three LCU loads with enough ammunition to support the remainder of the Triangle clear. In total, LCUs would deliver 400 tons of supplies, primarily ammunition and Class II during the course of the 10-day battle. The 90mm (M48 tank main gun rounds) and 81mm mortar rounds were critically low at some points, but these LCU and heliborne deliveries ultimately fueled the fight.

4. Modern application to planning. There are no rear areas in the modern urban battlespace; every domain therein is contested, and force protection of logistical troops is no less important than riflemen closing with the enemy. Planners must design logistical networks able to surge at the outset to avoid premature culmination and subsequently fuel extended, intense urban combat. Unlike Hue's Triangle clear, which featured a U.S.-only force, the future fight is likely a coalition effort. U.S. logisticians will support American and host nation or third-country warfighters, with their attendant peculiar sustainment needs.

5. Recommended references

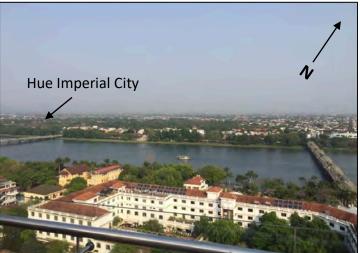
Erik B. Villard, *Combat Operation: Staying the Course, October 1967 to September 1968*, CMH Pub. 91-15 (Washington, DC: U.S. Army Center of Military History, 2017), chap. 12.

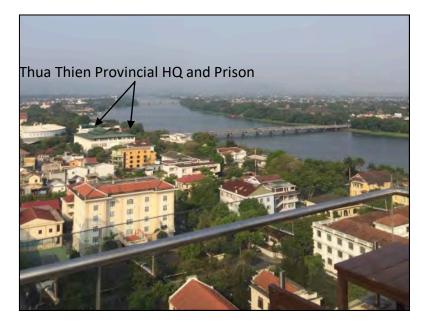
"Combat After Action, Operation Hue City," 14 April 1968, TF X-Ray, 1st Marine Division Vietnam Center and Archive, Texas Tech University, Lubbock, TX.

Jack Shulimson et al., *U.S. Marines in Vietnam: The Defining Year, 1968* (Washington, DC: History and Museums Division, Headquarters Marine Corps, 1997), 105–11, 164–91.

Terrain photographs:







Prepared by: Major Jeff Brewer, USMC

INFORMATION PAPER

Subj: OPERATION HUE CITY, CITADEL AND FLAGPOLE, 1968

1. **Belligerents**. During 11–25 January 1968, enemy forces within the Citadel consisted two reinforced battalions of the 6th NVA Regiment. Friendly forces consisted of elements of 1st ARVN Division including TF-A, NVMC, and 1st ARVN Division Airborne TF. The airborne TF conducted a relief in place with 1st Battalion, 5th Marines (subordinate to TF X-Ray), on 12 February.

2. **Major themes**. Complexity of urban terrain, escalation of rules of engagement (ROE), information operations.

3. Key takeaways

- *Complexity of urban terrain.* The Battle of Hue demonstrates the complexity of urban terrain. Casualties in the battle of Hue were seven times higher than in nonurban operations, and within the Citadel itself casualties were 20 percent greater than in South Hue. Beyond the obvious advantages afforded to the defense in urban terrain, which include multiple opportunities for enemy strong points, naturally occurring obstacles and ideal terrain for defense in depth, group discussion identified that linear (gridded) streets offer simple solutions to tactical control measures but also give the enemy an element of predictability in friendly actions. The compartmentalized nature of the houses and blocks make urban fighting a manpower intensive, small unit fight. Small units must be supported by close coordination with adjacent units, including partner nations.
- *Rules of engagement escalation.* It should be expected that ROE will be initially constrained in an urban environment (owing to density of civilian population and infrastructure); however, as exemplified at Hue, final clearance operations often necessitate a rapid escalation of ROE. It was generally excepted during discussion that this was a necessary evolution, even if for informational effects. Of importance is relating ROE to military objectives, that is restrictions need to support a military objective.
- *Information operations*. Hue exemplifies a tactical victory that became a strategic defeat due to failure to control the narrative. The informational effects of the Viet Cong flag flying from the Citadel drove operational planning on both sides. Media presence during the battle and the powerful images that were projected into domestic living rooms outpaced USMACV ability to control the narrative. Operation Hue City can be said to have culminated with Walter Cronkite's declaration of a stalemate in Vietnam on 27 February 1968, and with that declaration President Lyndon Johnson determined he had lost middle America.

4. Modern application to planning. Population growth and urbanization trends suggest that future conflicts are most likely to occur in coastal cities. The challenges presented to TF X-Ray in Hue City are the same challenges that should be anticipated in future urban warfare.

5. Recommended references

Alec Wahlman, *Storming the City: U.S. Military Performance in Urban Warfare from World War II to Vietnam* (Denton: University of North Texas Press, 2015).

Nicholas Warr, *Phase Line Green: The battle for Hue, 1968* (Annapolis: U.S. Naval Institute, 2013). As the most frequently read book on the battle for Hue, this is an important read, but should be read with healthy skepticism and in conjunction with official history and other works. It is the perspective of one platoon commander and is understandably limited.

U.S. Army official history provides a good overview of the complete battle (to include 1st ARVN, 12th Cavalry, and Marine Corps efforts, while Marine Corps official history provides a detailed account of the fighting in both south and north Hue. Multiple after action reports are also readily available and can be found in the student drive.

Terrain photographs:

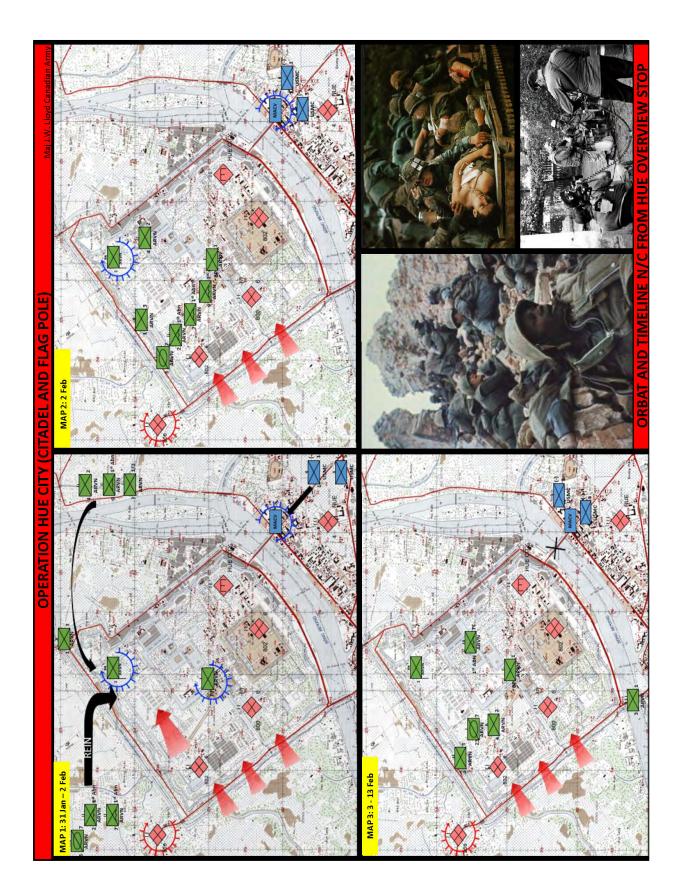


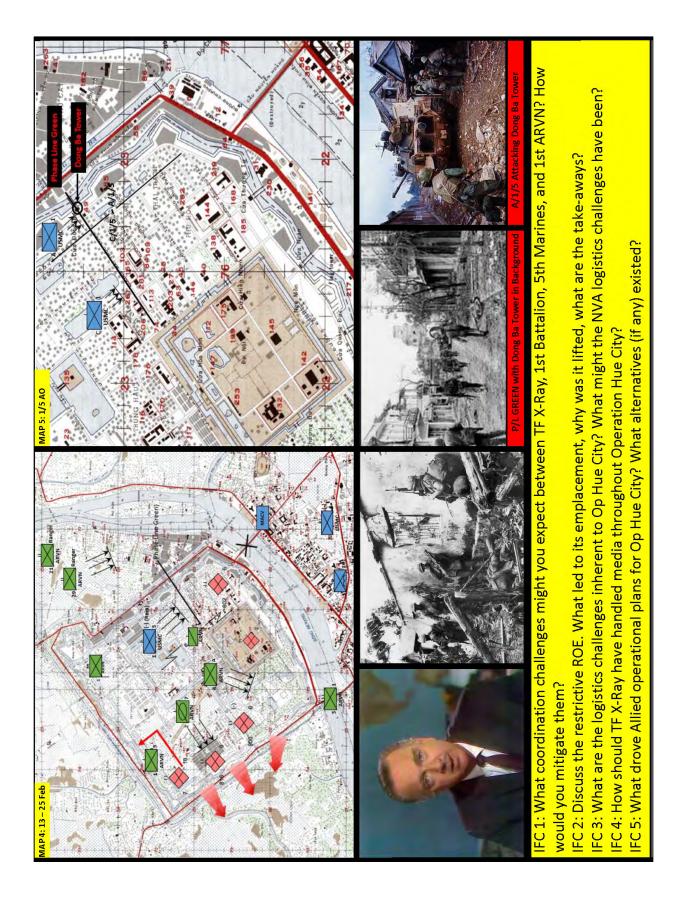
Phase Line Green from Dong Ba Tower (2019)



Source: Erik Villard Twitter feed. Dong Ba Tower in Background (1968)

Prepared by: Major J. W. Lloyd, Canadian Army, and Major C. Nash, USMC





INFORMATION PAPER

Subj: KHE SANH – THE HILL FIGHTS, VIETNAM WAR, 24 APRIL–11 MAY 1967

1. **Belligerents**. U.S. Forces: 3d Marines; 1st Marine Aircraft Wing (1st MAW); Company B, 1st Battalion, 9th Marines; Company K, 3d Battalion, 9th Marines; 2d Battalion, 3d Marines; 3d Battalion, 3d Marines. PAVN Forces: *325C Division*.

2. **Major themes**. Air ground team integration, adaptation and innovation, importance of geography and terrain, resources and sustainment.

3. Key takeaways

- The Hill Fights is one of the finest examples of the effective employment of the air-ground team. 3d Marines fought a conventional infantry battle against a well-entrenched and well-prepared PAVN force. Though Marine infantry took back the ground previously occupied by PAVN the overwhelming force came from supporting arms. The 1st MAW flew more than 1,100 sorties, expending in excess of 1,900 tons of ordinance. Air support was provided by Air Force Boeing B-52 Stratofortresses and 24-hour close air support (CAS) from 1st MAW. U.S. Army and Marine artillery fired more than 25,000 supporting rounds. Prior to the attacks on the enemy's positions, preassault fires literally blew enemy forces off of their positions.
- The PAVN had a detailed plan to overrun Khe Sanh reminiscent of the siege of Dien Bien Phu. It entailed isolating the combat base from air and ground support. Furthermore, enemy forces had constructed an elaborate bunker network in the hills to the north and west of Khe Sanh. If the active reconnaissance and patrolling effort of the Marines had not been in place, PAVN forces may have succeeded in accomplishing their operational objectives.
- While Marine units fighting in the hills north of Khe Sanh began to take casualties they experienced challenges with the evacuation of their wounded. Based on the complexity of the terrain, vehicles could not get to their positions to evacuate wounded Marines. PAVN forces took advantage of the terrain and the restrictions it placed on the Marines by deliberately targeting the few usable landing zones (LZ), effectively limiting and in some cases completely preventing helicopters from landing to evacuate casualties and resupply the ground forces.

4. Modern application to planning

- Geography and terrain are a constant. They affect both attacker and defender and, if not planned for and studied, have the potential to have an immense impact on both the strategy and the tactics of all parties involved in the fighting.
- Resources and sustainment are critical to operational success. The Marine's ability to leverage their available aviation assets in the role of assault support, CAS, and strike capability allowed a numerically inferior forces to route a dug in well prepared numerically superior force from occupied high ground.
- The best defense is an active offense. If the company occupying the Khe Sanh combat base in the winter and spring of 1967 had not remained offensively minded and had not continuously

pursued the enemy through active patrolling, there is a possibility that they would not have had the meeting engagement with PAVN forces on 24 April 1967. Through this engagement, the PAVN was forced to initiate a spoiling attack that desynchronized their planned complex attack preventing them from succeeding in their overall strategy for I Corps.

