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Nadzab (1943): the first successful airborne operation

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**NADZAB (1943):
THE FIRST SUCCESSFUL AIRBORNE OPERATION**

A Thesis

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Master of Arts in Liberal Arts

in

The Interdepartmental Program
In Liberal Arts

by
James P. Lowe
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ABSTRACT

The U.S. Army in 1940 was in the early stages of developing an airborne capability to exploit the vertical envelopment concept. That concept became reality in 1942 with the first airborne operation in North Africa. Although the first parachute drop contributed virtually nothing to the overall success of the mission, it was the beginning of an important capability.

In 1943, the War Department authorized five airborne divisions despite a lack of experience and doctrine to direct the new organizational structure. The airborne initiative expanded much more quickly than did the doctrine, training, or employment principles. The first attempts of conducting large-scale airborne operations in combat during the Sicilian Campaign that year proved to be disastrous. Because of these failures, the airborne division, as well as the vertical envelopment concept itself, were in jeopardy. Army Chief of Staff George C. Marshall appointed a special board to investigate the causes of the disasters and make recommendations as to the soundness of the airborne division.

While the board was meeting, half-way around the world in the South West Pacific Area, a successful airborne operation occurred when the 503^d Parachute Infantry Regiment executed a drop at the Nadzab Emergency Landing Strip that allowed the capture of the essential port of Lae, New Guinea. This operation had a broader impact than just the tactical objectives that it achieved. This was the first unqualified successful American airborne operation of World War II and it allowed the airborne advocates to make a case for the soundness of the vertical envelopment concept, as well as that of the airborne division. Had it not been for this parachute drop, the U.S. Army might have abandoned the whole initiative just when it was planning to employ two airborne divisions during Operation NEPTUNE, the airborne portion of Operation OVERLORD.

CHAPTER 1

INTRODUCTION

"War undergoes a constant evolution. New weapons create new forms of combat. To foresee this technical evolution accurately, to assess the effect of a new weapon system on the course of a battle and to employ it before the enemy does, are essential conditions of success." ¹

-- Official German Manual on Troop Leadership
(*Truppenführung*) prior to World War II

On October 17, 1918, Colonel Billy Mitchell went to see General John J. Pershing, commander of the American Expeditionary Force, with a plan to put 12,000 soldiers from the 1st Infantry Division into light bombers and drop them by parachute behind German lines. Pershing was skeptical about the plan, but surprised Mitchell with tentative approval to determine its feasibility. However, the operation did not happen because the war ended less than a month later. The plan died, but the idea did not. The strategy intrigued one of General Pershing's staff officers, then Colonel George C. Marshall. Over twenty years later, General Marshall, as Chief of Staff, revived the airborne concept and made it a reality.²

The United States was not the pioneer in vertical envelopment; on the contrary, it was years behind several other countries. Although the United States was the last major power to develop the airborne concept, it possessed the largest and most advanced airborne forces by the end of World War II. This development did not always come easily, or without its share of disasters through a series of trials and errors.

By 1942, an infantry battalion had been the largest unit involved in an airborne operation. The War Department activated parachute and glider infantry regiments faster than the Air Corps could produce aircraft or pilots to train with, or transport, the airborne forces. This issue of troop carrier availability and training continued to plague the airborne effort throughout the war.

In 1942, the War Department expanded the airborne concept to include divisions in spite of the lack of doctrine and troop carrier units. The decision to activate airborne divisions came after Brigadier General William C. Lee visited England in July 1942 to observe British airborne training. The most significant item Lee brought back was the news that the British were going to form airborne divisions. When he briefed Lieutenant General Leslie J. McNair, commander of Army Ground Forces, on the results of his trip, he recommended that the United States form an airborne division of its own to have the capability to conduct large-scale offensive combat operations.³ McNair had his staff study the proposal and less than two weeks later he advised Lee that the War Department was going to form not one, but two such divisions. As a result, on August 15, 1942, the 82^d and 101st Infantry Divisions at Camp Claiborne, Louisiana became the 82^d and 101st Airborne Divisions.⁴

The parachute infantry regiment was the largest airborne formation addressed in any doctrinal manual when the War Department activated the first two airborne divisions. There was still much to learn about the doctrine, training and employment principles of a parachute regiment -- let alone an airborne division. Many of the lessons learned about large-scale airborne operations came from the units already assigned to the war-time theaters while they were training or conducting combat operations. In most cases, the lessons learned were from poor performances.

By the middle of 1943, the series of airborne failures in the European Theater caused many of the senior military leaders to question the soundness of the concept, or at least the idea of an airborne division. Fortunately for the advocates of vertical envelopment, the South West Pacific Area produced a dazzling display of a perfectly planned and executed large-scale airborne operation. On September 5, 1943, the 503^d Parachute Infantry Regiment's operation at the Nadzab Emergency Landing Strip allowed the capture of the essential port of Lae, New Guinea. This first unqualified successful

American parachute drop of World War II allowed the airborne advocates to make a case for the soundness of the airborne concept, as well as that of the airborne division.

It is interesting to note that this operation occurred in the Pacific Theater, where there was only one parachute infantry regiment. At the time of the operation, General Douglas MacArthur, Supreme Commander of Allied Forces in the Southwest Pacific, had slightly less than two percent of the total U.S. Army and Air Corps, which amounted to only 10 percent of the total forces deployed outside the continental United States. His share of the Navy forces was even smaller than that of the Army forces.⁵ Because MacArthur and his staff understood that they represented the secondary front and therefore did not receive the same resources as the main effort, what they did receive, they employed effectively and efficiently.

CHAPTER 2

THE DEVELOPMENT OF THE AIRBORNE

"Where is the prince who can afford so to cover his country with troops for its defenses as that 10,000 men descending from the clouds might not in many places do an infinite deal of mischief before a force could be brought together to repel them."

-- Benjamin Franklin, 1784
After witnessing one of the first manned balloon flights

The development of the airborne concept went quickly from an idea into reality. In fifteen months the project went from a staff study to an actual parachute drop and just over two years later a combat jump. Despite the speed of the initiative, there were many obstacles, challenges, and failures. Some of the obstacles were the training and organizational structure of the initial units. The challenges included doctrine, training, and employment principles. The failures came in North Africa and Sicily. The disastrous results of the Sicilian operations in July 1943 clearly showed the poor training of the troop carrier units and the lack of coordination and planning among all forces involved. Many of the senior leaders in the Army were excited about the possibilities of vertical envelopment, but not all were convinced of its practicality. The unsuccessful operations in Sicily almost led to the demise of the concept.

In May 1939, Chief of Staff of the Army General George C. Marshall directed his Chief of Infantry to conduct a staff study of the concept of parachute and air-landing infantry units. This directive was in response to the many intelligence briefings Marshall had received about the European powers that were experimenting with, or already had formed, various parachute and air-land units. Marshall saw the enormous advantages in conducting a surprise vertical envelopment of the enemy by the use of airborne forces.¹ Airborne forces consisted of three types: parachute, glider, and air-land, or troops that landed by air transport.

Five days after Marshall's request, Major General George Lynch, Chief of Infantry, delivered an extensive report on tests and operations that the Army already had conducted on the movement of forces by air. Pointing to the capabilities and training of other nation's airborne units, he recommended employment principles and called for immediate experimentation to determine several key characteristics: the appropriate organizational structure and size, types of weapons and equipment, place in the Army's organizational chart for command and control purposes, and design and characteristics for troop carrier airplanes. His final recommendation was that he immediately receive a squadron of nine airplanes to begin testing at Fort Benning.²

Several months passed before General Marshall acted on the recommendations. The extreme shortage of transport airplanes, as well as the long list of projects associated with equipping a rapidly expanding army, put the airborne project at the bottom of a long list. Marshall eventually sent the recommendations to his Chief of the Air Corps, Major General Henry "Hap" Arnold, asking him for comments and recommendations. Arnold, in turn, sent the project to his Air Corps Board at Maxwell Field and his Plans Division in Washington for their recommendations.³

Arnold received two divergent views on the airborne project. Colonel Walter Weaver, Commandant of the Air Corps Tactical School, wholeheartedly advocated the formation of parachute units within the Air Corps to perform functions similar to those the Marines Corps executed for the Navy. The paratroopers would guard airdromes and supply centers, conduct military ceremonies, provide guards for prisoners, as well as serve as parachute troops. Lieutenant Colonel Carl "Tooey" Spatz, author of the Plans Division study, argued that the already meager resources of the Air Corps and the shortage of transport aircraft would not allow another priority project. At the time the Army had just over a hundred aircraft to support its requirements. He suggested that the project be the subject of joint study of the Air Corps and Infantry Boards until more aircraft were available. Arnold endorsed Spatz's recommendation and sent it forward to Marshall.

Impressed by the coordinated employment of tanks and attack airplanes by German forces in Poland that September, Marshall agreed to keep the concept under study. For the moment, he did not want to detract from the Air Corps' mission of developing a strong attack air arm. The project languished until December 1939 when the Red Army's employment of paratroopers in its attack on Finland revived Marshall's interest. Although the Soviets failed to achieve any immediate tactical victory, the possibilities were intriguing. The Chief of Infantry appointed then Major William C. Lee to head the airborne project.⁴

Over the next several months Lee made considerable progress in the development of airborne techniques and procedures. To his surprise, he received strong support from the Air Corps. Throughout the spring, Lee test-dropped at Lawson Airfield on Fort Benning weighted containers that replicated paratroopers to determine proper jump altitudes and the resulting ground dispersion patterns.

In May 1940, German airborne troops spearheaded the attacks on Holland and Belgium with great success. In the attack against Holland, they captured essential bridges across the Maas and Waal Rivers, allowing the Panzer units to advance across Holland unhindered. In Belgium, both glider and airborne forces landed inside the fortress of Fort Eben-Emael, neutralizing that critical installation along the King Albert Canal defensive line. The successful exercise in vertical envelopment energized Lee and his assistants and attracted widespread attention within the Army. The reason was two-fold -- it was not only the accomplishment of such vital tasks with a small number of forces, but also the impact those missions had on the ultimate outcome of the overall operations. The German achievement provided a concrete example of the capabilities and the value of airborne forces and magnified the urgency of the airborne project.⁵

Major Lee informed the Infantry Board in June 1940, that he was ready for live-jump tests and that all he needed was volunteers. They came from the 29th Infantry Regiment at Fort Benning to form the Airborne Test Platoon. The new unit, under the

command of Lieutenant William T. Ryder and Lee's direction, began intensive training the next month. By August 16 it was ready for its first jump.⁶ The interest of the high-command was so intense that both Secretary of War Henry L. Stimson and Marshall were on hand to watch the fifth and final qualifying jump. The operation was an astounding success and Marshall immediately authorized the activation of the first parachute battalion, the 501st.⁷

The training of jump volunteers grew at a furious pace. In order to keep up with the growth of the airborne concept, the War Department activated the Provisional Parachute Group on March 10, 1941 at Fort Benning under the command of now Lieutenant Colonel Lee. Still under the direction of the Chief of Infantry, Lee's mission was to conduct basic parachute jump training. The unofficial mission of the Group was also to train cadres for parachute battalions as the War Department authorized them, study permanent tables of organization and basic allowances, develop tactical doctrine, and prepare training literature.⁸

The task almost immediately became an even broader one when the Germans employed glider forces and air-landed forces to seize the entire island of Crete in a short period. Before this operation, American planners had placed all their emphasis on the development of parachute units, but they now expanded the airborne concept to include glider and air-landed troops.⁹

As the War Department authorized more parachute battalions, it became evident that the airborne effort had progressed to a stage where the Chief of Infantry could no longer exercise effective control over it. He did not have the authority to provide the unity of command necessary for organizing, equipping, training and providing effective liaison with the Air Corps. An example of this inefficient organization came when the War Department authorized the testing of an airborne combat team that included a field artillery battery. The Chief of Field Artillery first organized the unit and then the Chief of Infantry was responsible for its parachute training. This training occurred only after the

howitzers came from the Chief of Ordnance.¹⁰ The existing command structure thus did not facilitate the growth of the airborne concept.

Under the Provisional Parachute Group, parachute organizations received only individual jump and basic unit training. They then passed to the War Department General Headquarters' control for advanced unit instruction and preparation for combat. However, after basic unit training, the organization was only partially prepared for airborne operations. Further training in the form of battalion and regimental jumps, loading and unloading of supplies, and air transport with other units (field artillery, infantry and antitank) was necessary.

Lee pushed for the activation of a unified command to supervise the advanced and combined training for all units until they deployed to the theaters of operations. Without this centralized training headquarters, there was no way to ensure uniformity of doctrine, procedures and standards throughout the entire airborne community. With the probable dispersal of these units throughout the United States and overseas, the uniform training would be nearly impossible. Another factor was the shortage of transport planes. Only with a centralized location could a single command manage the acute shortage of aircraft.