5. Recommended references

Graham A. Cosmas, *MACV: The Joint Command in the Years of Escalation*, 1962–1967, CMH Pub. 91-6-1 (Washington, DC: U.S. Army Center of Military History, 2004).

George L. MacGarrigle, *Combat Operations: Taking the Offensive, October 1966 to October 1967*, CMH Pub. 91-4-1 (Washington, DC: U.S. Army Center of Military History, 1998).

Captain Moyers S. Shore II, *The Battle for Khe Sanh* (Washington, DC: History and Museums Division, Headquarters Marine Corps, 1969).

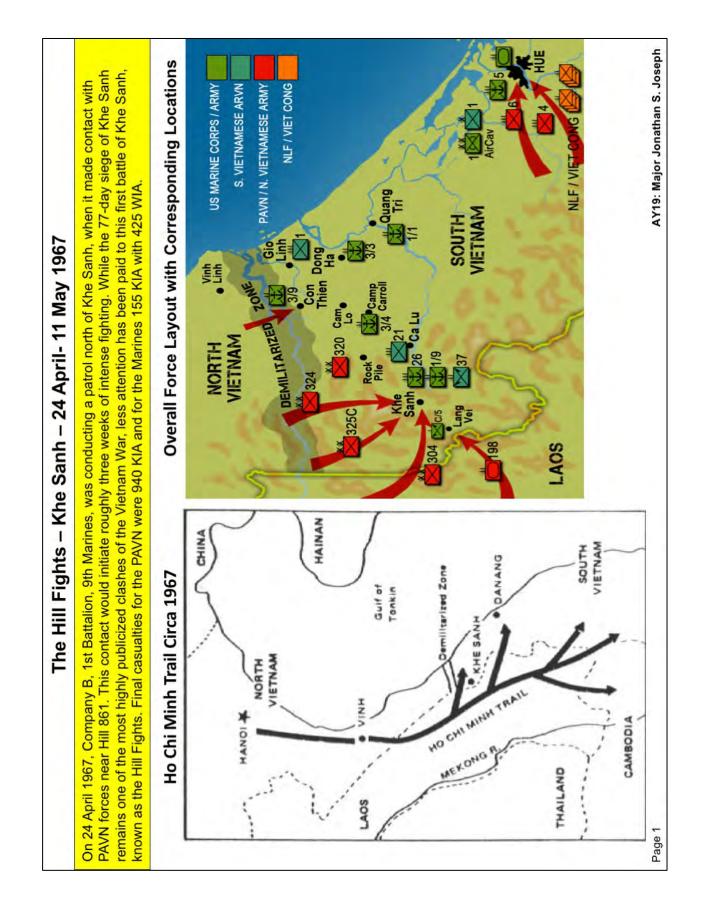
Terrain photographs:

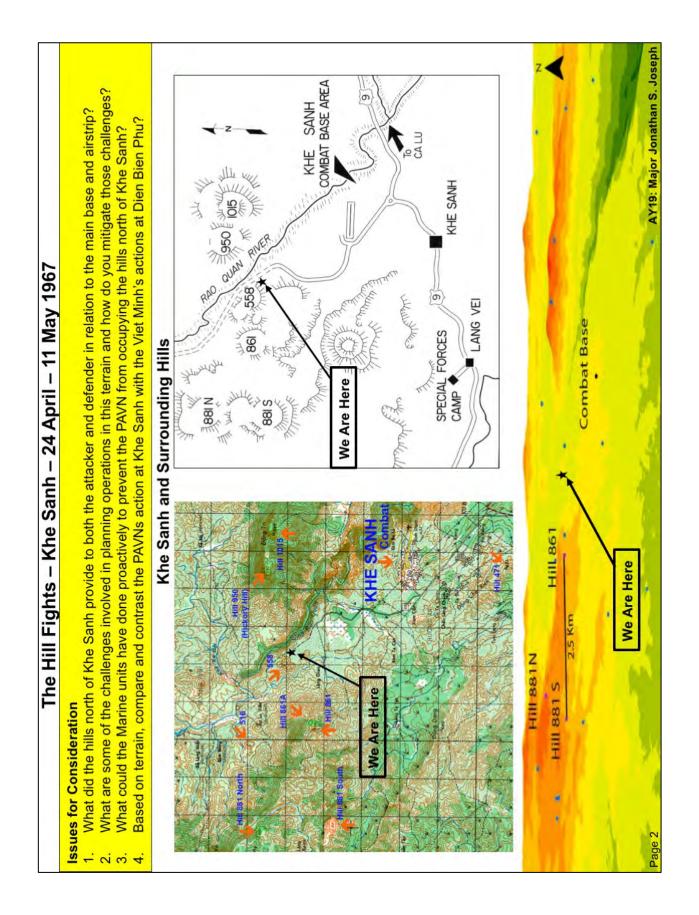


(Left) Hill 950 and Hill 1015, looking east. These hills overlooked the north side of the Khe Sanh airfield and were to the west of the engagements that took place during the Hill Fights. They represent the challenging terrain for which the Marines found themselves fighting.

(Right) Hill 861, looking west. This is the eastern-most hill of the three hills making up the hill complex of Hills 861, 881 South, and 881 North.

Prepared by: Major Jonathan Joseph, USMC





INFORMATION PAPER

Subj: KHE SANH AIRFIELD DEFENSE, VIETNAM WAR, JANUARY–JULY 1968

1. **Belligerents**. Enemy—PAVN, *325C Division*. Friendly—USMACV, 26th Marine Regiment (Reinforced) with 37th ARVN Ranger Battalion.

2. Major themes. Operational art, strategic-tactical dialogue, innovation/adaptation, logistics and sustainment, role of airpower, strategic messaging.

3. Key takeaways

- USMACV had numerous reasons for building and ultimately increasing the coalition presence at Khe Sanh, to include serving as a western anchor for the McNamara Line, a way to sever the HCM Trail, and as a forward base from which to conduct offensive operations. However, as the enemy threat increased and the perception of "another Dien Bien Phu" took hold, Khe Sanh's relative value was not merely limited to its military application—it became a symbol of American resolve in the face of an enemy.
- After fall 1967, the only GLOC into Khe Sanh (Route 9) was severed by enemy interdiction. Once this occurred, Khe Sanh was dependent wholly on air resupply for all logistics and sustainment. Though this was accepted, such a reliance on air resupply did present some challenges in both planning and execution. USMACV did adapt well by executing robust air delivery operations, including use of the LAPES (low-altitude parachute extraction system).
- The terrain surrounding Khe Sanh and the large enemy formations in the vicinity did necessitate the use of large volumes of air bombardment, to include those of Operation Niagara. All told, USMACV forces dropped more than 100,000 tons of aviation ordnance in support of those forces assigned to Khe Sanh, further demonstrating the effects of airpower.

4. Modern application to planning

- Planners should ensure that a continual strategic-tactical dialogue is maintained. This will ensure that military action is in line with strategic considerations—even those of perception.
- Placement of an airfield in an area with only one GLOC and a high enemy threat requires due diligence. Thought should be given to ensure that alternate resupply (e.g., air) is appropriate and available for a long-duration.

5. Recommended references

Phillip B. Davidson, *Vietnam at War: The History, 1946–1975* (New York: Oxford University Press, 1988).

Jack Shulimson et al., *U.S. Marines in Vietnam: The Defining Year, 1968* (Washington, DC: History and Museums Division, Headquarters Marine Corps, 1997).

Terrain photographs:



Source: Asiatravelandleisure.com

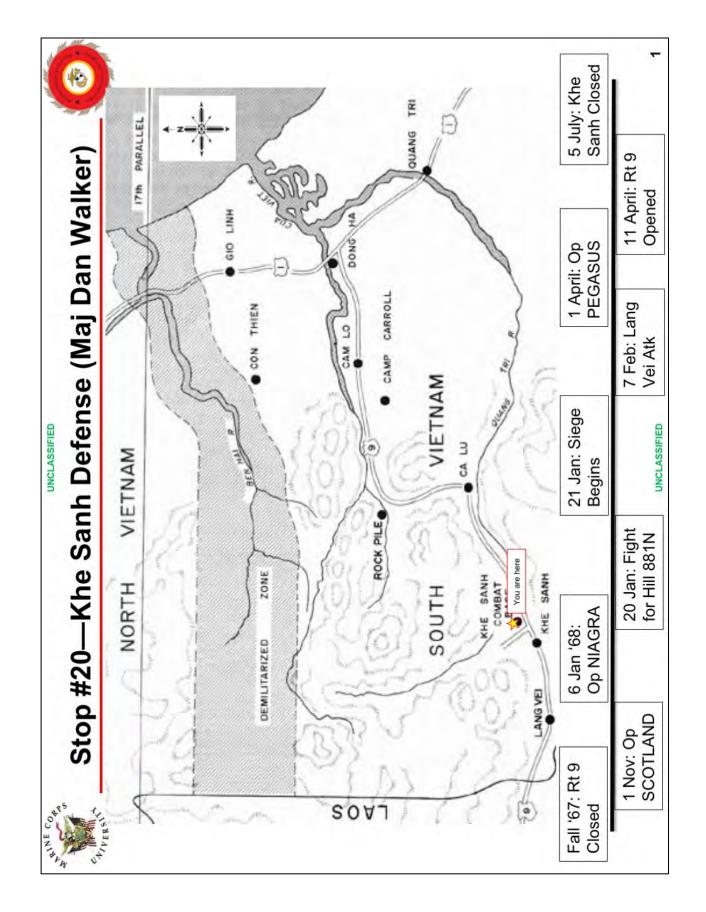
Khe Sanh Airfield, looking northeast. A significant east/west-running ridge sits just north of the Khe Sanh Airfield. This terrain has implications for enemy observation as well as flight path for cargo planes.

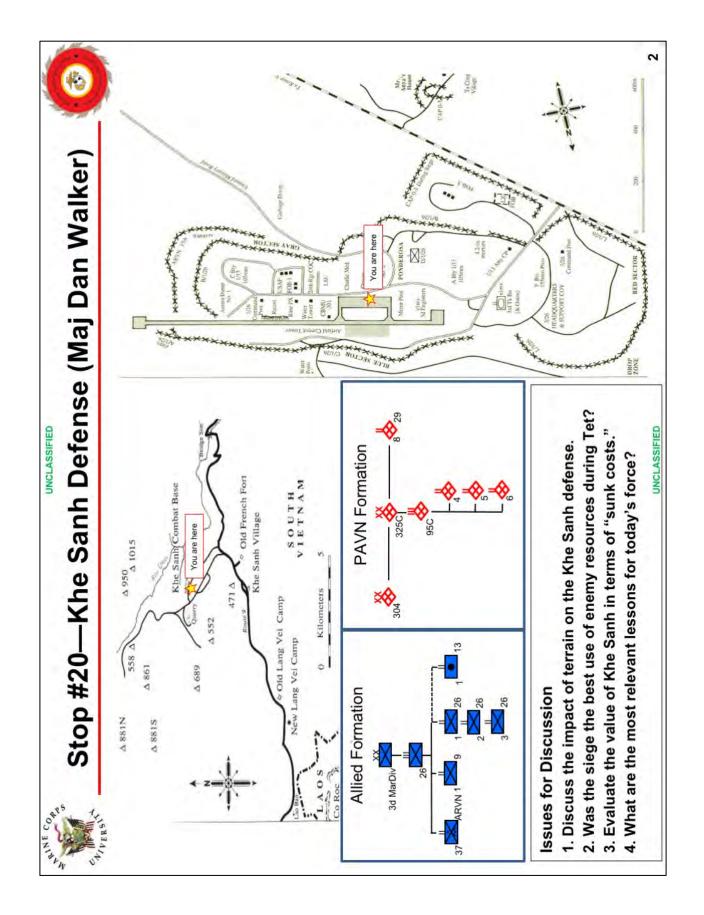


Source: Asiatravelandleisure.com

Khe Sanh Airfield, looking due north. In the distance, Hill 1015 (sharp peak over right wing of plane) and Hill 950 (peak over left wing of plane) are visible. Trenches are visible in the foreground.

Prepared by: Major Dan Walker, USMC





INFORMATION PAPER

Subj: LANG VEI – ATTACK ON SPECIAL FORCES CAMP, VIETNAM WAR, 6/7 FEBRUARY 1968

1. Belligerents. United States of America and North Vietnam.

a. Friendly forces

- Lieutenant Colonel Daniel F. Schungel, commander, Company C, 5th Special Forces Group.
- Captain Franklin C. Willoughby, commander, U.S. Special Detachment A-101.
 - U.S. Special Detachment A-101 (24 men)
 - A 14-man ARVN Special Forces contingent and 6 interpreters.
 - One Montagnard company.
 - Three South Vietnamese rifle companies.
 - Three CIDG combat reconnaissance platoons.
 - A Mobile Strike Force Company, consisting of 161 Hre tribesmen, along with 6 U.S. Special Forces advisors (elements of this company operated from a fortified bunker 800 meters west of the camp).
 - Royal Laos Army elements.

b. Enemy forces

- Brigadier General Tran Quy Hai, commander Route 9 front.
- Colonel Le Cong Phe, NVA, operational commander.
 - The NVA Route 9 front (campaign headquarters in Laos)
 - 4th and 5th Battalions, 24th Regiment, NVA 304th Division
 - 8th Battalion, 66th Regiment, NVA 304th Division
 - 3d Battalion, NVA 325th Division
 - 3d and 9th Tank Companies, 198th Tank Battalion, NVA 203d Armored Regiment
 - 4th and 10th Sapper Companies, NVA 7th Engineer Battalion
 - 122-mm Artillery Battalion, NVA 675th Artillery Regiment (on Co Roc Mountain)
 - NVA 14.5-mm Heavy Machine Gun Company
 - NVA Flamethrower Platoon

2. **Major themes**. Special Operations Forces (SOF), importance of contingency planning, operational flexibility, inter-Service coordination.

3. Key takeaways

The camp was initially attacked on the morning of 6 February at 1810 hours. The PAVN followed up their morning mortar attack with an artillery attack from 152mm howitzers, firing 40–60 rounds into the camp. Then at 00:30, NVA artillery pounded the camp, covering the movement of the *24th Regiment*, *3d Battalion* of the *325th Regiment*, and PT-76 light tanks.

• This required the defenders to not only resist the attackers, but also to counter a substantial new weapons system in the form of armor. Moreover, the action at Lang Vei highlighted the

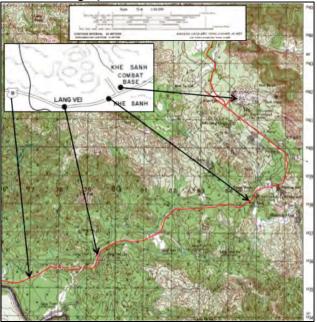
requirement for contingency planning. Some critical decisions appear to have been made with secondary operational impacts in mind, the foremost being, avoiding documentation containing the details of HUMINT sources being captured by the enemy, thus exposing a comprehensive informant network. This action prompted the defenders to remain in the camp rather than conduct an ordered tactical withdrawal.

- Correspondingly, the contingency plan for reinforcement from the marine Corps combat base at Khe Sahn, although in place, was not engaged due to there being no dedicated resources to respond in a timely manner. Ultimately, the decision to allocate resources was made at a higher command level from Da Nang, which delayed the withdrawal/reinforcement of the defenders at Lang Vei. Additionally, the route for reinforcements to gain access to Lang Vei, Route 9, the main LOC, running from Lang Vei to Khe Sanh, had not been secured and was therefore a high-risk course. This only serves to amplify the importance for securing main LOC to provide rapid and secure freedom of movement.
- The NVA had given the access to Lang Vei and beyond a good deal of thought. The dense jungle environment, weather, and the terrain had the potential to impact operations. However, the two NVA tank company commanders completed their exhaustive reconnaissance. They studied the Lang Vei camp defenses. They studied the terrain, which restricted tank movement, to discern the best avenues to advance on the American camp. They also selected assembly areas where their tanks could gather to prepare for the final assault. The supporting attack from Lao Bao would move east on Route 9, this would not have been possible if it had been secured by U.S. forces, and the main attack came from Lang Troai road right up to the Lang Vei camp's southeastern perimeter. Given the terrain, it would have been more prudent to have several mutually supporting firebases along the border to facilitate a better early warning and enemy movement observation system.
- Other factors identified in the aftermath of Lang Vei included: more emphasis should be placed on antitank defenses for strike force camps to include antitank training for all personnel and the construction of tank obstacles around the camps. Additionally, it was noted that regular NVA units in mass have superior firepower to main force Viet Cong units and are therefore better suited for attacking fortified positions.

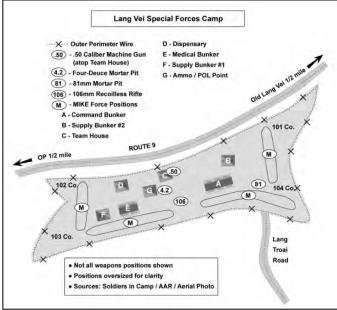
4. Modern application to planning. The attack on the U.S. Special Forces Detachment A-101 camp at Lang Vei on 6/7 February 1968 highlighted the ability of SOF to adapt to evolving situations, a premise that continues today. Contemporary wars in locations such as Iraq and Afghanistan have shown this time and again. The need for coordination among mutually supporting branches of the armed forces is of paramount importance in a multifaceted counterinsurgency situation as is the necessity for freedom of movement to friendly forces and denial of that freedom to enemy forces and the effective use of the operational environment to engage the enemy on your terms and deny them any form of refuge or advantage. Ultimately, contingency planning for all consequences is essential, continuously ask the "what if" question when planning at all levels on the spectrum of conflict.

5. Recommended reference. John A. Cash et al., *Seven Firefights in Vietnam*, CMH Pub. 70-4 (Washington, DC: Office of the Chief of Military History, U.S. Army, 1985), chap. 6.

Terrain imagery:

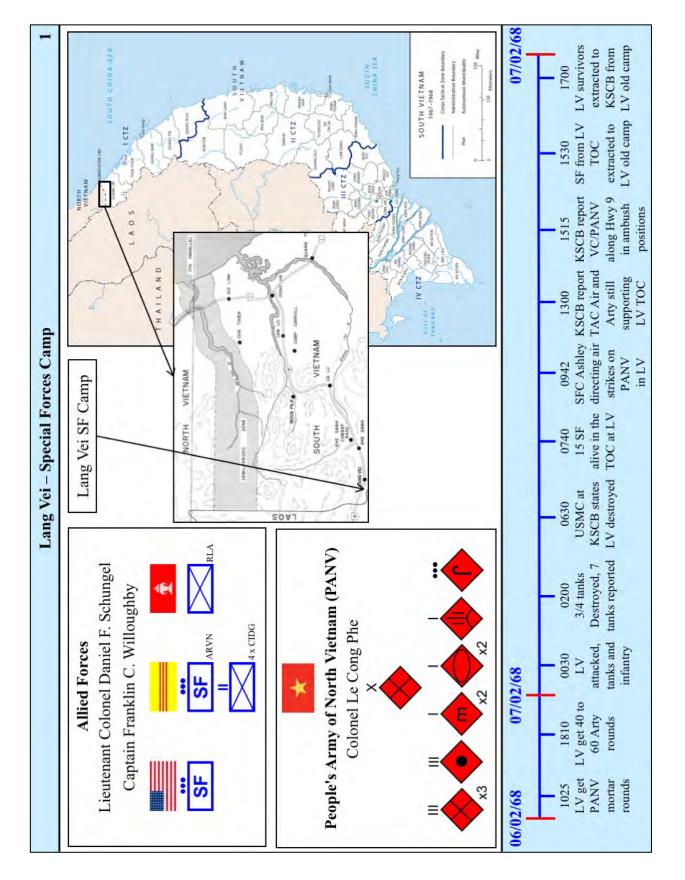


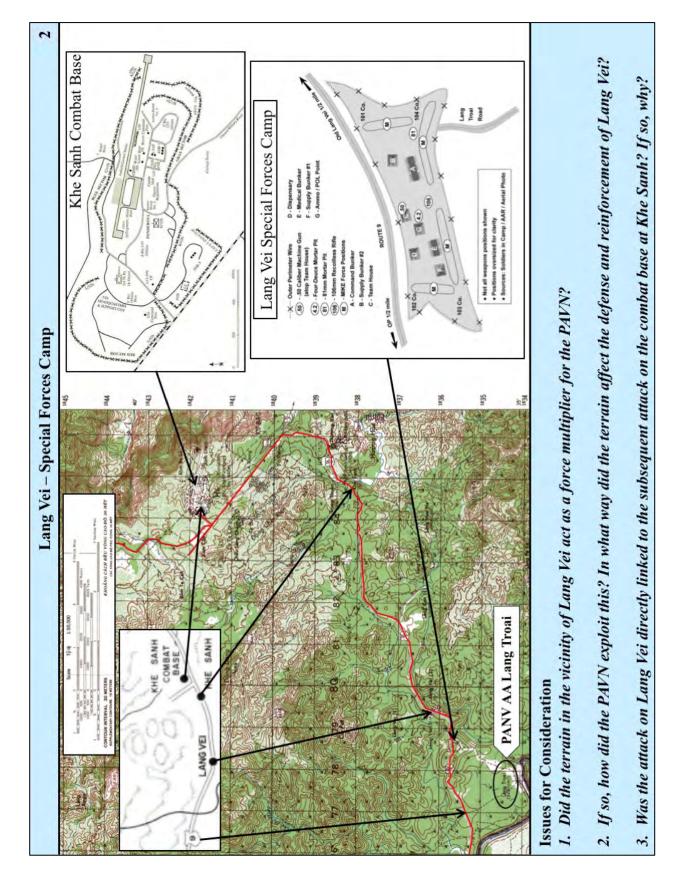
Source: University of Texas Libraries and www.Mishalov.com. 1:50,000 map showing the area in the vicinity of Lang Vei.



Source: https://langveibattle.com. Plan of Lang Vei Special Forces Camp.

Prepared by: Major Mohammed al-Nahyan, United Arab Emirates, Special Operations Command





INFORMATION PAPER

Subj: OPERATION PEGASUS (RELIEF OF KHE SANH) 1968 - 1ST CAVALRY DIVISION

1. **Belligerents**. During March–April 1968, Operation Pegasus served as one of the largest and most complex allied operations yet undertaken in I Corps, with eight cavalry battalions, seven infantry battalions, three airborne battalions, a Ranger battalion, 100+ artillery pieces, and 1st Cavalry Division's 450 aircraft under Major General John J. Tolson, who had responsibility for the relief of Khe Sanh. Along Route 9, the North Vietnamese *8th Battalion, 29th Regiment*, established blocking positions between Khe Sanh and Ca Lu. In addition, the *304th Division* had *9th Regiment*, and parts of the *24th Regiment* and *66th Regiment*.

2. Major themes. Deception, air mobile assault, sequencing objectives, time based vs. conditions based.

3. Key takeaways

- To ensure the North Vietnamese *320th Division* did not attack toward LZ Stud and disrupt Operation Pegasus, Task Force Kilo (an airborne task force of four battalions) from Operation Lam Son attacked northeast from Dong Ha toward the DMZ along the coastal plains near Gio Linh-Con Thien on 30 March 1968.
- Operation Pegasus began at 0700 on 1 April. The operation had 1st Cavalry Division's 1st, 2d, and 3d Brigades attacking west via air mobile assaults from Ca Lu to seize key terrain along Route 9 to establish fire support bases. Concurrently, 1st Marine Regiment with 2d Battalion, 1st Marines, and 2d Battalion, 3d marines, would launch a ground assault with 11th Engineer Battalion from Ca Lu to secure or repair Route 9 to Khe Sanh. Later, 3d ARVN Airborne Task Force would support the operation to attack *5th Battalion, 24th Regiment*.
- From D-1 through D+2 (securing LZ Mike and Cates) operations were time based. Based on initial success from the fire bases and B-52 strikes, the conditions were established on D+3 for conditions-based objectives to be secured. This allowed 26th Marine Regiment to breakout of Khe Sanh and seize an initial objective (Hill 471) with 1st Battalion, 9th Marines, attacking a reinforced North Vietnamese platoon.
- Operation Pegasus-Lam Son 207A from its inception to its final extraction from the area of operations will long stand as a classic example of airmobile operations. During the engagement, the enemy did not know how to or was unable to react against the airmobile maneuvering of large numbers of combat troops supported by artillery around or behind enemy positions.