The training experiences of 1941 emphasized the critical role the Air Corps played in basic, unit and combined training stages. The Air Corps did not have enough transport planes or pilots and staffs to keep up with the requirements of the expanding airborne forces. In June 1941, it could provide only twelve transport aircraft for the 50th Transport Wing for airborne training. This wing was the only such organization in existence; it could carry only one infantry company at a time and did not expect to receive any more aircraft until 1942. The need for transport capability became so great in 1941 that the Provisional Parachute Group requested in vain the release of the airplane used by General Headquarters.¹¹

The combat mission, rather than a logistical or transport one, governed the production of aircraft and the training of pilots and aircrews. The U.S. Army was fortunate

that the civilian Air Transport Association (ATA), the trade organization for the major airlines in the United States, had an operational blueprint for their mobilization in case of a national emergency. The president of the ATA was Egar Gorrell, a veteran of the U.S. Air Service in World War I.¹² The DC-3 airliner easily adapted to a military logistics and troop-carrier aircraft. The Air Corps received the first DC-3 (designated C-47) in September 1941 and owned over 500 by the next summer.¹³

The lack of effective coordination between the Air Corps and airborne forces was due primarily to the lack of an accurate, long-range schedule of airborne troop transport requirements. There was little coordination among the numerous airborne units throughout the country and the Air Corps. The Air Corps was thus unable to train crews properly or acquire sufficient aircraft to meet the requirements of the rapidly expanding airborne forces.¹⁴ Had there been a centralized training agency for all airborne forces, it might have been able to articulate the troop transport needs for the Air Corps.

The first operational test of the airborne concept occurred in the U.S. Army General Headquarters (GHQ) Maneuvers in the fall of 1941. These maneuvers took place in Louisiana in September 1941 and the Carolinas in November 1941. The 502^d Parachute Battalion conducted four separate airborne operations, usually company-sized because of the shortage of transport planes. None of the operations was of sufficient scale to have much of an impact on the maneuvers and the results seemed to indicate that parachute troops were most useful in small-scale sabotage missions. Although they did not provide a realistic tactical test of the capabilities of airborne forces, General McNair, commander of Army Ground Forces, believed that the maneuvers at least had provided good training for the fledgling parachute battalion.¹⁵

The reorganization of the War Department and the U.S. Army in March 1942 into co-equal Army Ground Forces (AGF) and Army Air Forces (AAF) paved the way for the unified airborne command that Lee envisioned. The creation of the AGF merged into one command the agencies under which the various parachute, glider and air-landed units

operated. The establishment of the AAF provided the one command necessary to coordinate with AGF the planning and training for airborne transport requirements.¹⁶

The Army Ground Forces formed the Airborne Command on March 21, 1942 at Fort Bragg, North Carolina to provide the oversight for all aspects of airborne operations. The Airborne Command replaced the Provisional Parachute Group. Its mission was to organize and train airborne forces, such as parachute, air-land and glider units, control the allocation of transport airplanes as made available by the AAF, and determine operating procedures for airborne operations. The Command also had the responsibility for development of doctrine and standardization of material and equipment. This simplified the process for advanced and combined unit training and established unity of command to insure uniformity of training and procedures.¹⁷

A month after the activation of the Airborne Command, the AAF formed a similar organization to deal with many of the troop carrier issues. This organization was the Troop Carrier Command (TCC), later renamed the 1st TCC.¹⁸ Its mission was to "organize and train Air Transport units for all forms of Air Transport with special emphasis on the conduct of operations involving the air movement of airborne infantry, glider troops, and parachute troops, and to make such units available to other elements of the Army Air Forces to meet specified requirements for Airborne forces."¹⁹

In Field Manual 100-20, Command and Employment of Air Power, published in July 1943, the AAF paid little attention to the roles and missions of TCC in airborne operations. That manual was the AAF's "Declaration of Independence," which made the case for centralization of all available air power and command through the senior air force commander. The manual declared that "land power and air power are co-equal and interdependent forces; neither is an auxiliary of the other."²⁰ The only mention of troop carriers came in the discussion of the types of tactical aviation. The manual defined troop carrier activities (including gliders) as those air units that carried parachute and airborne troops, as well as cargo. This broad definition made the case for the secondary mission

of troop carriers units to deliver supplies when not conducting the primary mission of airborne operations.²¹

From the point of view of airborne and troop carrier units, the latter should have been training for their primary mission -- airborne operations -- when they were not actually participating in combat. The view of most air and ground commanders, however, was that airborne training was an uneconomical use of the scarce resource of transport aircraft. Most commanders, especially those of ground armies, regarded resupply as more important than training for future airborne operations. As long as commanders regarded such training as non-essential, troop carrier and airborne units did not receive the joint training necessary for proficiency.²²

The first task of Airborne Command was to move from the overcrowded Fort Benning to Fort Bragg. On April 9, 1942, the Airborne Command and the two battalions of the 503^d Parachute Infantry Regiment relocated to Fort Bragg. The next tasks were to continue with the training of the newly activated units and writing of doctrine. The first doctrinal publication on airborne operations was Field Manual 31-30, Tactics and Techniques of Air-Borne Troops, dated May 20, 1942.²³ Describing airborne warfare as the seizure of suitable landing areas by parachute troops and then reinforcement by troops arriving by glider or airplane, the manual listed a series of possible operational objectives. Among them were holding key terrain, seizing and holding river and canal crossings and defiles, establishing bridgeheads, and capturing or destroying vital enemy supply and communication installations. But the most likely mission was the seizure of an airfield and to that task the manual devoted an entire section.²⁴

The remainder of the manual was a basic description of the organization of a parachute infantry regiment, fundamental tactical employment considerations, and advice to instructors on how to conduct basic parachute training. The manual could describe only what the Airborne Command expected, since at that point no American airborne troops had participated in a combat airborne operation. Although the document dealt with

the basics, much of it proved valid with the test of combat and substantial portions remained in later editions and other doctrinal references.²⁵ However, key points of doctrine, training, and employment principles would come only through trial and error, a sometimes disastrous process.

The few manuals that did exist in the early development of airborne warfare covered only the overall aspects of airborne operations and organizations, not the troop carrier operations and organizations. There were no manuals on the tactics and techniques of troop carrier aviation in support of airborne operations. A basic manual on the training of crews and units, operations, navigation aids, and coordination between troop carrier and airborne forces was desperately needed. The available aviation manuals treated only air transport tasks that were significantly different from troop carrier missions in airborne operations.²⁶

It did not take many training exercises to reveal the numerous shortcomings in the existing doctrine and training manuals. Basic details were still lacking as late as April 1943 when a Joint Airborne-Troop Carrier Board made recommendations on minimum jump altitudes, jump speeds, formations, time warnings and other jumpmaster-pilot coordination issues.²⁷ Some units, such as the 503^d Parachute Infantry Regiment (PIR), which had already departed Fort Bragg for its theater of operation, found answers in its own training exercises. Other units learned the hard way through the trial of combat.

American airborne troops saw their first action on November 8, 1942, when the Second Battalion, 503^d PIR (later designated 509th Parachute Infantry Battalion) jumped into North Africa as part of Operation TORCH. This operation was not only the first for paratroopers, but it was also the longest of the war. The 39 C-47s that carried them from Cornwall, England to North Africa traveled over eight hours and 1,100 miles -- nearly half of those being over Spain.²⁸ Most of the troop carriers separated from the formation on the long flight. Several dropped their paratroopers prematurely in Spanish Morocco, while others ran out of gas and landed in the desert. German fighters shot down several more.

The remainder dropped their paratroopers nearly thirty-five miles east of the intended objective. The result was that the airborne mission contributed virtually nothing to the success of the overall operation. The fault lay with inept and inexperienced transport pilots who had not properly trained for a parachute drop. There were some valuable lessons learned, but after the operation, there was only half the number of parachute forces available because of the loss of men and aircraft.²⁹ This failure was just the first of more to come.

By the summer of 1943, the War Department had authorized five airborne divisions (11th, 13th, 17th, 82^d, and 101st) and several independent parachute regiments. There had not been any tests of the large-scale airborne concept, however, to determine its feasibility. The largest organization described in doctrine at the time was the parachute infantry regiment. Any parachute drop larger than battalion-sized was a large-scale operation. The first combat large-scale American airborne maneuvers were regimental size operations of the 82^d Airborne Division in July 1943 at the island of Sicily. These parachute drops became known as the Airborne's Baptism of Fire – Operation HUSKY. Major General Matthew B. Ridgway, commander of the 82d Airborne Division, had serious objections.

The Americans, with virtually no night jump training, were to be delivered by pilots with the least experience in combat and who were grossly undertrained in night formation flying and navigation. The troop-carrier pilots would have to navigate and fly a route over water, at night, that was clearly beyond the capability of most, and in the follow-up missions "not suitable" for avoiding friendly naval fire.³⁰

The inadequate training of the troop carrier units deeply concerned Ridgway. He knew the mission would be arduous and worried that they had not acquired the necessary proficiency to execute the operation as planned.³¹ In spite of his repeated objections, the stage was set for a disaster.

There were four separate airborne operations in the Sicilian assault: HUSKY I, a parachute drop about five miles northeast of Gela on July 9; HUSKY II, another drop

three miles east of Gela on July 11; LADBROKE, a glider mission to a point just south of Syracuse on July 9; and FUSTIAN, a parachute mission reinforced by gliderborne artillery, five miles south of Cantania on July 13. The first two operations were American and the last two were British.³²

The first American jump was that by Colonel James Gavin's reinforced 505th Parachute Infantry Regiment. The plan was simple enough -- fly to Malta and take a dogleg to the left, coming in on Sicily's southwest coast near Gela. The dogleg was necessary to avoid Allied naval convoys and the possibility of their anti-aircraft fire. The troop carrier aircraft flew under 500 feet to avoid radar detection. The island of Sicily was to come into sight on the right side of the aircraft and the paratroopers were to jump on four drop zones to the east of Gela.³³

The 226-aircraft formation flew in an aerial column over 100 miles long. Three airplanes missed the turning point over the island of Malta and returned to North Africa. There was a thirty-five mile per hour crosswind from west to east that caused the entire air armada to make landfall on the eastern coast of Sicily. Most paratroopers saw land come into sight on the left side of the aircraft, instead of the right as planned. German anti-aircraft fire shot eight airplanes out of the sky and severely damaged many more. Twenty-three airplanes dropped their paratroopers in the British zone near Noto, almost sixty miles away from the intended drop zone. Another 127 placed their paratroopers several miles outside of the division's sector. According to Gavin's estimation, only about 12 percent of the combat team landed near the correct drop zone, a contingent still widely scattered by the strong winds.³⁴ The returning pilots, thinking they had been successful, were elated. In spite of all the navigation problems, most claimed they had found their drop zones. The troop carrier unit proudly informed its higher headquarters that "80% of the paratroopers had been dropped on their designated drop zones."³⁵ In reality, almost the opposite was true.

The paratroopers were unable to secure most of their assigned assault objectives. However, this did not stop them from being productive, or destructive in this case. Small groups of lost paratroopers roamed through the hills of southern Sicily cutting telephone lines and ambushing enemy patrols. Other groups caused confusion and fear by just appearing here and there. The scattered paratroopers throughout the area panicked the enemy and caused him to exaggerate greatly the Allied strength. The German commanders assumed that the drops had been well executed and that there were numerous organized airborne battalions within or behind their front lines. As Field Marshall Albert Kesselring, German Supreme Commander in the Italian Theater later commented, the Allied paratroopers had “considerably impeded the advance of the Hermann Goering Panzer Division and helped to prevent it from attacking the enemy promptly after the landings at Gela and elsewhere.”³⁶ Hitler’s forces thus faced a new dimension of warfare.

It was fortunate that the commander of the Hermann Goering Panzer Division did not counterattack with speed and vigor. If he had, the counterattack on the thinly defended beachheads would have been a catastrophe for the poorly prepared Americans. The scattered groups of paratroopers bought valuable time for the landing divisions to establish a secure beachhead and build combat power. General George S. Patton credited the paratroopers with speeding his ground advance by forty-eight hours.³⁷

To judge the success or failure of an airborne operation requires consideration of three aspects: the air contribution, the airborne effort, and the impact of the parachute drop on the overall outcome. The Weapon System Evaluation Group (WSEG), which conducted a study and evaluation of airborne operations after World War II from the standpoint of their utility in future operations, defined a successful air effort as one which “a high degree of accuracy and concentration of a large proportion of troops delivered is achieved with light troop losses and maximum air destruction and obstruction of the movement of enemy material and personnel.”³⁸ As for an airborne effort, it would turn in a

“perfect performance if all its objectives were seized and held at the planned time.”³⁹

Success for the overall effort was if the airborne operation “accomplishes its planned purpose, and the success of the operation measured in terms of the accomplishment of ultimate purpose, was dependent on the performance on the airborne forces.”⁴⁰

There are relative degrees and combinations of success within these definitions. For example, an air effort can be a total success, but the whole effort could be a failure. Alternatively, the airborne effort could be a total success, but failed to achieve the purpose of the overall effort. In actual airborne operations, however, the actual results were usually combinations of these definitions. From the perspective of the air effort, the HUSKY I airborne operation was a failure, in spite of the reports from the pilots. The troop carriers did not drop the paratroopers accurately, nor were the paratroopers dropped closely together. From the perspective of the airborne effort, the operation was a failure as well because the paratroopers were not able to achieve their assault objectives. For the whole effort, the airborne operation was a success. Although the paratroopers did not accomplish their planned purpose, the success of the overall operation was dependent on the airborne forces. The failure of the air effort directly contributed to the failure of the airborne effort, but may have indirectly contributed to the overall success of the operation. HUSKY I was a success since it facilitated the Seventh Army's advance, but the costs were high.

What the HUSKY I operation revealed again was the serious weaknesses in the capabilities of the troop carriers, which could not drop a large force reasonably close to a chosen drop zone at night. In the defense of the pilots, the aircraft flew a circuitous route because of naval restrictions, there was insufficient time for reconnaissance and briefings by subordinate flight leaders, and the weather was severe that night. Obviously the troop carriers units needed better navigational aids and more training in night flying.⁴¹

On July 11, 1943, General Patton ordered Ridgway to bring in another regimental combat team later that night with little or no planning or coordination. The next unit to

jump in HUSKY II was the 504th PIR, commanded by Colonel Reuben H. Tucker, III, who lacked one of his battalions. This mission comprised 144 C-47s that carried the paratroopers to an abandoned airfield three miles east of Gela. The purpose of the operation was to reinforce the 505th PIR. The pilots believed this would be a "milk run" and vowed to improve on their previous poor performance. By all indications, the mission started well. All the airplanes made the turn at Malta and were on course and in formation. The first indication of trouble was that the air armada received random and inaccurate fire from some of the Allied convoys while they were approaching Sicily, but there were no reported damages. After all the airplanes made proper landfall and skirted along the beachhead at Sicily, they encountered clouds and climbed to 1,000 feet to avoid them.⁴²

Ridgway was at the drop zone waiting for the arrival of the 504th PIR when all of a sudden friendly anti-aircraft units opened fire. Within a minute, it seemed to Ridgway that every anti-aircraft weapon afloat and ashore began firing along the entire length of the beachhead. Because of the haste in executing the operation, neither the Allied ships nor the units on the beachhead had received sufficient warnings about the airborne operation. Friendly fire hit sixty of the 144 airplanes; twenty-three crashed into the sea or on Sicily and the anti-aircraft fire damaged thirty-seven beyond immediate repair. The remainder of the airplanes broke formation and dropped paratroopers wherever they could -- some inside German lines. The results were disastrous. There were 229 paratrooper and ninety aircrew casualties.⁴³ There was no question about the execution of HUSKY II: from the standpoint of the air, airborne and overall effort, it was an unqualified failure.

The two British airborne operations proved to be as disastrous as the American. The failures of Sicily convinced many military leaders that such operations were too costly to be of value. General Dwight D. Eisenhower, the overall Allied Commander, was one of the skeptics. Eisenhower knew that small groups of paratroopers, although widely scattered through no fault of their own, had performed extremely well at many points on

the battlefield. He appointed one of his airborne advisors, Major General Joseph Swing, to investigate the reasons for the debacle. In his subsequent report (see fig. 1), Swing listed five major errors for the HUSKY II failure: insufficient prior planning and lack of coordination between the Army, Air and Navy; inability of aircraft to adhere closely to routes given; the unalterable decision of Navy elements to fire at all aircraft at night coming within range of their weapons; the unfortunate circumstance of an enemy bombing raid coinciding exactly with the arrival of the friendly aircraft; negligence of some ground commanders in informing their units of the airborne operation.⁴⁴ In the end, the board was unable to find a sole cause or fix any single blame for the disaster and it took no disciplinary action. Ridgway's statement best sums up the whole tragic incident:

The responsibility for the loss of life and material resulting from this operation is so divided, so difficult to fix with impartial justice, and so questionable of ultimate value to the service because of acrimonious debates which would follow efforts to hold responsible persons or services to account, that disciplinary action is of doubtful wisdom. Deplorable as is the loss of life which occurred, I believe that the lessons now learned could have been driven home in no other way, and that these lessons provided a sound basis for the belief that recurrences can be avoided.⁴⁵

Unfortunately, those lessons came through the inevitable price of war in human life.

The Fifth Army Airborne Training Center also submitted a report on HUSKY airborne operations that was very critical of the troop carrier performance:

The 82^d Airborne Division was in superb physical condition, well qualified in the use of infantry arms, in combined ground operations, and in individual jumping. It was extremely deficient in its air operations. The 52^d Troop Carrier Wing did not cooperate well. Training was, in general, inadequate. Combat efficiency for night glider operations was practically zero. The combined force of the 82^d Airborne Division and troop carrier units was extremely deficient.⁴⁶

The report also commented on the employment of troop carrier units for purposes other than airborne operations. The report stated that higher headquarters did not realize the importance of the joint training of troop carrier and parachute units in conducting airborne operations. The troop carrier units were focusing on their secondary mission of resupply

General Swing's comments on night operation, Eighty-second Airborne Division (Sicily), 16 July 1943.

La Marsa Camp, Tunisia, N.A.
16 July, 1943

Memorandum:

Comments on Night Operation, 82d Airborne Division Night D plus 1/D plus 2.

1. On the night referred to above, 142 aircraft carrying elements of the 82nd Airborne Division endeavored to fly over a dropping zone in the vicinity of landing strip two miles east of Gela. Less than 50% dropped in the vicinity of the objective. Of the remainder, a small portion dropped as far west as the vicinity of Licata; the majority of one battalion of infantry and one battalion of artillery dropped between Vittorio and Scoglitti.

2. This dispersal covered a zone of approximately thirty miles from east to west. During and at the conclusion of the operation, 23 planes were lost. As to date, only eight have been counted on the island, it is presumed that the remainder were lost at sea before and after their approach to the island.

3. The following may be summed up as contributory causes:

a. Insufficient prior planning. Reluctance at Force 141 Headquarters to accept the plan of Force 343 with respect to successive lifts of the 82nd Airborne Division resulted in lack of coordination between Army, Air, and Navy. Routes of approach to the island and guarantees of immunity to anti-aircraft fire were not given until July 5th, were not disseminated to the Army until July 6th, and not broadcast to the Navy until 1100 hours on the day of the movement: July 11th. These directions could and should have been issued weeks previously.

b. Inability of some Troop Carrier elements to adhere closely to Routes given. This inability may be laid partly to the level of training of the pilots, and partly to the complicated route finally allocated.

c. The unalterable decision of Navy elements to fire at all aircraft at night coming within range of their weapons, whatever caliber, despite all efforts on the part of friendly aircraft to identify themselves.

d. The unfortunate circumstance of an enemy bombing raid coinciding exactly with the arrival of the Troop Carrier element.

e. The negligence on the part of some subordinate ground force commanders in communicating to the personnel immediately concerned with the operation of the ground anti-aircraft weapons, the time, course, and expected arrival of airborne formations.

J. M. SWING
Major General, U. S. A.

Figure 1. General Swing's Comments on HUSKY II Airborne Operation.
Source: Huston, Out of the Blue, p. 273.

operations to the detriment of their primary mission of airborne operations. There was not enough emphasis on the joint training for airborne operations.⁴⁷

After the Sicily operation, the entire airborne concept was the subject of widespread discussion both within and outside the airborne community. Swing voiced the most optimistic opinion. He believed that the Allied airborne forces could have been a decisive factor in the invasion of Sicily if employed differently. Instead of four separate regimental-size operations to support the seaborne invasion, Swing advocated the consolidation of the units for a mass attack into the heart of Sicily.⁴⁸ At the other end of the debate was Lieutenant General Lesley McNair, commander of AGF, who was far less optimistic about the airborne concept. The failures at Sicily convinced him of the impracticality of handling large airborne units, so he recommended that parachute units be no larger than battalion-size.⁴⁹

Even within the 82^d Airborne Division, there were differences of opinion about the organization of the airborne division. At the time, the 82^d Airborne Division had two parachute infantry regiments and one glider regiment. The "nonparatroopers," Ridgway and Assistant Division Commander Brigadier General Maxwell D. Taylor, believed the AAF was not capable of dropping paratroopers at night and was not willing to provide adequate fighter escort for daylight operations. So they concluded that the parachute regiments should be withdrawn from the division and be employed by the theater commander for special missions of regimental size or smaller. The airborne division, stripped of its parachute regiments, would become, in effect, an air-landed division of gliders and transports.⁵⁰

The "paratroopers," Gavin and Tucker, wanted to maintain the integrity of the airborne division. But they did make several recommendations for change, such as intensified aircrew training, including B-17 bombers in the aerial formations to provide navigation and protection, and the employment of pathfinders to mark drop zones. Their argument convinced Ridgway, who presented the case to Eisenhower. Ridgway urged

that the AAF must intensify training for all types of airborne operations, but especially night operations. Sicily, he continued, had demonstrated that the commitment of airborne division in a piecemeal fashion was a mistake. But to deploy the whole division would obviously require more transport aircraft. A final lesson learned, he concluded, was that a single commander of airborne forces capable of choosing routes and enforcing safety procedures was required.⁵¹

Following a review of the airborne operations conducted during the Sicily campaign, Eisenhower stated in his after-action report to Marshall: "I do not believe in the Airborne Division. I believe that airborne should be organized in self-contained units comprising infantry, artillery and special services, all of about the strength of a regimental combat team."⁵² He recommended against the airborne concept primarily because a division was too difficult to control in combat. This letter almost resulted in the break-up of the five airborne divisions.⁵³

CHAPTER 3

PLANNING FOR CARTWHEEL

"I accordingly applied my major efforts to the seizure of areas which were suitable for airfields and base development, but which were only lightly defended by the enemy." ¹

-- General MacArthur, in Reminiscences

In 1943, General Douglas MacArthur's primary goal in the Southwest Pacific was to cut off the major Japanese naval staging area, airfields and supply bases at Rabaul. Located on the northeast coast of the island of New Britain, Rabaul was the Japanese focal point for the protection and reinforcement of the entire area. In order to seize this critical target, it was first necessary to capture New Guinea, the strategic right flank of the Japanese line of defense. The gulf port of Lae was the final objective of the New Guinea offensive. In order to employ all necessary forces for the assault, MacArthur needed an airfield in the vicinity.

MacArthur's plan was to "envelope them, incapacitate them, apply the 'hit 'em where they ain't -- let them die on the vine' " method of "leap frog" advances. As he explained to one of his staff officers, this was the very opposite of the term "island hopping," which was the direct frontal pressure against enemy-occupied islands in a long and costly effort. Instead, he intended to envelop the enemy in order to bypass and neutralize Japanese centers of strength. This maneuver required the careful selection of key points, usually lightly defended areas that were suitable for airfields and bases, as objectives. The timing of their seizure was critical for success.²

The lack of aircraft carriers and naval aviation significantly hampered MacArthur's progress in the Southwest Pacific. The very nature of "leap frogging" depended on achieving air superiority over each move forward. The limit of advance in the Southwest Pacific was the maximum range of ground-based fighter aircraft. The presence of aircraft carriers would have enabled MacArthur to strike quickly and decisively throughout the

entire area of operations, but reliance on ground-based aircraft meant that he had to advance airbases to support each subsequent operation.³

The senior intelligence officer of the Japanese Eighth Area Army described MacArthur's successful strategy to secure Buna, Papua:

This was the type of strategy that we hated most. The Americans, with minimum losses, attacked and seized a relatively weak area, constructed airfields and then proceeded to cut the supply lines to troops in that area. Without engaging in a large-scale operation, our strongpoints were gradually starved out. The Japanese preferred direct assault after the German fashion, but the Americans flowed into our weaker points and submerged us, just as water seeks the weakest entry to sink a ship. We respected this type of strategy for its brilliance because it gained the most while losing the least.⁴

This strategy worked to capture Buna, so MacArthur planned to use it again to take Rabaul.

With the fall of Papua in January 1943, the Japanese consolidated their defensive positions. They withdrew along the northern coast of New Guinea, New Britain and the northern Solomons. New Guinea was the strategic right flank of the Japanese line of defense. From New Guinea, the Allies were able to begin operations into the heart of the Japanese-occupied areas, and eventually assault the Philippines and Japan itself.