4. **Modern application to planning**. Operation Pegasus is one of the few division-level air assaults we have studied. It provides an opportunity to allow deception operations via diversionary attacks to support a shaping construct. Meanwhile, the case study portrays how the planning shifts to conditions-based operations due to the tempo of the combined joint force capability. The case study also provides an engineering aspect through the construction of a C-7A airfield for logistics support and the reconstruction of the only overland route in the region.

5. Recommended references

Lieutenant General Willard Pearson, *The War in the Northern Provinces, 1966–1968*, CMH Pub. 90-24 (Washington, DC: Department of the Army, 1991), 81–89.

Lieutenant General John J. Tolson, *Airmobility, 1961–1971*, CMH Pub. 90-4 (Washington, DC: Department of the Army, 1999), 169–80.

Erik B. Villard, *Combat Operation: Staying the Course, October 1967 to September 1968*, CMH Pub. 91-15 (Washington, DC: U.S. Army Center of Military History, 2017), 506–19.

Terrain photographs:

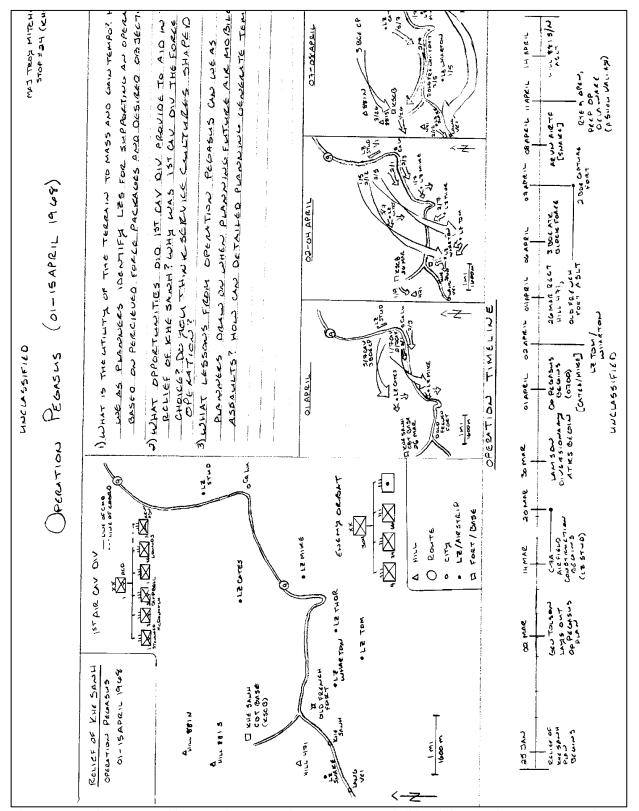


As the class crossed the bridge, this vantage point looks towards Khe Sanh (west). The bridge the picture was taken from was built in 1976 and starts a version of the Ho Chi Minh Trail at the northern portion of the A Shau Valley. The 2d Battalion, 1st Marines, and 2d Battalion, 3d Marines, with 11th Engineers worked to repair Route 9 through this terrain. Route 9 is to the right of the image.



Over the mountain ridge is LZ Cates where 5th Battalion, 7th Cavalry Regiment, landed to establish a firebase on 1 April. Many of the firebases ranged supporting objectives or the advances of the Marines along Route 9.

Prepared by: Major Troy E. Mitchell, USMC



This stop was a last-minute addition to the trip, resulting in Major Mitchell hand drawing the impressive graphic seen here to facilitate the discussion.

INFORMATION PAPER

Subj: VIETNAM WAR – BATTLE OF AP BAC – 2 JANUARY 1963

1. **Belligerents**. ARVN and South Vietnamese Provincial Forces (with U.S. advisors and helicopters) vs. People's Liberation Armed Forces (Viet Cong). ARVN 7th Division and Dinh Tung Regiment. Army Lieutenant Colonel John Paul Vann was senior advisor to the ARVN 7th Division.

2. Major themes. Command and control, advising host nation forces, terrain.

3. Key takeaways

- Due to leadership and proper use of terrain, a Viet Cong force was able to hold its ground against a larger South Vietnamese force with helicopters, armored personnel carriers, and artillery. The Viet Cong severely damaged five U.S. helicopters and achieved its purpose of inflicting a defeat on the South Vietnamese forces.
- The South Vietnamese forces operated under two parallel chains of command: one ARVN and one provincial force. When the battle started to go poorly, these two forces did not help out each other. No matter what they did, American advisors could not get the South Vietnamese forces to accept risk of casualties to work together.
- The Viet Cong took advantage of the natural obstacle of rice paddies, which significantly slowed dismounted movement. Both the helicopters and the armored personnel carriers placed dismounted infantry in the rice paddies, where the Viet Cong had established their engagement area, nullifying the South Vietnamese technological advantage and playing into the Viet Cong's design of their defense.
- Lieutenant Colonel Vann and other advisors told their contacts in the media about the poor performance of the South Vietnamese, which immediately led to articles in major newspapers. The same ARVN division fought well just a few weeks later. Three months later, in his final report as the advisor, Vann praised the ARVN. Advisor reports and evaluations are colored by a variety of motivations and emotions.

4. Modern application to planning

- Never underestimate the capabilities of the enemy. Lightly armed irregulars, with the correct leadership and terrain, may be able to stand their ground against modern machinery.
- Host nation forces that are receiving assistance may have unfamiliar command relationships that affect operations. U.S. forces must be aware of how local chains of command operate.
- Context is essential to evaluating host nation forces. Even the best advisors have a variety of external factors and reference points that may influence their evaluations.

5. Recommended references

David M. Toczek, *The Battle of Ap Bac, Vietnam: They Did Everything but Learn from It* (Annapolis: Naval Institute Press, 2007).

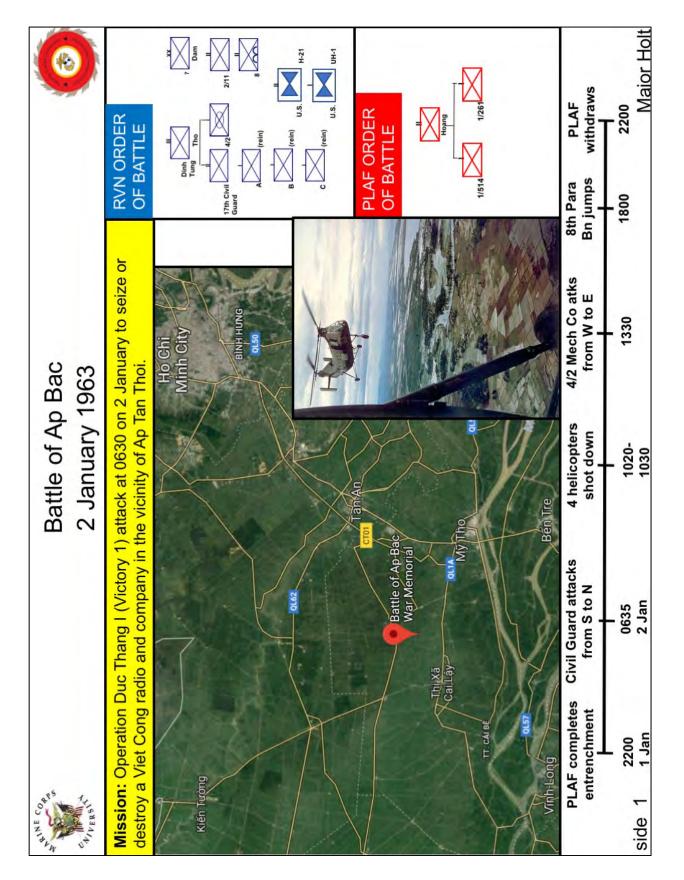
Mark Moyar, Triumph Forsaken: The Vietnam War, 1954-1965 (Cambridge < Cambridge University Press, 2006), 186–203.

Terrain photograph:



Source: Key Burns and Lynn Novick, "The Vietnam War," PBS Series, September 2017. Flooded rice paddies were an obstacle because they slow dismounted movement. Open fields with level ground created an ideal engagement area for defenders who are concealed by thick vegetation (tree line in the distance).

Prepared by: Major Tyler Holt, USMC

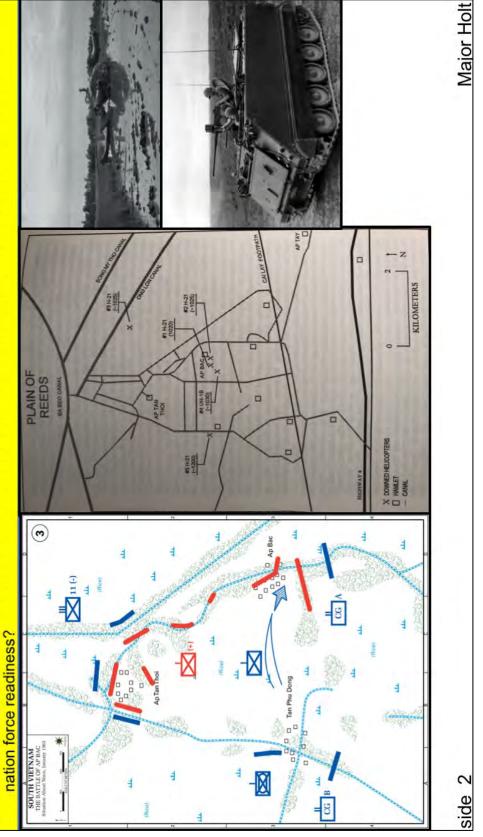




Issues for Consideration Ap Bac (2 January 1963)



- Looking at the canals, dikes, paddies, and tree lines, how do the terrain and vegetation affect movement dismounted, mechanized, and heliborne) and fires (direct, indirect, and aviation)?
- What friction should advisors and U.S./allied pilots anticipate when host nation forces employ U.S./allied aircraft? What challenges should U.S./allied commanders expect when they are using advisor reports to evaluate host S. 3.



INFORMATION PAPER

Subj: VIETNAM WAR – AP BAC II / 9th INFANTRY DIVISION – 2 MAY 1967

1. Belligerents. NVA, 514th Local Force Battalion (same unit as Ab Bac I in 1963).

2. Major themes. Training philosophy, attacking a fortified position, learning and adaptation.

3. Key takeaways

- *Training.* The 9th Infantry Division was created in 1966 for Mekong Delta riverine operations. Their training methodology focused both on land domain basics and specialized training for their riverine mission. However, this was a case study in limited time to create and train an entire division. Hence, there was little time to perfect the specialized riverine TTPs. Therefore, reliance was placed on the fundamentals (basic blocking and tackling) for the preponderance of forces. Inevitably, this battle ended up being fought using those basics, not the riverine tactics.
- Comparisons to Ap Bac I (1963). Key differences and similarities.
 - Similarities: terrain (enemy dug in fortified positions), G2 had no SA as to the enemy force structure or size, mechanized infantry used in both, same scheme of maneuver (attack south to north and west to east).
 - Differences in 1967: U.S. forces only, key task force commanding general and lead company commanding generals were not KIA in initial contact, no helicopter support, they planned a two-axis simultaneous attack, there was an absence of key tactical/execution errors, Lockheed C-130 Hercules gunship closed off escape route, and mechanized armor assets had evolved to be more effective—both organically and with infantry integration. Ab Bac II was an overwhelming success: 200 enemy KIA vs. 15 U.S. KIA.
- 1967 context. By 1967, the war had changed. In the delta, the 9th Infantry Division was fighting the Viet Cong, who knew the terrain better in a full-spectrum conflict. Operationally, the terrain naturally resulted in a focus on air maneuver as a force enabler. The 9th Infantry Division had to conduct pacification operations, conventional land ops (this battle), riverine ops, and counterguerrilla ops, though primarily search and destroy missions, which resulted in rare contact with the enemy, but when contact was made—very high kill ratios. Strategically, however, this did little to change the course of the war or impact the enemy's op design.