Final planning for the Rabaul operations began after the U.S. Joint Chiefs of Staff issued their planning directive on March 28, 1943. The directive ordered General MacArthur and Admiral William F. Halsey, commander of the South Pacific Area (SOPAC), to accomplish the following tasks: establish airfields on Woodlark and Kiriwina Islands; seize the Lae-Salamaua-Finschhafen-Madang area of New Guinea; occupy western New Britain; seize and occupy the Solomon Islands as far as southern Bougainville.⁵ MacArthur commanded the entire operation, but the advances in the Solomons were under the direction of Admiral Halsey (see fig. 2). SOPAC was one of the three subordinate commands of Admiral Chester W. Nimitz's Pacific Ocean Area. Except for the forces designated for the Rabaul operations, Halsey remained under Nimitz's control. This arrangement was another one of the complicated chain of commands in the

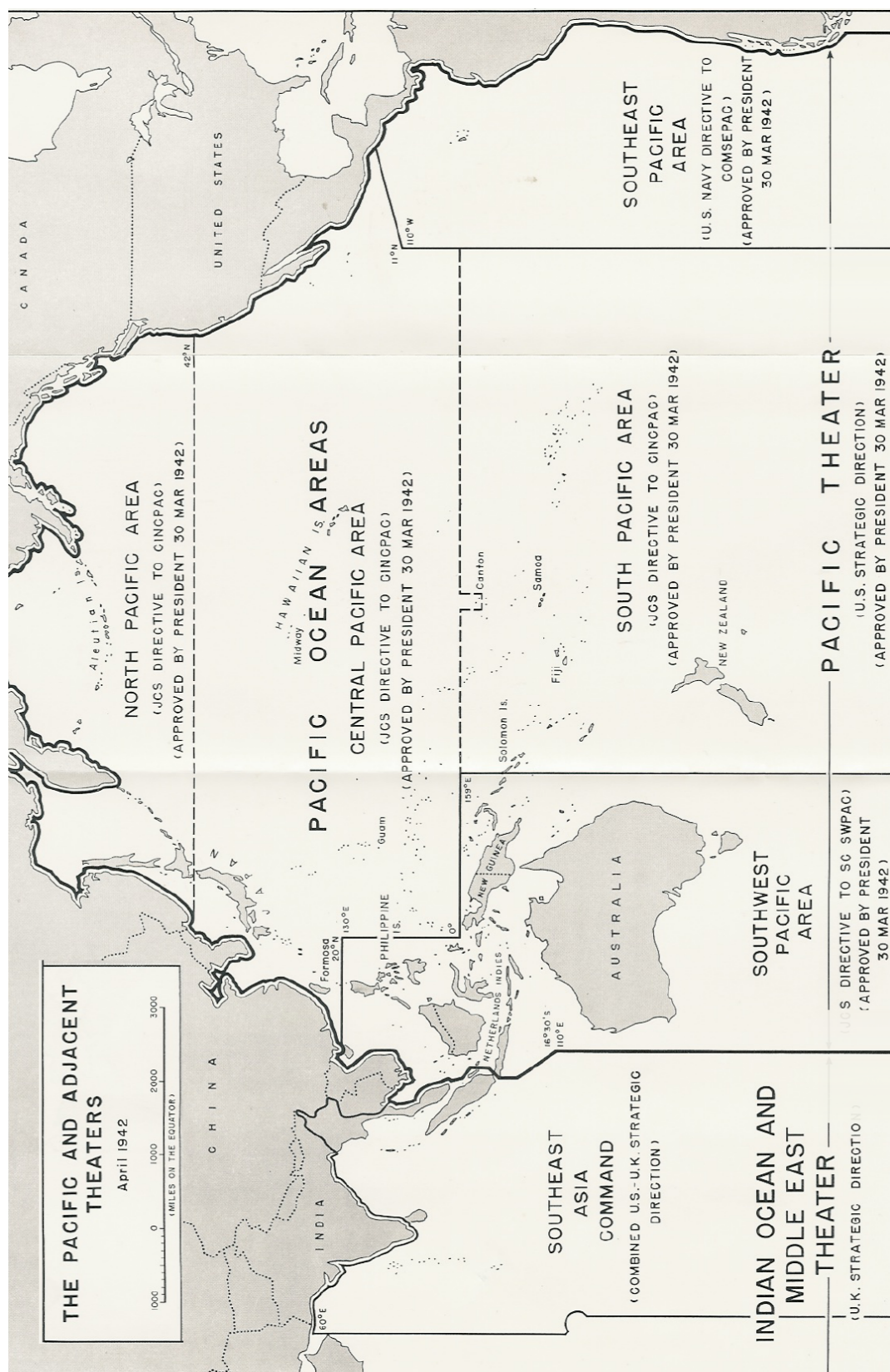


Fig 2. The Pacific Theater Area of Operations and Commands.
Source: Morton, Strategy and Command: The First Two Years.

Pacific Theater. Fortunately for the Rabaul operation, the violation of the principle of unity of command did not affect the outcome.⁶

The planning task to seize Rabaul was not difficult because MacArthur's Southwest Pacific Area (SWPA) General Headquarters (GHQ) had already developed two previous plans (designated ELKTON) to accomplish this mission. On April 26, 1943, SWPA GHQ issued its plan, codenamed ELKTON III, after a personal conference in Brisbane between Halsey and MacArthur. The joint operations of the SWPA and SOPAC would occur under the codename CARTWHEEL (see fig. 3). The plan, calling for mutually supporting advances along two axes of SWPA and SOPAC forces, envisioned thirteen amphibious operations, over eight months, culminating in the capture of Rabaul.⁷

The SWPA and SOPAC plans each had three phases. The SWPA phases were I, II and III and the SOPAC phases were A, B and C (see figs. 4 and 5). The initial two phases (Operation I and A) began simultaneously. Operation I was the seizure of Woodlark and Kiriwina and Operation A was the ground operations in the Solomon Islands (New Georgia and Santa Isabel). Operation II was the capture of Lae (IIa), Salamaua and Finschhafen (IIb), and Madang (IIc). One month later, the SWPA would begin Operation B to complete the conquest of New Georgia and move forward to take the Japanese bases on the Shortland Islands and Buin in southern Bougainville. The final set of operations would also begin simultaneously. Operation III would cross the Vitiaz Strait to seize Cape Gloucester and Operation C would take control of Buka Island before converging on the final objective of Rabaul.⁸

MacArthur used mainly the existing headquarters in his command to execute ELKTON III (see fig. 6). But he did set up, under the direct control of his GHQ, a new, primarily American, task force (Alamo), under the command of Lieutenant General Walter Krueger. The Alamo force was virtually the same as the Sixth Army that Krueger commanded. The remainder of the ground forces, primarily Australian, was the New Guinea Force, under the control of Australian General Sir Thomas Blamey. The Alamo

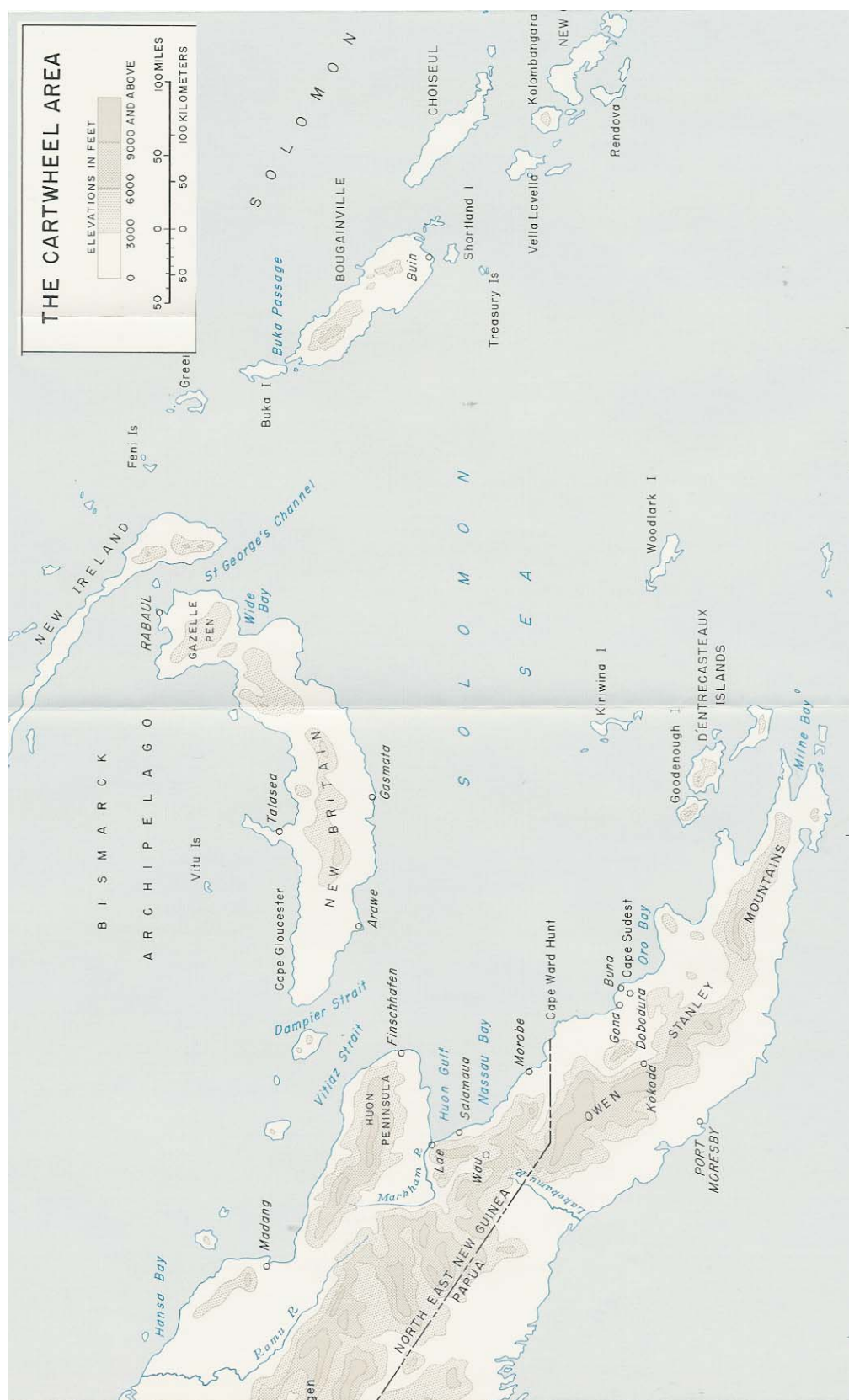


Fig 3. The CARTWHEEL Area of Operations.
Source: Miller, CARTWHEEL: The Reduction of Rabaul.



Fig 4. SOPAC CARTWHEEL Operation A, B and C.
Source: Miller, CARTWHEEL: The Reduction of Rabaul.

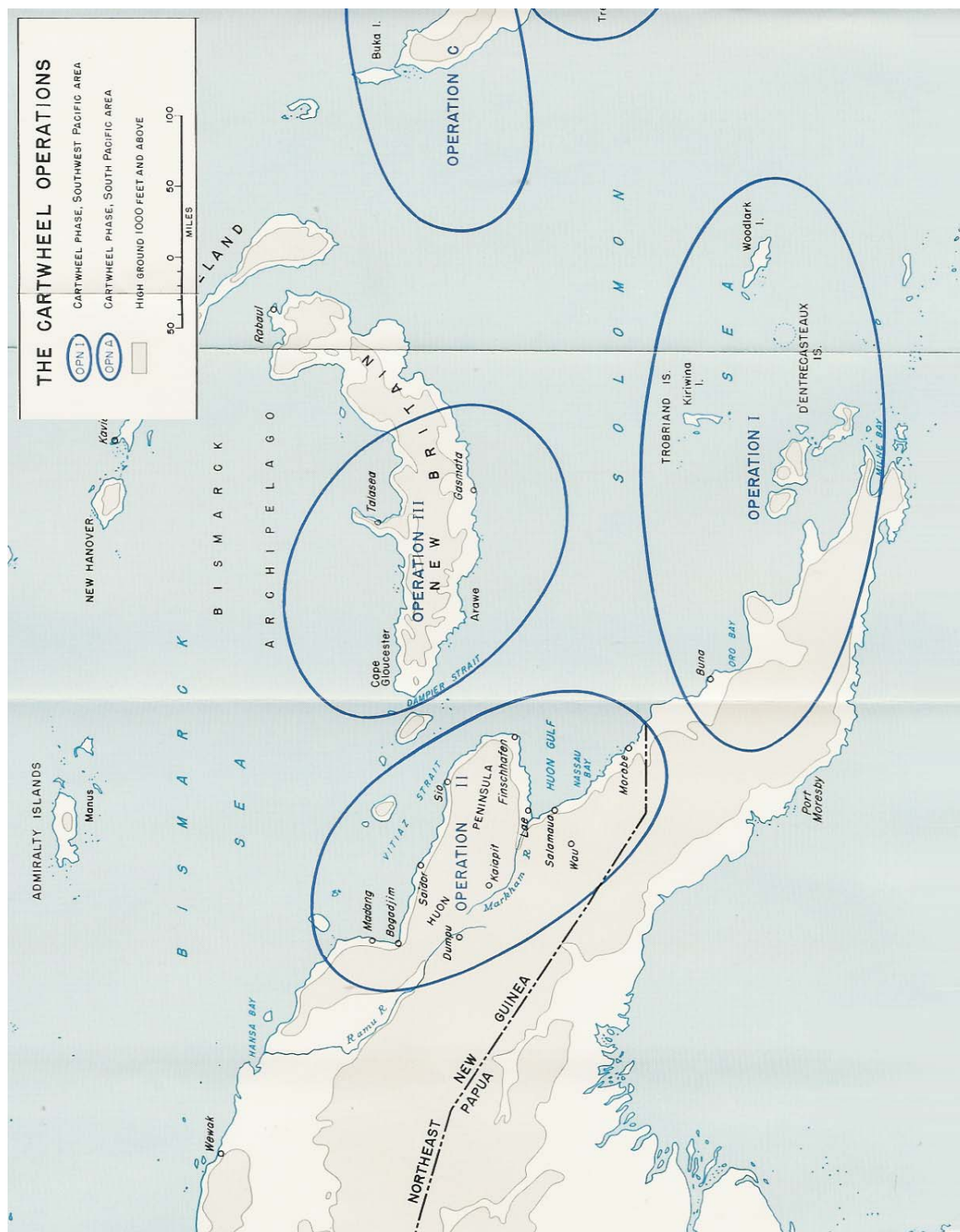


Fig 5. SWPA CARTWHEEL Operation I, II and III.
Source: Miller, CARTWHEEL: The Reduction of Rabaul.