4. **Modern application to planning**. Warfare is full spectrum, so how do you train your forces? At the campaign level, what does it mean if you continuously fight about the same piece of terrain? Is this a measure of effectiveness for the war? Can you even hold this type of terrain? At the tactical level, the ability to use multidomain assets to envelop the enemy and close off their method of escape (in this study, C-130 gunship neutralized the enemy's northeast axis of escape).

5. Recommended references

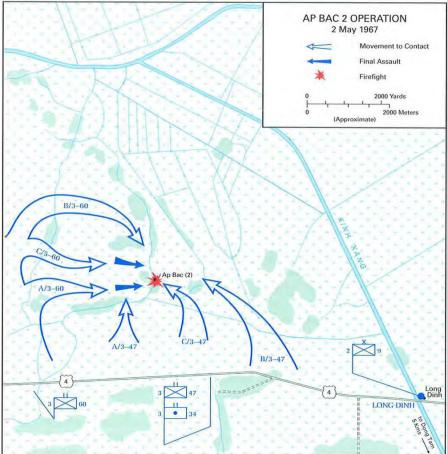
George L. MacGarrigle, *Combat Operations: Taking the Offensive, October 1966 to October 1967*, CMH Pub. 91-4-1 (Washington, DC: U.S. Army Center of Military History, 1998).

John M. Carland, *Combat Operations: Stemming the Tide, May 1965 to October 1966*, CMH pub. 91-5-1 (Washington, DC: U.S. Army Center of Military History, 2000);

Major General William B. Fulton, *Riverine Operations 1966-1969*, CMH Pub. 90-18 (Washington, DC: Department of the Army, 1985).

Lieutenant General Julian J. Ewell, "Impressions of a Division Commander in Vietnam," 17 September 1969, Box 1, Elvy B. Roberts Papers, USMHI, Carlisle, PA.

Terrain imagery:



Source: MacGarrigle, Taking the Offense, 404.

Prepared by: Lieutenant Colonel Christopher Conant, USAF

INFORMATION PAPER

Subj: MOBILE RIVERINE FORCE OPERATIONS IN THE MEKONG DELTA, 1966–69

1. **Belligerents**. U.S. Military Assistance Command, Vietnam, Army of Republic of Vietnam, Central Office of South Vietnam, Democratic Republic of Vietnam.

2. Major themes. Joint operations, personality impacts on military operations, economy of force missions, adaptation and innovation, operational design.

3. Key takeaways

- Terrain and population distribution within the Mekong Delta, coupled with the secondary focus from USMACV, made this location a prime candidate for an economy of force mission. The Army and Navy worked in a joint relationship to develop the Mobile Riverine Force (MRF), a composite of the River Assault Flotilla 1 and the 2d Brigade, 9th Infantry Division. The force had the ability to move 5,000 personnel 100–200 km in 24 hours and operationally employ ground forces within 30 minutes day or night. The force had self-contained logistics, fires, medical, and aviation. The training, command structure, and flexible employment of the MRF gives insights into low-level commanders in the Army and Navy effectively working together to forge a cohesive unit. The lack of a unified higher headquarters negatively impacted the operational employment of the MRF, but this did not detract from its tactical record, which was highly successful.
- The MRF was never used as initially intended, instead being pulled repeatedly back to the 9th Infantry Division's area of operations nearer to Saigon. Oscillating interest from the Army and Navy led to three major shifts in employment, the first most closely resembling the support force to pacification, the second as a strike force in support of 9th Infantry Division, and the last as an interdiction force as part of the Navy's Sealords Operations. The record of the MRF is mixed, having destroyed a significant number of Viet Cong units, but also causing considerable collateral damage, all without much long-term result. Failure of Viet Cong to resurge post 1968 had more to do with neglect than with any lasting impact from the MRF.

4. **Modern application to planning**. This is a model for modern riverine operations. The capabilities created, though not appropriately applied to achieve operational impacts, are significant considering the terrain and population. This also is a cautionary tale of developing capabilities just because you can without a clear comprehension of how those capabilities support a war winning campaign.

5. Recommended references

Major General William B. Fulton, *Riverine Operations 1966-1969*, CMH Pub. 90-18 (Washington, DC: Department of the Army, 1985).

Edward J. Marolda, "Orphan of the Mekong Delta: The Army-Navy Mobile Riverine Force," *Journal of Military History* 80, no. 4 (October 2016): 1149–81.

Terrain photographs:



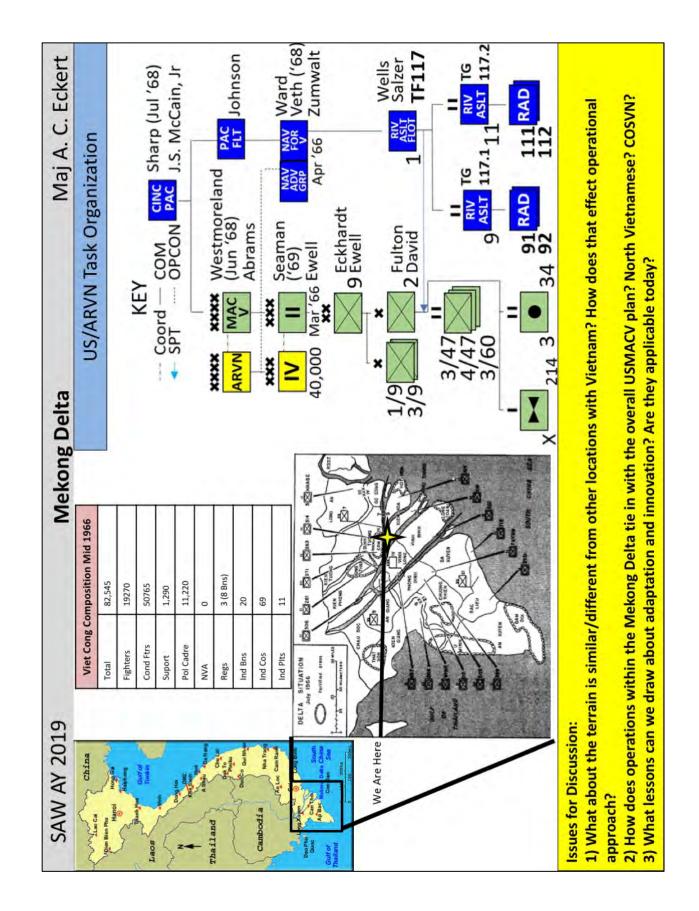
Source: Breath of the Mekong Tours.

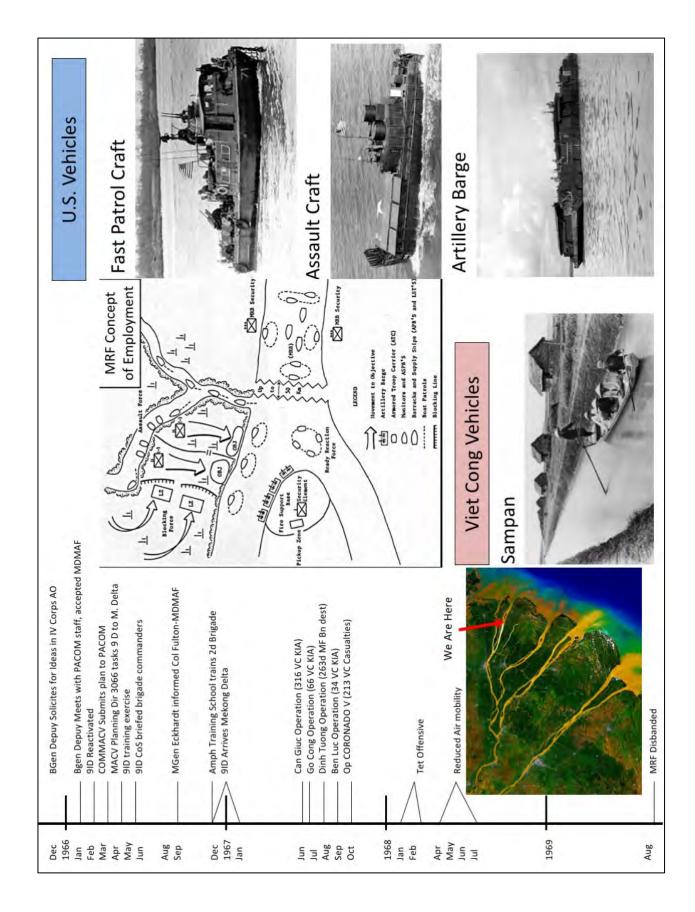
Sampan Ride. Sampans were the primary mode of transportation and logistics for the Viet Cong in the Mekong Delta.



Source: Associated Press, 1966.

Prepared by: Major Andrew Eckert, USMC





EUROPEAN STAFF RIDE: 8-24 JANUARY 2019

Battles/Operations Studied and Locations Visited

- 1. WWII Operation Avalanche Salerno Beaches, church with overview, Maiori Pass
- 2. WWII Italian Campaign Gustav Line Monte Cassino, Rapido River crossing
- 3. WWII Operation Anvil/Dragoon Camel Green Beach, Le Muy
- 4. WWI Belleau Wood Memorial, wheat field, Belleau Wood
- 5. WWI Blanc Mont 2d Infantry Division's approach, Blanc Mont
- 6. WWII Operation Jubilee Dieppe overlook, Pourville, 4 Commando
- 7. WWII Operation Overlord Pegasus Bridge, Point du Hoc, Omaha Beach, Utah Beach, Arromanches, La Fiere, Saint-Lo and Bocage
- 8. WWII Brittany Saint-Malo
- 9. WWII Operation Cobra Coutances, Mortain,
- 10. WWII Falaise Pocket Falaise gap



Group Reflection by Theme

Terrain Operational Art Logistics/Engineering Amphibious/Airborne Operations Command and Control/Task Organization Joint and Coalition Warfare

Battle Study Assignment Key

Operation Avalanche, overview (Albert) Operation Avalanche, church (Alnahyan) Operation Avalanche, Maori Pass/ranger employment (Annuziata) Second and third battles of Monte Cassino/abbey bombing/New Zealand attacks (Brewer) Rapido River crossing/first and fourth battles of Monte Cassino (Carey) Operation Anvil/Dragoon, Camel Green Beach (Copeland) Operations Anvil/Dragoon and Rugby, Le Muy/airborne operations (Christman) Belleau Wood, overview (Conant) Belleau Wood, wheat field/consequences (Frerichs) Belleau Wood, tactics (Eckert) Blanc Mont, overview (Hawkins) Blanc Mont, follow-on actions (Holt) Operation Jubilee, Dieppe overview (Hunter) Operation Jubilee, Pourville (Joseph) Operation Jubilee, 4 Commando (Katolin) Operation Overlord, Pegasus Bridge (Lambert) Operation Overlord, Point Du Hoc (Lloyd) Operation Overlord, Omaha Beach (Manzanet) Operation Overlord, Arromanches (Nash) Operation Overlord, Utah Beach (Rice) Operation Overlord, Le Fiere (Richardson) Operation Overlord, Saint Lo/Hill 192 (Mitchell) Brittany/Saint Malo (Van Zummeren) Operation Cobra, Coutances (Sgro) Operation Cobra, Mortain (Spillane) Operation Cobra, Falaise gap (Walker)

TERRAIN

Key terrain. Any locality, or area, the seizure or retention of which affords a marked advantage to either combatant. (JP 2-01.3)

Decisive terrain. Key terrain whose seizure and retention is mandatory for successful mission accomplishment. (FM 3-90)

Key and decisive terrain. Pegasus Bridge highlights the assignment of a division-level task to a company as a high-risk operation based on the relative value of the bridges. These bridges were considered decisive terrain for ensuring the security of the lodgment of forces for Overlord. Seizing the bridges quickly using a coup de main imposed shock on the defending German garrison forcing them to capitulate quickly. Additionally, the resultant shock imposed on the *21st Panzer Division* delayed the expected counterattack by a number of hours, thereby generating time for the remainder of the 6th Airborne Division to converge on to identified key terrain. Examples of the interrelation of key and decisive terrain include:

- La Fiere Bridge (Operation Overlord). Key terrain for 1st Army, decisive terrain for VII Corps (Collins) to enable access to Cherbourg.
- Maiori Pass (Operation Avalanche Salerno). Key terrain to 5th Army, decisive terrain for X Corps (tasked to Darby's Rangers).

Avenues of approach. Operation Deadstick (Pegasus Bridge) is an example where controlling a single avenue of approach shapes an enemy scheme of maneuver toward a less favorable option. Controlling the bridges denied German counterattack forces the option of a flanking attack at Sword beach and instead forced them to conduct more costly frontal attacks through Caen. Bridgeheads were comprised of light infantry forces that generated a conditions-based effect of securing the flank of Sword beach tied to a time-based requirement to link up with the incoming British 3d Division. The reason for the operation was to secure the avenue of approach to the eastern flank of the entire invasion. Additional examples of canalizing analysis of alternatives:

- Liri Valley (N. Italy). Decisive terrain for 5th Army. Required to maneuver armored to Rome.
- Mortain (German counterattack during Operation Overlord). Enemy counterattack was limited to established avenues of approach (Route 177). Counterattack defeated with fires (observation).
- Bocage (Operation Overlord). Natural terrain limits mobility; forced successive obstacle/ strongpoint reduction to reduce tempo. Friendly forces innovated/adapted to adjust to terrain. Enemy adjusted task organization due to terrain.
- Beach exits define the ability to generate tempo. Examples at Salerno relative to access to Naples. Comparison of Omaha and Utah as examples of flooded causeway and opposed exits requiring assault landing/reduction.

Convergence to enable divergence (roads, urban centers, open terrain)

- Saint-Lo and Coutance (Operation Overlord). Routes converge requiring operations to secure multiple urban centers.
- Liri Valley (N. Italy). Both armies converge to penetrate Gustav Line and gain access to Rome. An example of underestimating the requirement for convergence.
- Pegasus Bridge (Operation Deadstick). Division-level airborne drop comprising parachute and glider forces executed in support of an army-level amphibious landing. These forces were used

in combination to achieve mass through deliberate use of dispersion to then converge on a common objective. The objectives were secure within hours which demonstrated the achievement of surprise and imposing shock on the enemy.

Open terrain and firepower

- Counterattack at Mortain. Allied firepower, air superiority, and open terrain, maximized employment of weapon systems.
- Operation Goodwood. Superior German weapon systems along with open terrain resulted in defeat of Allied attempt to break through.

Beach selection. Concave and convex beaches. Utah was convex – advantage related to German inability to attack beaches by fire from a flank. Camel Red was concave – advantage to German enfilading fire from coastal artillery. Tidal lengths, beach gradients, and beach composition affecting landing requirements and length of assault required by disembarking combat forces. Specific to raids, pros and cons of extracting from same beach as infiltration.

- Dieppe (Operation Jubilee). 4 Commando cliffs: offset landing to successfully secure objectives. Remainder of landings (Dieppe and Pourville) were failed frontal assaults.
- Salerno (Operation Avalanche): Example of a 20-mile long beach intersected by a river requiring boundary shift.
- Toulon (Operation Anvil): Camel Red demonstrated the problem of flanking coastal defenses. Divergent beaches leading to convergence.

Intermediate objectives based on high ground. Hills at Salerno beyond the landing area. Point du Hoc as an example of controlling terrain astride the dispersed landing beaches at Omaha and Utah.

The complications of flooding and river crossing

- Monte Cassino / Rapido River: integrated flooding of wet gap into defensive SOM along MLR (enlarged/complicated EA turned divisional problem into a corps problem)
- La Fiere Bridge: flooded plain along Merderet River to enhance natural obstacle at operational chokepoint. Decisive terrain for VII Corps.
- Poureville (Operation Jubilee): battalion landing derailed by inability to cross river and seize inland objective. Enabling a BLT to conduct obstacle reduction as a contingency.
- Ports almost always have a river nearby. (Saint-Malo). A natural obstacle influencing landward attack on a port.

Terrain or enemy oriented objectives. Terrain is an inanimate object–relevance is what force/ capability is placed there. Terrain as a center of gravity? Terrain as a critical requirement?

- Cassino Massif. Massif was critical to enemy defense and protection of Liri Valley.
- Blanc Mont Ridge. Seizing terrain enabled systemic disruption of German defensive system.
- Saint-Malo. Terrain oriented objective-key terrain to enable power projection.

Ground/amphibious reconnaissance. Value of observation to confirm/deny operating environment.

- Dieppe (Operation Jubilee). Shingle (beach composition) and mobility concerns.
- Omaha/Utah (Operation Overlord). Beach composition, gradient, convex/concave shape, obstacles.

OPERATIONAL ART

Observation 1: Time vs. condition-based operations (Blanc Mont–Monte Cassino). Throughout multiple stops, time-based versus conditions-based operations was a topic of debate. In most instances, it was recognized that the ideal is always conditions based execution. However, it was recognized that in the context of higher, lower, and adjacent plans *time often is a condition* and operations may need to be executed absent ideal conditions. 36th Division being ordered to cross the Rapido River, or the New Zealand Corps being ordered to execute Operation Avenger, are both examples of instances were operations were executed without conditions being met due the demands of higher requirements (in both cases factors at the Anzio beachhead led to the decision). Conversely, Blanc Mont represented an instance where General John A. Lejeune, recognizing critical conditions had not been met (adjacent forces not yet in line) and was able to successfully argue for a 24-hour delay which set conditions for success.

Observation 2: Learning and adaptation (Blanc Mont – Dieppe). At Blanc Mont, it was vigorously debated whether or not a bloody nose is required for learning and adaptation in war. It was generally accepted that at the very least significant learning will occur as a result of first contacts. Strategic ambiguity, technological uncertainty, and resources constraints suggest it is inevitable that armies will get their doctrine wrong in peacetime. What matters, as Sir Michael Howard has suggested, is the "capacity to get it right quickly when the moment arrives."⁴ It is our job to ensure we develop a value system within our force that encourages rapid adaptation. Adapting faster than our adversary will be critical. One method of achieving this ability is through the continuation of staff rides such as the one just executed.

Observation 3: The emergent way (Monte Cassino). The Italian campaign writ large and Monte Cassino specifically demonstrated the value of the Ends—Means/Circumstances—Emergent Way model of operational art. Two elements of the model are worth highlighting. First, consideration of ends, means, and circumstances must be done in a transregional, multidomain, multifunctional context. Modern campaigns are executed in an integrated, synchronized joint operations environment with operations in one theater impacting operations in another. Both the means and ends during the Italian campaign were governed by the requirements of other theaters. Second, it was recognized that *circumstances are often the dominant aspect of the model.* At Monte Cassino, a change in circumstances (dry weather, attrition of the enemy, massing of 15th Army Group), with little change to way or ends resulted in success during the fourth attempt to break the Gustav Line. An operational approach that has not worked in the past might in the future based on changing circumstances.

Observation 4: Hart's Outward Paradox (Operations Cobra and Anvil Dragoon). "Effective concentration can only be obtained when opposing forces are dispersed; and, usually, in order to ensure this, one's own forces must be widely distributed. Thus, by an outward paradox, true concentration is the product of dispersion."⁵ To concentrate forces, your adversary needs to disperse, which means you need to disperse. For Operation Cobra, General Omar Bradley saw an operational opportunity and

⁴ Michael Howard, "Military Science in an Age of Peace," *RUSI Journal 119*, no. 1 (March 1974): 2.

⁵ B. H. Liddell Hart, *Strategy*, 2d ed. (New York: Meridian Books, 1991), 329.

developed a plan to use Mortain as the pivot point for an encirclement operation designed to destroy the German Army west of the Seine. The Battle of Le Muy displayed the convergence of airborne assaults for a common mission, which served as an enabling action for an operational objective. Incorporating deception and airborne forces created multiple dilemmas for the Germans, which dispersed enemy forces while VI Corps concentrated on operational objectives. Saint-Malo was an attempt to secure a key port city on the Brittany peninsula while reducing remaining elements of the German forces.

Observation 5: The risk of Auftragstaktik (Salerno). *Auftragstaktik*—what U.S. doctrine calls mission command—is generally accepted in doctrine as a fundamental element of maneuver warfare. It is expressed as a highly desirable element of modern western military systems. However, German divisional level counter attacks at Salerno demonstrated the potential risks embodied in the philosophy of auftragstaktik. The divisional commanders, trained to exploit opportunity, committed their forces in divisional level counter attacks. This prevented the forming of a corps counter attack force. The divisional level counterattacks were in the end insufficient, a corps level one may have been, but never materialized. This example highlights a downside of mission command. In future war, is a C2 structure that embraces auftragstaktik the right construct?

Observation 6: What now, what next, what then, to what end (Brittany Peninsula, Mortain counterattack). The operational planner, regardless of the level of war, must at all times keep in mind the strategic aim. Practically this might manifest itself by constantly asking "what now, what next, what then, to what end." Throughout the staff ride two scenarios were observed which led to the operational artist abandoning this fundamental truism.

The commander's requirement to maintain an "aura of invincibility." Once an operation is started, the situation may develop such that it no longer serves an operational purpose. Commanders may decide to continue the operation anyway with the deliberate intent of maintaining an aura of invincibility for the army. That is, the purpose becomes one of morale vs one of operational gain. This was evident in Bradley's decisions relating the Brittany campaign.

Moving faster than the speed of operational art. An essential element of operational art is deciding when and when not to give battle. However, we instill in subordinate commands a sense of initiative—to exploit opportunity where it exists (see observation 6). Not infrequently this can mean that a force is engaged in a fight before the commander can truly determine if he wants to be in the fight or not. Relating to the above observation this may result in the commander seeing it through to maintain the aura of invincibility.

Observation 7: Operational approach design. Operation Jubilee was a tightly coupled plan that was overly reliant on surprise, including single points of failure, and lacked branches, sequels, and abort criteria. Operation Overlord described the impacts of C2 transitions integrated with the timing or sequencing of enabling actions. The battle for Saint-Lo was a line of operation with an army-level objective (Saint- Lo) with converging corps and division intermediate objectives all nested within a single-battle concept across multiple dimensions. The battle for Saint-Malo provides an opportunity to assess the applicability of continuing an operation in light of changed circumstances.

Observation 8: Risk (Dieppe, Pointe Du Hoc, and airborne operations during Overlord). Risk was a prominent part of the discussions at all stops. Most, if not all things are relatable to risk. Risk is frequently cascading. For example, the need to reduce strategic risk may significantly increase military risk as was the case at Dieppe. Likewise, there is an integrated relationship between military risks assumed at different levels of war. A subordinate mission may be executed at high risk (point du hoc and airborne operations as part of Overlord), in order to mitigate risk at the operational level. Latent in any risk is opportunity. The greater the risk, the greater the opportunity.

Observation 9: Escalation management (Operations Cobra and Totalize/Tractable). Against a nuclear adversary we cannot expect to fight or finish the next war in the same way as World War II. This demands that the operational planner consider escalation management. How do we compel our adversary to surrender while simultaneously managing the risk of escalation above the nuclear firebreak? For example, at Falaise, when the Allies neared the encirclement and destruction of the German *7th Army*, this translated to an existential threat to Germany. How do we manage victory, and with it both the adversary's and our own perceptions of honor and interests, and still avoid escalation above the nuclear threshold? No clear answer is apparent.