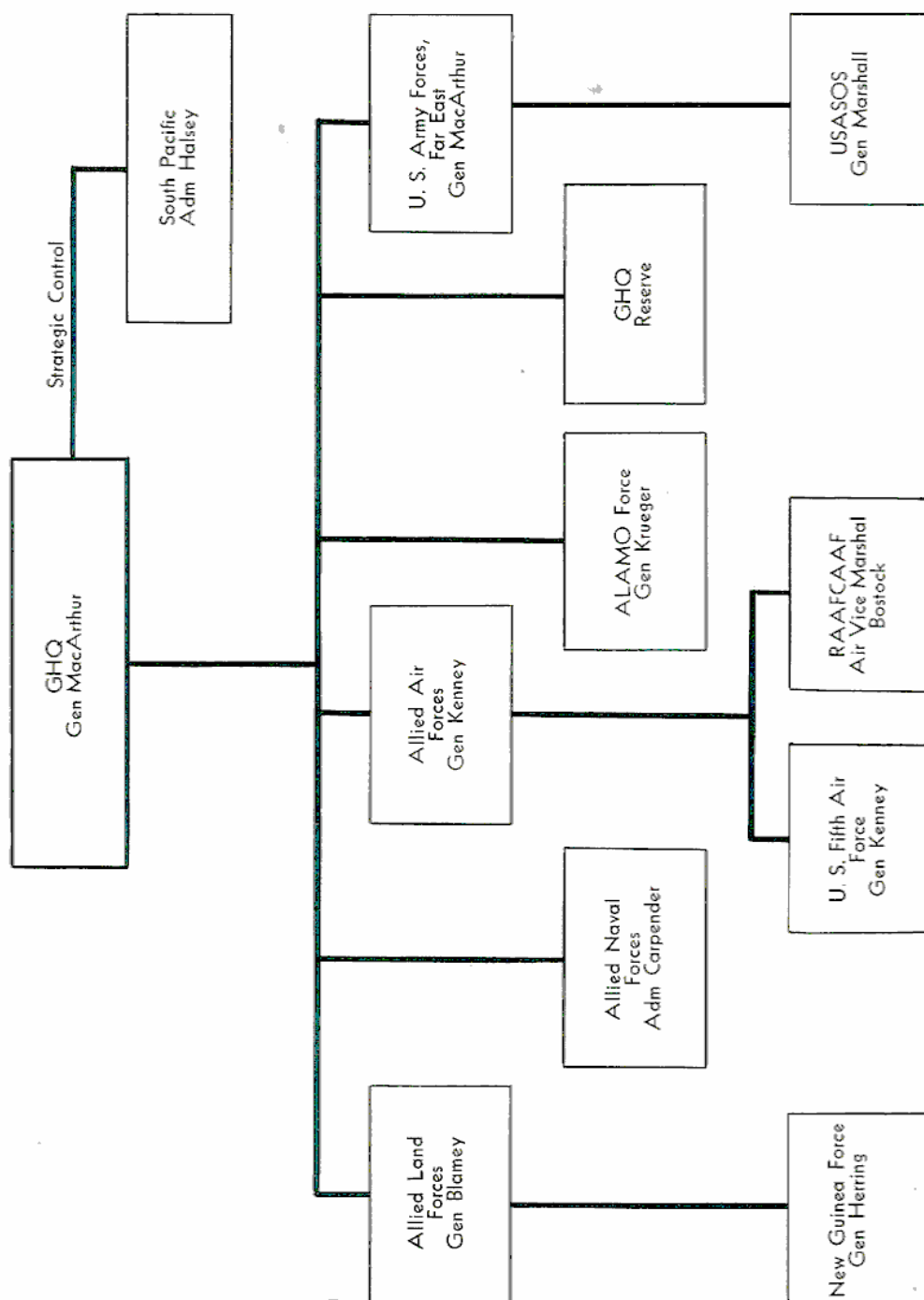


Fig 6. Organization of Forces for CARTWHEEL.
Source: Miller, CARTWHEEL: The Reduction of Rabaul.

Force conducted operations in Woodlark, Kiriwina and New Britain while the New Guinea Force fought primarily in New Guinea. Lieutenant General George C. Kenney, commander of the U.S. Fifth Air Force, was responsible for the Allied Air Forces.⁹

The CARTWHEEL operations began June 29, 1943 when Halsey invaded New Georgia (Operation A) and MacArthur struck at Nassau Bay (Operation I). The following day two U.S. Army regiments, 112th Cavalry and 158th Infantry, from the Alamo Force, made unopposed landings at Woodlark and Kiriwina Islands. Nassau Bay, about forty miles from Lae, became a staging area that threatened the Japanese at Salamaua, a village that guarded the overland approach to Lae. As the 41st Division and 162nd Regiment pushed slowly along the coast of the Nassau Bay, the Japanese began to reinforce Salamaua with the troops from the Lae garrison. These operations set the conditions for a flanking attack by sea and air at Lae. While the Americans advanced along the coast of Nassau Bay, Australian troops crossed overland from Wau through the Owen Stanley Mountains. An Allied pincer closed on the real objective of Lae.¹⁰

MacArthur described the basic scheme of maneuver for the New Guinea Force to seize the Huon Peninsula.

My plan to advance in northeast New Guinea and to seize the Huon Peninsula was entrusted to what was called the New Guinea Force. It was largely composed of Australian troops under the command of General Blamey. My order to the Force was to seize and occupy the sector that contained Salamaua, Lae, Finschhafen, and Madang. Lae was to be the first main objective -- its capture would breach the vital gate in the Huon Peninsula. The advance pushed the enemy back toward Salamaua with the purpose of deceiving him into the belief that it, and not Lae, was the prime objective.¹¹

In early June 1943, Kenney began to look for airfields that could cover both an airborne and an amphibious assault on Lae. General Whitehead, the Deputy Fifth Air Force Commander, established a base that was sixty miles southwest of Lae at a native village named Marilinan. There was an old airstrip at the location, but it was satisfactory only for cargo planes. Just four miles to the north was another strip at a little village named Tsili-

Tsili that was made into a double runway 7,000 feet long with ample room for dispersed parking areas.¹²

Work began immediately under great security to improve the airfields. The Fifth Air Force brought in jeeps and trailers to move supplies from Marilinan to Tsili-Tsili for the larger base there. Two and one-half ton trucks were necessary to handle the supplies, but would not fit into the C-47. The ingenuity of the airmen of the Fifth Air Force then came into play: they sawed the frames of the truck in two, put the pieces in separate planes, flew them over the Owen Stanley Mountains into Marilinan, where they bolted and welded the trucks back together. On July 26 the first fighters landed at Tsili-Tsili without the Japanese even detecting the improvements to the airstrip. In the middle of August, the airfields were ready and fighters based there could now concentrate on the Japanese barge traffic into Lae from Wewak and Rabaul and the airfields at Wewak.¹³

In the middle of July, the successful continuous attacks of the Allied Air Forces under Kenney and the SOPAC attacks near New Georgia took the initiative away from the Japanese air force in both the SWPA and SOPAC areas. By August, the plans to capture Lae were in their final stages. In spite of the progress, Kenney reported to MacArthur that he did not have sufficient assets to destroy all the Japanese air forces at both Rabaul and Wewak. So he gained approval to concentrate all his forces on Wewak -- the airfield that had the greatest impact on the Lae operation.¹⁴

With the forward secret airbase at Tsili-Tsili complete and in full operation, the fighters were in effective range of Wewak and were able to provide the required escort for the heavy bombers. On August 17, Kenney's airmen struck Wewak and destroyed a hundred Japanese airplanes on the taxiways. He had planned the raid based on intelligence from compromised air-ground codes that revealed that the Japanese had concentrated ten regiments of airplanes at Wewak. The destroyed aircraft were most likely about to take off to attack Tsili-Tsili and Marilinan. A Japanese reconnaissance flight had discovered the new bases on August 14 and over the next two days the

Japanese attempted to attack the bases with little success.¹⁵ The Fifth Air Force continued the attack and destroyed twenty-eight more aircraft. In just two days, the Japanese Fourth Air Force had lost three-quarters of its aircraft and was unable to oppose Allied operations at Lae.¹⁶ The conditions were set for the coordinated airborne and amphibious attack on Lae.

MacArthur's plans to seize the Huon Peninsula and the Markham Valley were complex. Lae was the first objective. There were enough troops in the New Guinea Force, but the terrain precluded large-scale overland movements. The SWPA lacked enough ships for a completely amphibious assault and did not have enough aircraft for a complete air-movement of the required troops. To employ all the necessary forces, MacArthur and his staff developed a plan to employ all available means -- a division amphibious assault, an assault by parachute forces, and an air-movement of an entire division.¹⁷

Lieutenant General Sir Edmund Herring, 1st Australian Corps Commander, controlled the assault on Lae. For this operation, he had two divisions – Major General George Vasey's 7th Australian and Major General Sir George Wooten's 9th Australian. The original plan called for the 9th to land by sea to the east of Lae and the 7th was to march overland from the Wau-Bulolo area down the Markham Valley towards Lae from the west. In addition to the two Australian divisions, MacArthur made available a parachute battalion from the 503^d PIR that formed part of Krueger's Alamo Force. The battalion's mission would be to seize the airfield at Nadzab. During the assault on Lae, Major General Edward J. Milford's 5th Australian Division would continue to press towards Salamaua, to draw enemy forces away from the Lae area (see fig. 7). At the planning conference, Admiral Barbey worked with Wooten to prepare for the amphibious assault and Whitehead worked with Vasey to plan the attack on Nadzab and the subsequent air resupply of the 7th Australian Division.¹⁸

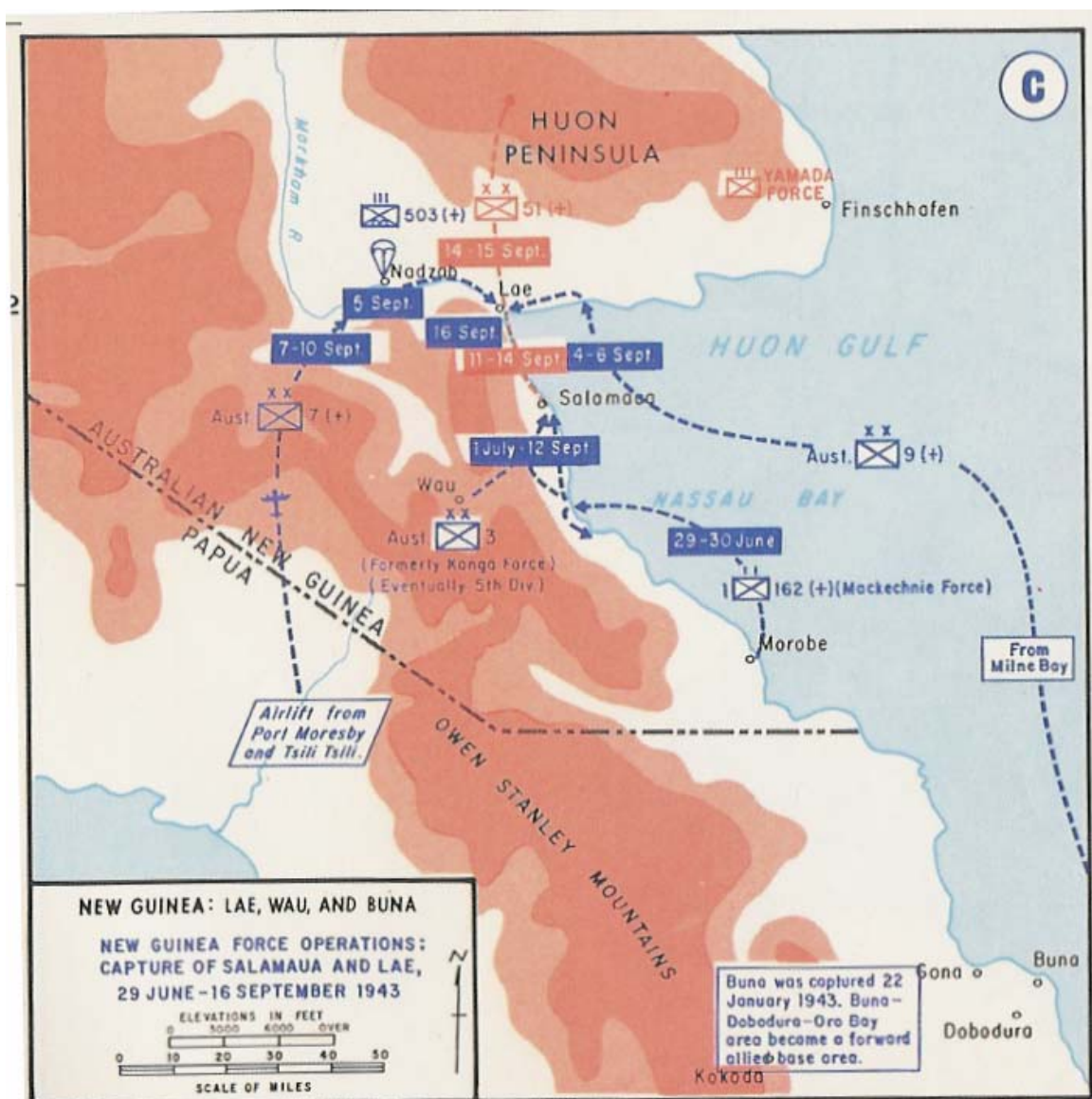


Fig 7. New Guinea Force Operations.

Source: Griess, *Atlas of the Second World War: Asia and the Pacific*, p. 21.

Vasey was not happy with the original plan, which relied heavily on using the uncompleted Bulldog-Wau road to move his division into the Bulolo Valley. Once in the Markham Valley, the division would require another road to advance into the Lae area. Any delay would allow the Japanese to build up their forces. In addition, the long overland march would exhaust his unit. Vasey returned to the New Guinea Force Headquarters later that afternoon to recommend to Herring that the majority of his forces fly into Nadzab and receive resupplies by air.¹⁹

Vasey was also unsatisfied with the plan for one parachute battalion to seize the airstrip against possible opposition, while also preparing the airstrip for the transport planes to bring in the 7th Australian Division. Enemy movement down the Markham Valley was increasing and it was essential to seize the airstrip quickly. Although the Japanese did not occupy it, patrols passed through the area on a regular basis. On July 31, Vasey discussed with Colonel Kenneth H. Kinsler, Commander of the 503^d PIR, the possibility of using the entire regiment for the assault. Kinsler "jumped" at the chance. On August 2, Vasey wrote to Herring requesting the use of the entire 503^d PIR in the operation. Since it was a theater asset, the approval of MacArthur's GHQ was necessary; that obtained, planning for the operation continued.²⁰

There was another plan developed that called for an Australian infantry brigade to fly into Tsili-Tsili several days before the operations at Nadzab and then move down the Watut River to the Markham River to be in position to support the airborne operation and seizure of the airstrip at Nadzab. As the planning continued, Vasey reduced the force to just the 2/2nd Pioneer Battalion and the 2/6th Field Company. After the 503^d PIR seized the airstrip, the pioneers and engineers would prepare the airstrip for the 7th Australian Division's air-movement.²¹

The timing of the attacks to seize Lae was critical. To ensure minimal resistance, there also had to be a deception plan to divert Japanese attention from Lae. Kenney proposed that the Navy load native boats and repaired Japanese barges with dummy figures to look as though they had troops on board and tow them from Goodenough Island in the direction of Gasmata on New Britain. His fighters would allow the Japanese reconnaissance planes to report to Rabaul the naval expedition moving towards Gasmata. He would then mass his fighters for the Japanese attack that he expected as soon as they received the report. The idea did not materialize because the Navy could not spare the resources.²²

Salamaua was the deception plan for Lae. Still in control of Salamaua, the Japanese believed that the Allied preparations were part of the plan to strengthen the forces advancing on Salamaua. With enemy attention on Salamaua, the 9th Australian Division would make a surprise landing east of Lae on September 4 and draw the Japanese attention in that direction. On the following day, the 503^d PIR would make an unopposed jump to the west of Lae at Nadzab. That would allow the 7th Australian Division to air-land the following day and commence its movement east towards Lae. There would then be a race between the 7th and 9th Australian Divisions to see which unit could first make it to Lae.²³ Rumor had it that Vasey and Wooten had a bet of twenty cases of whiskey on the outcome.²⁴

On August 15, Blamey and his Chief of Staff flew to New Guinea to take command of the operations and to complete the plans.²⁵ The New Guinea Force prepared the final tactical plans in conjunction with MacArthur's GHQ as well as with the Allied Air and Naval Force Staffs. On August 24, MacArthur and Kenney arrived at Port Moresby.²⁶ The whole plan was complete, except for one detail -- the start date. The original D-Day was August 1, but it was postponed to August 27 to allow enough C-47s to assemble for the airborne and follow-on air-land operations. Kenney did not have enough transport aircraft to ensure Allied success. With enough planes available at the end of August, MacArthur left the final decision for the start date to Kenney -- and the weather. Kenney wanted early morning fog over western New Britain and the Vitiaz and Dampier Straits west of the Huon Peninsula, while the Markham Valley remained clear to allow the airborne operation at Nadzab. This was a common condition for the area, but the weather forecasters could not agree on a date. Kenney told MacArthur that he would give him the date and time to start the operation on September 1.²⁷ On the morning of September 1, Kenney's Australian and American weather teams kept changing their forecasts and could not agree on a date. The Australian team finally said the 3rd would be the best date, while the American team said the 5th. Kenney decided that they knew little about weather forecasts, so he split the

difference and told MacArthur the best date for the amphibious assault would be the morning of the 4th.²⁸ With the date set, the New Guinea Force made final preparations for the attack on Lae.

CHAPTER 4

THE LONG ROAD TO PORT MORESBY

"Hey, we ain't heading toward New York! We're in Tennessee -- that's my pappy's farm out there!"

-- Unknown 503^d Parachute Infantry Regiment Paratrooper

In October 1942, the War Department ordered the 503^d Parachute Infantry Regiment (PIR), still without a third battalion, to the Pacific Theater. Even before this long trip across the Pacific Ocean, the regiment had a lengthy journey and numerous name changes before their departure for Australia. The unit formed at Fort Benning, but went to Fort Bragg with the movement of the Airborne Command. It was here that the regiment formed and trained before receiving orders to deploy to the Southwest Pacific. In route to Australia the regiment picked up its third battalion in Panama. Once in Australia, the unit conducted numerous training exercises and airborne operations in preparation for employment. This order came in August 1943. The final leg of the journey was to Port Moresby where the regiment prepared for the first jump in the Pacific Theater.

On August 22, 1941, the War Department activated the 503^d Parachute Battalion under the command of Major Robert Sink, a member of the 501st Parachute Battalion.¹ This first such battalion formed in September 1940 from the original Test Platoon after the fifth and final qualifying jump before a prestigious audience. The two most notable personnel present were Secretary of War Henry L. Stimson and Chief of Staff General George C. Marshall. Fortunately for the airborne concept, the Test Platoon made a favorable impression on both of them that they did not quickly forget. The members of the Test Platoon formed the cadre of the 501st Parachute Battalion and many later became members of the 503^d PIR when the 501st Parachute Battalion became the Second Battalion, 503^d PIR in November 1942.²

On October 5 the War Department activated the next parachute battalion, the 504th, under the command of Major Richard Chase, who was also a member of the 501st and previously an executive officer of the 503^d. Just after the new battalion completed basic airborne training, it and the 503^d moved to Fort Bragg because of the formation of the Airborne Command as well as the crowded conditions at Fort Benning. On March 2, 1941, with the peacetime restrictions for army troop strengths lifted, the War Department ordered the formation of four parachute regiments from the existing parachute battalions. The 503^d and 504th now formed the 503^d PIR, the 503rd constituting its First Battalion and the 504th Second. The first commander of the regiment was Lieutenant Colonel William M. Miley.³

On May 20, less than three months after the regiment formed, the War Department ordered Miley to provide a parachute battalion for duty in Europe. He released the Second Battalion (originally the 504th Parachute Battalion), which was later renamed the 509th Parachute Infantry Battalion and gained the distinction of being the first American unit to jump in combat during Operation TORCH in North Africa.⁴ With the departure of Second Battalion for Europe, the 503^d PIR had only one remaining battalion at Fort Bragg. On June 4, the War Department activated the Third Battalion of the 503^d PIR. Just before the Second Battalion departed for Europe, Miley had reassigned the executive officer, Major John J. Tolson III, to organize the new battalion, which drew its paratroopers from the cadre of the 502^d Parachute Battalion who were still at Fort Benning. The Headquarters Company of the 502^d became the Headquarters of Third Battalion, 503^d PIR. Companies A, B and C of the 502^d Parachute Battalion became Company G, H and I, Third Battalion, 503^d PIR respectively.⁵

That October the War Department secretly ordered the 503^d PIR to the Pacific Theater. On October 10, the 503^d PIR completed loading all the men and equipment on trains under Tolson's supervision. Kinsler temporarily transferred Tolson to the job of regimental executive officer and made him acting commander of the regiment for the

move when Kinsler himself departed early for Australia to prepare for the unit's arrival.⁶ The very afternoon the paratroopers loaded the trains, Ridgway, commander of the 82^d Airborne Division, delivered the final unit before the regiment departed Fort Bragg. Company A of the newly activated 504th PIR was the newest addition to 503^d PIR.⁷ Ridgway made a point to tell Tolson to pass a message to Kinsler: although it was customary for a unit to give up its worst unit when ordered to transfer one, that was not the case with this transfer. Ridgway assured Tolson that this was the best rifle company in the division. Ridgway also said that he knew that it was typical for a commander to remove the officers and senior noncommissioned officers in the newly transferred unit and replace them with those he knew. He told Tolson that he would keep an eye on Company A and that it had better not happen.⁸

The First Battalion had undergone extensive ski training in the snowcapped mountains of Utah, so the paratroopers believed they were heading for combat in a frigid climate, possibly somewhere in Scandinavia. They expected to board ships in New York bound for England, following the Second Battalion that had left in June. Little did they know they were heading for the jungles in the Southwest Pacific. It was not until the next morning when a paratrooper staring out of the train window watching empty cornfields roll by did they realize they were not going to New York. "Hey, we ain't heading toward New York!," the paratrooper yelled out. "We're in Tennessee -- that's my pappy's farm out there!"⁹

The train trip across the United States lasted just over a week. The 503^d PIR finally arrived at Camp Stonemen, near Pittsburg, California, where it conducted more preparations for overseas movement such as equipment inspections and vaccinations. At dawn on October 20, the 503^d PIR aboard the Dutch freighter, the *SS Poelau Laut*, passed under the Golden Gate Bridge and out of the San Francisco harbor. Twelve days later it arrived at Balboa, Panama Canal Zone, where the 501st Parachute Battalion, less its Company C, came aboard. Company C remained behind to form a cadre of the 551st

Parachute Battalion, activated in November 1942. The senior person on board was now Lieutenant Colonel Jones, commander of the 501st Parachute Battalion.¹⁰

Company A and B, 501st Parachute Battalion became Company E and F, 503^d PIR respectively and Company A, 504th Parachute Battalion became Company D, 503^d PIR. These unit redesignations formed Second Battalion, the newest battalion of the 503^d PIR, now a full regiment -- at least on the books. Each unit knew in its heart that it was superior to the others. Although distrust, jealousy and suspicion were common, the regiment formed into a cohesive fighting unit in spite of being a collection of individual units thrown together.¹¹

On December 2, after forty-two days at sea, the 503^d PIR docked at Cairns, North Queensland, Australia and established an encampment site about two miles southwest of Gordonville on the northeast corner of Australia. Gordonville was due south of New Guinea, just across the Coral Sea from the Port Moresby area. The 503^d PIR began an extensive eight-month training period. During this time, Kinsler was the regimental commander, Jones was the executive officer, Lawrie commanded the First Battalion, Major John Haltom commanded the Second Battalion and Tolson commanded the Third Battalion.¹² By the time the regiment moved to Port Moresby in August 1943, Haltom had returned to the United States with a severe case of malaria and Jones again had taken command of Second Battalion. Lawrie replaced Jones as executive officer and Lieutenant Colonel John Britten assumed command of First Battalion.¹³

The 503^d PIR was the target of considerable attention during its time in Australia. Among some of the visitors were MacArthur, Blamey, and Krueger. All were very interested in the watching the regiment conduct airborne operations. There were numerous jumps between the training exercises and exhibitions for the visiting dignitaries. One jump per month was mandatory to stay on status for jump pay at the time was \$50 for enlisted men and \$100 for officers. Many of the paratroopers suspected that the extra money was necessary to induce the officers to jump out of an airplane.¹⁴

From April through July, there was an intensified training period for airborne operations at Cairns. The peak of this training was in May when records showed that 8,167 paratroopers had jumped during 572 training hours flown by the Fifth Air Force.¹⁵ Each paratrooper averaged about five jumps a month since there were approximately 1,700 paratroopers in the regiment at the time. The training and experience the paratroopers gained working together with the Fifth Air Force's troop carriers later proved invaluable – not only to the 503^d PIR, but also for the Fifth Air Force's troop carrier units.