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anning for Amphibious Operations: WV curity, and sustainment considerations.	Will offers several historical v Amphibious operations pr	Planning for Amphibious Operations: WWII offers several historical examples of planning for amphibious operations focused on the establishment of a lodgment, availability of resources, local security, and sustainment considerations. Amphibious operations provide a linkage over time from the development of the tentative manual for landing ops to JFEO of the 21st Century.	on the establishment of a lodg entative manual for landing op	ment, availability of resources, local s to JFEO of the 21st Century.
Themes	Operations to Consider	Linkage	Modern Concept	Current Case Study
stablishing a equirements for iperiority (or	H OZ	 Operational objectives linked to sustainment requirement over time remain key planning considerations today Connector availability vs. capacity remained a struggle for resources. These struggles remain today with limited amphibs Limited sustainment on the AFOE may lesson tempo, but being unable to sustain the force will halt operations. 	- <u>19 3-(</u> - <u>19 3-(</u>	- Exerc - Exerc - Exerc - Smal manua doctriu
Sustainment Considerations: Generating sustainment the evolution of outrent joint capabilities used today	#	is a military operation. The importance of ports, inbound sustainment, coalition interoperability, and resource allocation are evident in	coalition interoperability, and	resource allocation are evident in
Themes	• L ine	Linkage	Modern Concept/Capabilities	Current Case Study
 Importance of LOCs Importance of rail Importance of ports Requirement for inland sustainment Understanding coalition sustainment The requirement for distribution 	 GLOCs identified in planning may relied heavily upon key route int relied heavily upon key route int Rail operations take time. Often required and proper task organiz Port enable rapid EQEs and sustai Mulberry Harbors on gold beach Fuel (Class III) from the sea was remains an essential commodity St Malo offers a less than ideal p capability and available MHE and 	GLOCs identified in planning may drive operational objectives. Op COBRA relied heavily upon key route intersections and Rail operations take time. Often not universal, engineering recon is required and proper task organization for rail operation teams Port enable rapid EQEs and sustainment throughput, consider the Mulberry Harbors on gold beach as a possible option for MCO. Fuel (Class III) from the sea was important from the UK to France – fuel remains an essential commodity St Malo offers a less than ideal port due to marshalling areas, RORO/LOLO capability and available MHE and Stevedores	-JP 4-01.5 Joint terminal ops -JP 4-01.6 JLOTS • Trident birr (USA) • ELCAS (USN) • OPDS (Class III) • NATO Standard	 Op PAC Research (OPR 2017) Korea 2015 Navy Times (480') LCAS Anzio 2013 (1800') LCAS at Camp Patriot 2015 Korea Ex Ssang Yong ABLTS (JEB LC, & MPS capability) Rail – Ex CR16/TJ18 AAR (Norway)
Engineering Considerations: W/WII case st crossing) mobility and counter mobility, in	tudies highlight the importantegrated training shortfalls	Engineering Considerations: WWII case studies highlight the importance of IBP which informs the task organization and integrated planning which enables speed and tempo. Contested (gap crossing) mobility and counter mobility, integrated training shortfalls seen in WWII remain modem military problem sets that must be considered in the FOE.	rated planning which enables s must be considered in the FOB	peed and tempo. Contested (gap.
Themes		Linkage	Modern Concept	Current Case Study
 Mobility and counter mobility (obstacles, SLOC security, beach/ports) Gap Crossings (Mobility) Integrated planning and training (map studies and engineering recon) 	1 11 1	Examining the Rapido River or the Battle of Fredericksburg bring to light the risk and limited success of a contested bridge crossing. Integrated Infantry and Engineering training must be considered early Time/Speed/Tempo reply on adequate planning for embarkation of bridging capacity (not just the capability) Post WWII, <u>AirLand</u> Battle attempted to offer wet gap considerations – followed by Combined Operations Gap Crossing (2008) and now JP 3-34.	risk - <u>IP 3-34 (</u> Engr Ops) wed	 FM 90-13 FMFM 7-26 2015 Ex Heidesurm shock 38 Obstacle Russian Bastion Defense Current xMCM Capabilities
 Sub-thoughts: Reflect on the medical planning s Recognize the innovation and ad Understand the 2nd and 3rd ords Operations ISO log/sustainment 	shortfalls of WWII and c laptation of logistics ove ler effects of log/eng coi may have an element o	-thoughts: Reflect on the medical planning shortfalls of WWII and capabilities that current exist today – understand how to employ them. Recognize the innovation and adaptation of logistics over time: creation of the Mulberry, Rhinos in bocage, cross channel fuel lines, and 1-tank/t-chassis. Understand the 2nd and 3rd order effects of log/eng consideration after phase I (security access, EoF). Operations ISO log/sustainment may have an element of strategic risk or military risk. Building up sustainment hubs may be part of deterrence.	how to employ them. 5e, cross channel fuel lines iment hubs may be part of	, and 1-tank/t-chassis. deterrence.

LOGISTICS AND ENGINEERING

AIRBORNE AND AMPHIBIOUS OPERATIONS

Purpose. To provide future planners and commanders planning considerations for both airborne and amphibious operations either in conjunction with one another, or as separate operations. The following reflections are based on historic study and walking the terrain where the friction of war unfolded.

Amphibious Landing Site Selection

- a. Concave vs. convex landing sites. The convex shape of Utah Beach provided the landing force visual protection from the western most enemy positions and they could not observe for either direct or indirect fire. The convex shape of the Dieppe beach made it easier for an opposing enemy to place direct fire coverage on the landing force, especially when they are on an elevated position on the flanks.
- b. Offset landing sites. Landing at a port/city is not a favorable course of action given the strong defense that can be mounted by the adversary, *especially* when preparatory naval, artillery or aviation fires are not used. Operation Jubilee demonstrated this truth, and landing a force offset from a port became foundational for all subsequent amphibious landings during WWII.
- c. The size of beach should be proportionate to the landing force or graphically controlled to limit landing force scope. The beach at Salerno during Operation Avalanche was more than 25 miles long, which provided the Germans with an opportunity to exploit a gap between the two main landing forces. During Operation Anvil/Dragoon, a regiment landed on a beach that was between 300 and 400m long, which was a very narrow front for such a large force.
- d. Aviation support. Time on station for aircraft is critical during landing operations. During Operation Avalanche, Salerno beach was selected vice landing at the desired objective of Naples because continuous air support from Sicily could not be maintained based on aircraft available and platform range.
- e. Gradient, beach composition, and beach depth. Terrain at Utah (long distance at low tide, gentle slope,) versus Omaha (long distance at low tide, steep grade) beaches, played a critical factor in ability for landing troops to cross the open area and ascend to where they could effectively engage the enemy. Additionally, the composition of the beachhead (type of sand and/or shale rock) can inhibit mobility for personnel or vehicles landing on the beach. During Operation Jubilee, the shale rock prevented armor from getting off the beach and moving inland.

Command and Control

- a. Joint, interagency, multinational. Points to consider are Services equities and how Service/ally paradigms shape planning and the conduct of operations. Additionally, how the use of irregular forces can help shape amphibious operations by achieving objectives or supporting the main effort.
- b. The use of the amphibious end run during the Italian campaign to put the enemy in a dilemma by placing troops behind the enemy's main defensive line (a turning movement). This can be used as a supporting effort or the main effort to achieve operational objectives.
- c. During amphibious operations the relationship of CATF/CLF are important to ensure when each commander has authority. This was key during Operation Dragoon when the CLF was

ashore and unable to make decisions. Additional considerations are: when does the CLF go ashore, and what redundancy of command is there if the CATF/CLF is unable to make a decision.

d. An important theme with amphibious and airborne operations is the transition to follow-on operations. Amphibious/airborne operations are often tightly coupled operations, and the transition to more loosely coupled exploitation operations is where friction and delay are experienced. Key to this transition is how airborne amphibious force link-ups facilitate developing mobility corridors or a forward passage of lines to conducting exploitation or pursuit.

Deception Operations

- a. The use of deception to prevent enemy ability to mass against airborne of amphibious landing sites appears to be an essential element in establishing the force on land. Operationally, deception measures include nonspecific widespread aerial bombing, amphibious raids, and false signals. Successful use of these techniques can be seen through Operation Fortitude, the deception surrounding Operation Overlord. Tactical use of deception appears essential in the case of airborne operations and to a lesser extent for amphibious operations. Fake airborne insertions and misleading naval demonstrations can mislead the enemy and slow his ability to respond to actual threats as they are detected. The latter occurred during Overlord while the former occurred during Avalanche.
- b. In some instances, the goal of achieving tactical surprise can involve an unfavorable tradeoff with the ability to mass fires in support of a landing. At Dieppe and Salerno, attempts to achieve tactical surprise limited the firepower brought to bear against enemy coastal and counterattack formations. The Dieppe raid failed outright and Avalanche failed to provide significant advantage for the Allies. Significant supporting fires were employed during Overlord and Dragoon with a more favorable result.

Airborne Operations

- a. Coupling of airborne/amphibious operations: The value of planning "triphibious operations." The coupling of airborne operations with amphibious operations effectively creates a dilemma for the enemy forcing a decision on allocation and concentration of resources for a counterattack. An airborne operation can be incorporated into an operational plan to reduce or transfer risk from the amphibious landing force as the main effort to the airborne force as the supporting effort by drawing enemy forces away from the landing site or forcing the enemy to split its force.
- b. Airborne objectives are best selected in relation to the amphibious landing site with the singlebattle concept in mind. Airborne operations are most effective when conditions are set for a rapid link up between the beachhead and the airhead (LZ/DZ) facilitating either rapid reinforcement of the airborne forces on an enemy oriented objective or the rapid establishment of blocking positions by the airborne force on a terrain-oriented objective (key or decisive terrain inland: bridges, causeways, GLOCs) to establish mobility corridors connecting to the amphibious landing force. Consider current day planning factors for vertical envelopments.

- c. Airborne operations can support the landing force by rapidly seizing key terrain inland to either deny the enemy maneuver toward the landing site or enable rapid exploitation by the landing force.
- d. The mission routes of transport aircraft inserting airborne forces should be considered in relation to the amphibious landing site to mitigate fratricide, deconflict interference with shaping fires at or around the beach landing sites, and protect the element of surprise.

Organization of Amphibious Force (equipment, loading, phasing)

- a. Redundancy of forces for penetration and exploitation: task organization of forces to reduce obstacles at the beach, fight through heavily defended approaches or beach exits, or preparing for a counter attack will dominate how you initially task organize the forces ashore. The correct initial fighting elements, along with C2 transitions as leadership and full units assemble ashore to move inland will change based on the estimate of the situation and missions assigned.
- b. Landing throughput for follow on force: if there is an exploitation phase following the seizure of a beachhead, port, or airhead, ensure that appropriate support has been allocated to enable the logistical reach of the force so the culmination point is extended.
- c. Resource constraints: connectors and sustainment throughput are usually operational constraints. Apportionment/allocation should consider both combat and enabling forces based on mission analysis.
- d. Proficiency of training and preparedness of enablers: pilot hours, ship crew capabilities, connector training levels, as well as the crews that perform the tasks outside of driving are as integral as the training of the executors aboard. Reference pilot proficiency in delivery airborne forces to D-day objectives during Operation Overlord.
- e. Use of reconnaissance and/or Special Forces: outlying objectives that could inhibit a landing or prevent an amphibious or air assault operations raise the level of risk for the commander. Smaller teams can be employed to buy down the risk to mission or force, but they also require an apportionment of the resources and can have a trade-off to preplanned fires or enablers used elsewhere. Furthermore, while SOF often require conventional force support, adding conventional forces to SOF may be detrimental if it compromises unit stealth or agility.

COMMAND AND CONTROL/TASK ORGANIZATION

1. Command and Control

Leader/staff experiences and personalities. Effective leaders were not constrained by rigid doctrine, with adaptation supported by the capabilities of their collective staff's experiences. Additionally, the leader's ability to inspire the force often determined success under unusual circumstances.

• *Examples*: Belleau Wood to Blanc Mont. General Lejeune's experiences allowed for adaptation as he prepared for "set-piece" battle with the inclusion of rolling barrages to overcome German Army firepower. In addition, his staff gained experience throughout the campaign, streamlining their C2 and adjusting to the characteristics of battle. During Overlord, General George S. Patton's experience shaped his aggressive approach for Third Army through Charbourg/Brittany and leading to Falaise gap. In contrast, German high command's experiences on the eastern front biased their approach to the western front.