On July 24, the 503^d PIR received a warning order from MacArthur's GHQ alerting one battalion for possible combat operations. Immediately upon receipt of the order, Kinsler and several members of his staff proceeded to Port Moresby to confer with the commanding generals of Fifth Air Force and 7th Australian Division. Although the exact date of the upcoming operation was unknown, all units began to prepare tentative plans. For this operation, the 503^d PIR was under the operational control of the 7th Australian Division for securing the Nadzab airstrip to allow the division to air-land. Kinsler and Vasey discussed the operation at great length. Because of the terrain and the extensive front the unit was to cover, they secured MacArthur's approval to employ the entire regiment. On July 30, Kinsler and his staff returned to Gordonvale and began preparing for the movement to Port Moresby.¹⁶

Vasey and his 7th Australian Division had just completed the Buna Campaign and dealt with many of the problems associated with air movement and resupply. Without this experience, Vasey doubted that the time available while they were at Port Moresby would have been sufficient to prepare for the upcoming operation. Whitehead, Deputy Fifth Air Force Commander, and Vasey developed a good working relationship and worked closely together on a detailed plan. This was the first Allied operation of its kind and was very complex with the combination of amphibious, parachute and air-land assaults.¹⁷

The Fifth Air Force formed two separate planning staffs to control the fighter and transport units for the operation. Whitehead took a personal interest in the planning for

the parachute and follow-on air-land assault. He ensured that the 7th Australian Division had five C-47s available for the infantry brigades to practice loading and unloading. On August 7, 1943, he also arranged one of several low-level reconnaissance flights over Nadzab so that Vasey and members of the 503^d PIR could personally view the area of the intended assault.¹⁸

Because of the inquisitive nature of the paratrooper and tendency for rumors to spread about upcoming missions, Kinsler wanted to keep the mission secret, from both the Japanese and his paratroopers. Therefore, he announced that the 503^d PIR would move to New Guinea to participate in a large airborne training maneuver with the 32nd Infantry Division. The cover story did not fool the paratroopers. When the alert came for the move to New Guinea, it only confirmed their suspicions that their long-awaited first mission was not far off.¹⁹

On August 7, MacArthur's GHQ issued the orders for the 503^d PIR to proceed to New Guinea in preparation for combat operations. On August 15, an advance party flew to Port Moresby and the following day the Second Battalion flew in as well. The remainder of the 503^d PIR sailed from Cairns on August 20 on the liberty ship SS *Duntroon* and reached Port Moresby harbor two days later.²⁰ Nearly two years after the 503^d Parachute Battalion made its final qualifying jump, it was about to make its first jump in combat.

CHAPTER 5

THE NADZAB AIRBORNE OPERATION

"Gentlemen, that was as fine an example of discipline and training as I have ever witnessed."¹

-- General MacArthur, September 5, 1943

Success of the 7th Australian Division's attack on the port city of Lae depended on the possession of the airstrip at Nadzab to allow the division to air-land. Before the war, transport and small passenger aircraft used the airstrip for emergency landings. Just to the south on the Markham River was the Gabmatzung Mission, run by the German Lutherans. From Gabmatzung, the Markham Road ran twenty-five miles southeast to the port city of Lae, New Guinea. Nadzab was important not only for the airstrip, but also its location along the Markham River Valley to the west of the Huon Peninsula. The Markham and Ramu Rivers were the two major waterways on the island of New Guinea. The Markham ran southeast to the Huon Gulf at Lae, and the Ramu ran northwest to the Hansa Bay between Wewak and Madang. These two rivers formed a valley that separated the Huon Peninsula from the remainder of New Guinea. The valley made an easy passage to the Japanese bases of Wewak and Madang along the northern coast of New Guinea (see figs. 5 and 7). Capturing this key terrain at Nadzab would block that valley route, while possession of the airstrip would give the Fifth Air Force another forward base to support its air campaign against Rabaul and Wewak.²

On August 24, both MacArthur and Kenney arrived at Port Moresby to be present for the final stages of the planning and for the execution of the operation. Several days after MacArthur's arrival, he surprised Vasey with a trip to his headquarters. The two seemed to get along well together and agreed on the concept and details of the operation. Their only disagreement was over Japanese troop strength at Lae. Vasey placed the number at close to 5,000, while Herring's staff put it at nearly 7,000. MacArthur thought it was much smaller, around 1,400. While the actual strength was about 2,000, MacArthur

had the advantage of having information gained through signal intelligence available to only the very senior commanders.³

The 7th Australian Division published its operations order on August 27. The intent of the operation was to secure Nadzab in order to conduct offensive operations against Lae and to prevent the Japanese from sending reinforcements up the Markham Valley.⁴ The tasks given to the 503^d Parachute Infantry Regiment were as follows:

- (a) Capture area Nadzab - Gabmatsung - Gabsonkek on Z-Day -- object covering preparation of a landing strip.
- (b) Establish road block across Markham Valley Rd. in area of junc. Rd and track 445546 -- object preventing enemy movement into Nadzab along this road.
- (c) Prepare landing strip on site of present Nadzab emergency landing field with utmost speed.⁵

MacArthur had not established the date for the operation when the 7th Australian Division published its order. The final date did not come until September 1 when Kenney made his recommendation to MacArthur based on the weather forecasts. Z-Day was one day after the 9th Australian Division's amphibious assault to the east of Lae.

On August 29, one week before the operation, Kinsler assembled his three battalion commanders and staff at his regimental headquarters to brief them on the mission to drop on, seize and hold the abandoned airstrip at Nadzab. They would link-up with Australian engineers who would upgrade the strip to permit the landing of the 7th Australian Division. The division would then attack Lae from the west while the 503^d PIR continued to secure the Nadzab airstrip.⁶

Kinsler assigned Britten the task of jumping his First Battalion directly onto the airstrip and clearing it of all enemy troops, although the intelligence reports indicated that there were very few in the area. In addition, the battalion was responsible for starting the preparation of the airstrip until relieved by the Australian engineers. Next Kinsler directed Jones to jump his Second Battalion north of the airstrip to secure Gabsonkek and provide flank protection for First Battalion. Last, he assigned Tolson's Third Battalion to jump east of the airstrip and the secure the village of Gabmatsung. This was the enemy's most

likely avenue of approach if the Japanese opposed the landing from the garrison at Lae. This was not likely, however, because the Japanese units at Lae would have their hands full defending against the 9th Australian Division attacking them from the east.⁷

The 503^d PIR did not have any attached or organic artillery. To make up for the shortage of firepower, MacArthur's headquarters provided two "cut-down" twenty-five pound artillery sections with thirty-one personnel from the Australian 2/4th Field Regiment. The only problem was that the Australian gunners had never seen parachutes. Lieutenant Robert W. Armstrong, from First Battalion, had the responsibility of training the volunteers in the basic skills of jumping from an aircraft. The gunners also learned how to disassemble the artillery pieces and pack them in separate containers, each attached to the other with webbing (known as the ground control pattern) in order to facilitate recovery and expedite assembly on the ground. This was essentially the same procedure used for dropping the American 75mm pack howitzer.⁸

On August 30, the gunners made their one and only practice jump with one of their guns under the watchful eyes of Vasey and their regimental commander, Lieutenant-Colonel Alan Blyth. It was such a success, that they earned the right to go in with the 503^d PIR on its first combat jump. The Aussies were not actually going to jump with the regiment, but they would do so one hour after the initial airborne operation. Four airplanes arrived at Port Moresby on September 4 to transport the Australian gunners and "baby 25 pounders." They loaded their guns and flew the same day to Tsili-Tsili in preparation for the next day's jump.⁹

Kinsler, his three battalion commanders, and several regimental staff officers made a reconnaissance flight over the jump area in a B-17 on August 30. This flight proved valuable because they were able to view the proposed jump areas, check points and surrounding areas. Even more importantly, they were able to determine the prevailing winds near the jump areas. The meteorological reports stated that winds in the

Markham Valley were unusual: they blew down the valley until 1100 hours daily and then suddenly changed and blew up the valley. This proved to be exactly the case.¹⁰

On September 1, Kinsler met with all the company commanders in the regiment. He gave them an overview of the upcoming mission, but wanted it kept a secret from the paratroopers. The men may have not have known the details, but they saw the officers coming and going to secret meetings as well as the continuous arrival of C-47s, so they knew something important was about to happen. Meanwhile, they conducted intense rehearsals and training for the upcoming mission, attending classes on Japanese weapons, friendly aircraft identification, demolitions methods, and land navigation.¹¹ Of course, there were also the occasional visitors who wanted to see the 503^d PIR. Vasey showed up to address the regiment and tell the paratroopers how proud he was to have them with him. They were struck by the bitter way he referred to "Dirty Little Nips" in his "kill them all" speech.¹² Another visitor was MacArthur, who arrived with his corps of photographers and had his picture taken with many members of the regiment.¹³

The Fifth Air Force airmen also conducted extensive preparations before the operation for their part. The 54th Troop Carrier Wing, under the command of Colonel Paul H. Prentiss, was responsible for airlifting the men to the target. After much planning and preparation between the Fifth Air Force and the 503^d PIR staffs, they decided to use a formation of six planes staggered to the right with thirty seconds between elements in order to reduce chance of mid-air collisions while maximizing the widths of the drop zones.¹⁴

General Kenney was concerned about the vulnerability of the troop carrier convoy along the route to Nadzab, so he and Whitehead developed a very intricate air support plan for the operation. The Fifth Fighter Command was responsible for furnishing fighter protection along the way, as well as smoke and air support before, during and after the parachute operation. The air plan had 100 fighter aircraft to protect the slow-moving and bunched up transports. The air plan also had six squadrons of B-25s to strafe and bomb

the jump areas before the airborne operation. Just after the B-25s, six A-20s would lay smoke across the jump areas to screen the descending paratroopers. Kenney did not want to leave anything to chance.¹⁵

The Fifth Air Force practiced the entire mission for three straight days starting on September 2. The pilots were veterans and knew all the details of the three major jump areas -- one for each battalion. Emphasis during rehearsals was on formation flying to ensure that the entire 503^d PIR landed accurately and together so that it could quickly assemble and seize its assault objectives. The Fifth even conducted a full-scale trial run over Rorona, an abandoned airstrip thirty miles up the coast from Port Moresby. The fighter protection fired before the troop carriers loaded with the entire 503^d PIR flew over the abandoned airstrip and some of the paratroopers jumped to check the timing. The staffs corrected a few minor details and everyone felt much more comfortable about the mission.¹⁶

On September 3, Kinsler and the 503^d PIR staff issued Field Order 1. The four page base order described the plan for the two-phase operation. The first phase was for the regiment to jump on six separate drop zones in order to seize the emergency landing strip at Nadzab (see fig. 8). In addition, the regiment would secure the surrounding areas to deny any enemy infiltration (see fig. 9). The second phase was to receive the 7th Australian Division beginning the following day (see fig. 10).¹⁷

The order contained no changes from Kinsler's briefing to his battalion commanders on August 29 or his company commanders on September 1, but simply added many details. First Battalion had the task of jumping onto Field "B" to capture and begin preparing the Nadzab Emergency Landing Strip until relieved. Second Battalion's mission was to jump on Field "A" to capture the Gabonek area and deny enemy infiltration from the north and northwest. Meanwhile, Third Battalion was to jump onto Field "C" to capture the Gabmatzung area and deny enemy infiltration from the east. The Regimental Headquarters Company would assemble with First Battalion and prepare the drop zone