The impact of centralization of C2. The degree to which C2 systems and processes are centralized greatly affects planning, decision making, and execution of military operations. Consider the desired effect and "the how": artillery, tanks, airpower, and cyber? If a capability is seen as "strategic" (at any level of war) an argument can be made for centralization.

• *Examples:* (1) Despite auftragstaktik, German forces' centralization increased throughout WWII in pursuit of a better allocation of resources, though often at the cost of slower decision making. Following Normandy landings, the decision to delay deployment of the German reserve was a factor in a suboptimal defensive response. (2) General Dwight D. Eisenhower's working relationship with airpower to achieve both campaign-level battlespace shaping and tactical support to landings.

Location of key leaders. Key leader location presents time/space, C2, and task-organization considerations into the decision-making cycle. Their location must be relevant to terrain, friendly, and enemy force locations while weighing the cost/benefit of potential physical harm. Especially significant, CATF/CLF relationship and location throughout amphibious operations.

• *Examples*: (1) The German Army was negatively affected by Adolf Hitler's location far from the rapidly changing situation near the Falaise gap, resulting in stale decision making outpaced by the changing current state. (2) General Matthew B. Ridgway's personal leadership at the La Fiere bridge demonstrated both the risk and reward of being at the front. (3) Key leader location is also shaped by organizational culture. This was shown by a German PME system that emphasized leading from the front, resulting in significant officer corps attrition.

Logical dichotomies of risk. An attempt to "buy-down" risk at the strategic level can result in increased risk to force/mission at the tactical level. Subsequently, as each commanding general within the chain (and at different levels of war) seeks to buy-down their own risk to force/mission—with the associated impacts to decision making—the result could be a reversal of commander's intent or increased risk at the (higher) operational and strategic level. Classic case of this happening: supported/supporting relationships. Often the supporting effort will have increased levels of risk to buy down risk for the supported effort. How will that shape your C2/task-organization?

• *Examples*: (1) Mortain counter attack in WWII. Field Marshal Gunther von Kluge was told to counter attack to buy-down strategic risk for the Germans in France. His counterattack was so risky at the tactical level that he insisted on conducting the attack earlier than Hitler's reinforcements could arrive, thereby altering Hitler's strategic intent. (2) Dieppe, political objectives bought significant military risk.

2. Task Organization

Unit icons are not what they seem. Icon makeup varies significantly within and between Services, allies, and adversary. Remember, size and composition is only a quantitative metric of capability. Qualitative assessments (human factors, attrition period during the war, RCPA) are equally important. Moreover, history shows examples of small units having disproportionate results when holding key terrain or given decisive capabilities.

• *Examples*: (1) WWII, British, and U.S. armies had different logistical requirements and systems, complicating the re-supply organization. (2) Panzer grenadier and Panzer divisions had different makeup. (3) U.S. Army division size vs. German division size. (4) Avalanche, first-time U.S./British divisions composed a corps; what does that do to task/purpose and logistics? (5) Also, Maiori Pass: Darby's Rangers, attached to British 10th Corps, had mixed/combined tank, engineer, glider, and medical units.

Costs of task-organizing. Changing task organization requires either additional time to allow for rehearsal or a system that can rapidly adapt to ad hoc organizations. Considerations: how you shift boundaries during battle, reorganize a task force to fit the threat/terrain (Bocage), and when do you chop divisions (or integrate green units)?

• *Examples*: (1) Rapido River crossing. Last minute changes negated engineer/infantry relationship. (2) Belleau Wood: Task organization unsuccessful due to lack of practice/focus in combined arms. (3) Anvil/Dragoon: TF-Butler–green but built to fill capes-gap. (4) Omaha boundary shift with follow-on units (best practice: flow new units into the middle, not on edge, of previously established boundaries). (5) Cobra. Reorganization of tank/infantry/engineers to fight Bocage terrain.

Capability – task: match or mismatch. What are you trying to achieve, relative to objectives, enemy, or terrain? Mass? Surprise? Maneuver? Mass-to-maneuver?

• *Examples*: (1) Dieppe. Commandos include engineers, but Canadian division engineers arrive late. (2) Belleau Wood to Blanc Mont. Compare/contrast assignment (and integration) of additional corps artillery. (3) Overlord: Omaha and Utah task-organized to allow for rapid logistics establishment. Airborne operations. (4) Pegasus Bridge vs Le Muy vs La Fierre; light infantry holding ground against armor. (5) Moratin. Forward observers (on key terrain with comms) allow relatively small force to coordinate fires.

JOINT AND COMBINED OPERATIONS

1. Considerations

- Competing national interests complicate combined operations
- Objectivity is critical to successful combined operations
- Personalities matter
- Logistics interoperability

2. Competing National Interests

- Example. Operation Anvil/Dragoon. Competing national interests between American, British, and French political and military leadership complicated the planning and execution of Anvil and Dragoon. The British opposed the operations, wishing instead to pursue further operations in the Mediterranean in order to achieve post-war political objectives. The French refused to employ their forces in any area other than France, and continued to press for a key leadership role during the operation. The Americans believed the operation was critical to supporting Operation Overlord and, thus, was essential to winning the war quickly. Ultimately, competing national interests forced planners to eschew military optimization in order to maintain coalition unity. Other examples: Pershing and Foch employment of AEF, Operation Cobra and decision to take Paris, Operation Shingle, Operation Avalanche, Overlord coordination with Soviet offensive in the east.
- Contrast. Operation Overlord, where only two Allied nations, Britain and the United States, had meaningful leverage during planning and execution. Although competing interests were present, the limited number of Allied nations with a voice at the table reduced their impact.
- Take away. A broad coalition provides America the opportunity to increase legitimacy, spread risk/resource demands, and strengthen strategic messaging. However, these opportunities must be balanced by the risks incurred with a broad coalition: namely, that a larger coalition means more competing interests that must be balanced, often at the expense of military efficiency.

3. Objectivity

- Example. Blanc Mont Ridge. Due to the fact that the U.S. military component of the operation was subordinate and smaller than the dominant French component, this case offers U.S. commanders a unique perspective into the challenges faced by contemporary junior partner nations in a U.S.-led combined operation. Before and during the battle, General Lejeune constantly jostled with his French superiors to ensure that his division was employed within its capabilities and limitations, including advocating against piecemeal employment and formally protesting orders to continue the attack despite the division's exposed flanks. Ultimately, Lejeune was forced to assume unnecessary risk, most notably the employment of the inexperienced 71st Brigade, due to continued French insistence. Other examples: Operation Totalize, Falaise gap, Eisenhower/Montgomery during Overlord, Eisenhower Operation Torch planning.
- Contrast. The evolution of amphibious operations in the eastern theater of operations (ETO) provides a suitable contrast. Beginning with U.S. observation of the ill-fated Dieppe raid, and continuing to the successful invasion of Normandy, both British and U.S. military personnel demonstrated the objectivity required to learn from each other. Adoption of best practices,

regardless of which nation developed them, enabled successful combined amphibious operations at the army group, army, and corps levels throughout the war.

• Take away. It is easy to mirror image capabilities onto an Allied force and, perhaps, even easier to discount a partner nation's objections as risk aversion or laziness. As evidenced by Allied success in developing amphibious TTPs in the ETO, relationships, communication, and objectivity are critical to ensuring the success of a combined force.

4. Personalities Matter

- Example. Cassino/Rapido River crossing. In an effort to support the Anzio landings, General Clark eschewed much of his responsibility to integrate U.S., British, and French Corps into a combined cohesive force to achieve their operational objectives against the Gustav Line. This led to piecemeal, semi-independent military operations where tactical success by the British and French Expeditionary Corps did not contribute to the accomplishment of operational objectives. It took significant blood, reinforcements, and time to correct these mistakes and eventually accomplish their original objectives. Other examples: General Pershing's personality in World War I, General Lejeune's 2d Division during World War I, Eisenhower /Montgomery during Overlord, employment of the Special Service Force (SSF).
- Contrast. Operation Anvil/Dragoon. Generals Wilson and Patch successfully integrated French commandos and the French Army into the overall plan while also maintaining an effective balance to all force's political and national objectives by changing operational control of the French forces back to the French Army to conduct the main effort attacks to Toulon and Marseilles after being established ashore. This example shows the evolution of coalition warfare that the Allies learned and considered to optimize military operations in the European theater by 1944.
- Take away. Personalities play a significant role in coalition and joint warfare. The experiences, attitudes, and interpersonal relationships of key leaders can have a drastic impact (both positive and negative) on military operations.

5. Logistics Interoperability

- Example. Operation Avalanche. For the first time in the war, the Allies employed a combined Corps under General Clark, composed of a British and U.S. Army division. Due to the fact that British small-arms, artillery, and a number of vehicles were incompatible with their American counterparts, corps headquarters was forced to operate two separate logistics chains. Other examples: Employment of airborne forces during Overlord, employment of the airborne task force during Anvil Dragoon, employment of French Army during Anvil Dragoon.
- Contrast. Operation Overlord. During Overlord, coalition forces were separated by national lines into two field armies and, eventually, two army groups. This simplified logistics but had unintended consequences, including passive and active infighting amongst senior U.S. and commonwealth commanders and complicating command and control of converging forces near Falaise.
- Take away. Planners must dive into the details of coalition logistics planning in order to minimize friction during execution. Division of forces along national lines is a model to reduce this friction, but can have unintended consequences that must be considered, balanced, and/or mitigated.

EUROPEAN STAFF RIDE TERRAIN PHOTOGRAPHS



Naples, Italy.



Salerno, Italy. Facing southwest.



Salerno facing northwest toward Naples.



Salerno Beach, Italy.



Salerno, Italy. Facing west.



Salerno. Hilltop Church overview.



Paestum, Ancient Greek Temples. Province of Salerno, Italy.



Salerno, Maiori Pass, Ranger sector.



Monte Cassino, Italy. Castle and Monastery.



Rapido River crossing, Gustav Line, Italy.

SAW Class commemorative placard located at the Rapido River Crossing site, Italy.





Monte Cassino, Italy. Castle.



Monte Cassino, Italy. Polish cemetery.



Rapido River crossing, Gustav Line, Italy.



Frejus, France. Green Beach, AmphibAslt. West.



Chateau-Thierry, France. Facing east at sunrise.



Le Muy, France. Nighttime Airborne Aslt.



Belleau Wood, cornfields on approach.



Belleau Wood, tall grass approaching wood line.



Farming/mud surrounding Belleau Wood.



Chateau-Thierry Monument, American Battle Monuments Commission.



Belleau Wood, France. January 2019.



Belleau Wood in January.



Blanc Mont, France. Undulating terrain approach.



Blanc Mont, France. Approach to ridge.



Blanc Mont Ridge. German position.



Blanc Mont Ridge. German position.



Blanc Mont Ridge. German position.



Fort de la Pompelle, France.



Blanc Mont Ridge. German position.



Dieppe, France. White, Red, and Blue Beaches.



Dieppe/Pourville, France. Green Beach.



Dieppe/Varengeville, France. Orange Beach 1.







Dieppe/Ste.-Marguerite, France. Orange Beach 2.



Pegasus Bridge, France.



Arromanches, France. The Mulberry Harbors.



Normandy, France, Omaha Beach.



Arromanches, France. The Mulberry.



Normandy, France, Omaha Beach trench.

Map of the landings on the Normandy beaches and the development of the beach-head.



Point du Hoc, Normandy, France.



Point du Hoc, Normandy, France.



Point du Hoc, Normandy, France. Bomb craters.



Saint-Lo, France. Overview.



Saint-Lo, France. Bocage.



Saint-Lo, France. Bocage.



WWII Memorial for Richard "Dick" Winters.



Normandy, France. Utah Beach, NNW.



Normandy, France, Utah Beach.



La Fiere, France. Airborne Operation.



Normandy, France. Utah Beach, NNE.



La Fiere, France. La Merderet River/bridgehead.



Coutances, France. Overview.



Coutances overview stand.



Saint-Malo, France. Vauban Fortification.



Saint-Malo, France. Vauban Fortification.



Mortain, France.



Mortain, France.



Falaise, France. The Falaise Gap.



Falaise, France. The Falaise Gap.

Source: Photos courtesy of Major A. B. Christman, USMC

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