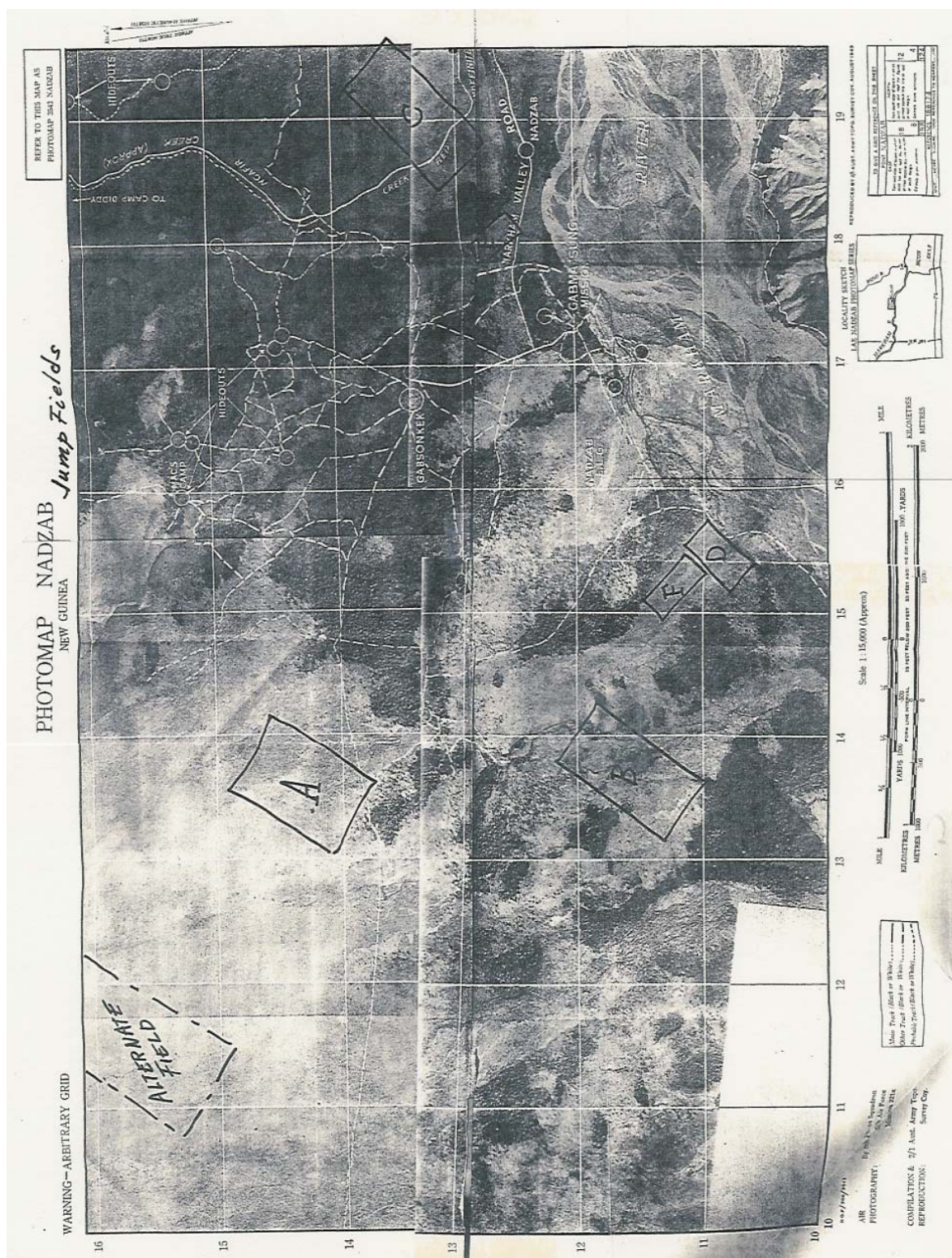


Figure 8. Nadzab Jump Fields.
Source: Field Order #1, Annex 2.

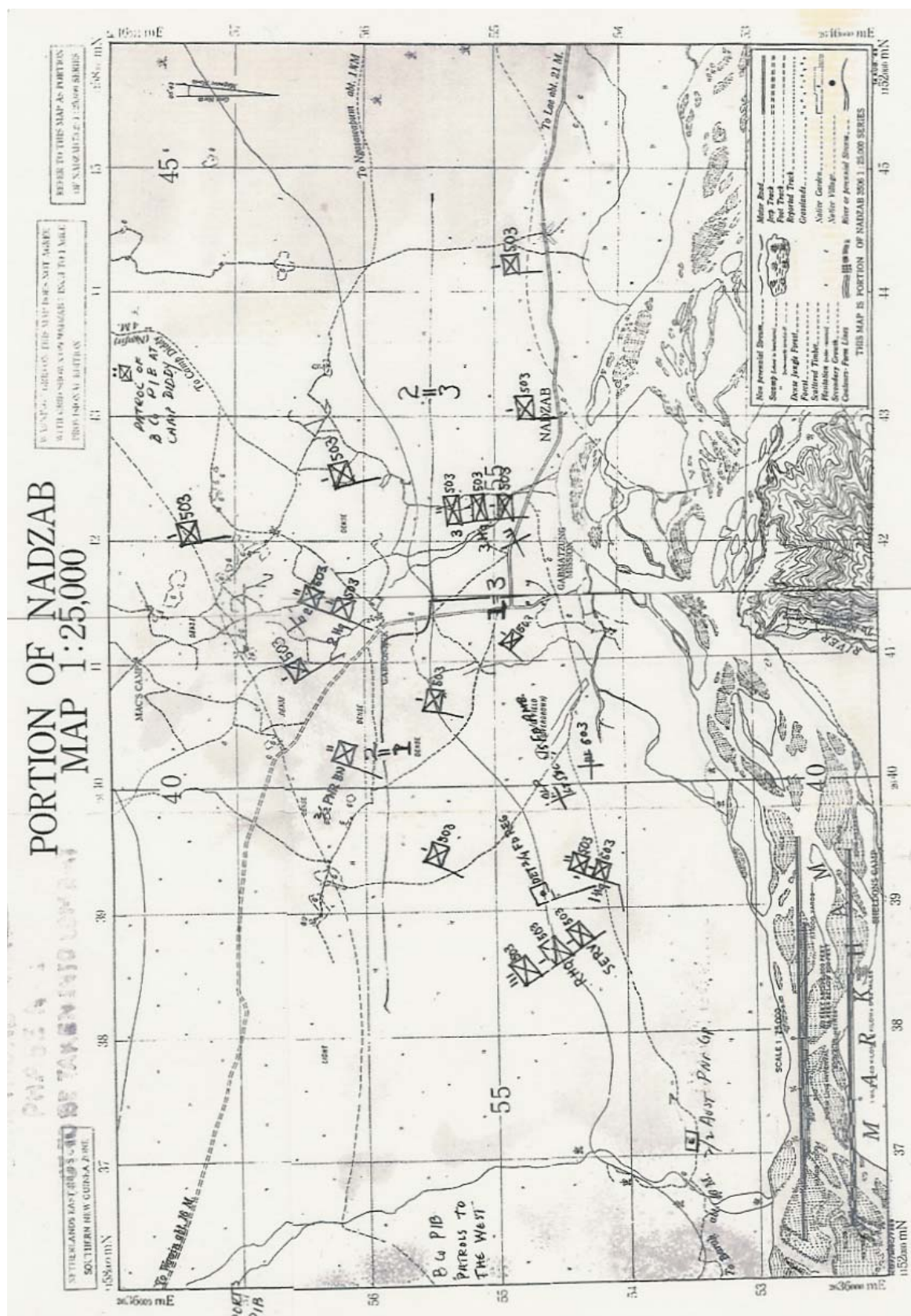
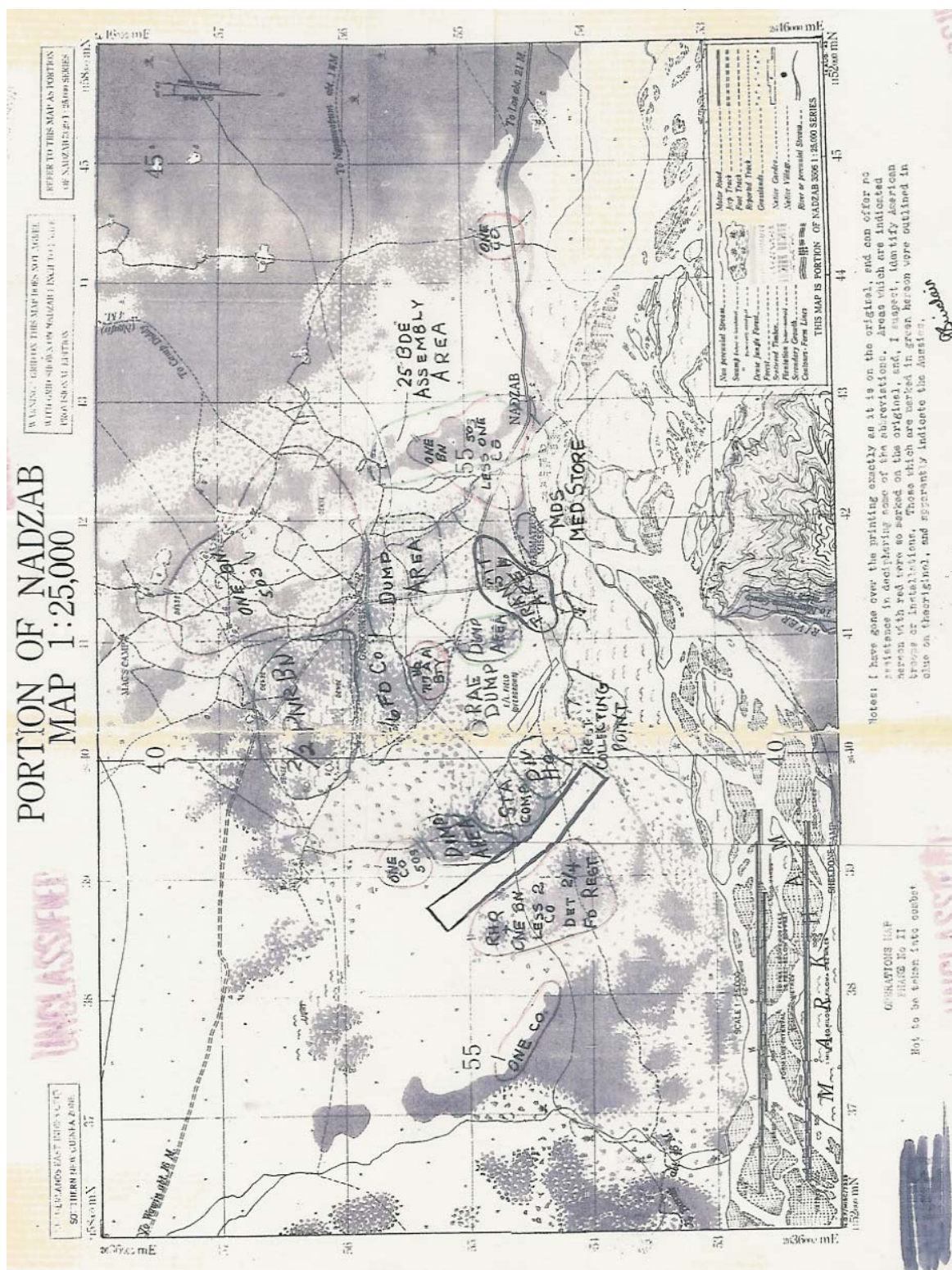


Figure 9. Operational Graphics, Phase I.
Source: Field Order #1, Annex 3.



for the Australian artillery battery. Regimental Service Company would also assemble with First Battalion and gather and distribute equipment and supplies.¹⁸

The regiment spent the remainder of the day completing battalion orders and conducting rehearsals, as well as preparing the company orders. The battalion commanders had the officers around their sand tables one company at a time going over their missions. It was not until September 4, the day before the jump, that company commanders assembled their men and spelled out in detail their missions. All day long, a platoon at a time gathered at the regimental sand table where each soldier received a briefing on his mission. The jumpmasters held the last meeting that night. The leaders reviewed the whole mission and updated everyone on the latest changes.¹⁹

While the 503^d PIR made its final preparations on September 4, the 9th Australian Division landed twenty miles east of Lae against very light opposition. Several Japanese bombers were able to get through and attack the congested beaches. The bombers were able to damage two ships and kill more than one hundred Australian and American seamen. All through the night, as the members of the 503^d PIR tried to sleep, the 9th Australian Division continued to march on Lae.²⁰

Reveille was at 0300 hours on Sunday, September 5. The paratroopers rapidly assembled in their battalion areas and nervously ate the usual soggy pancakes covered with syrup. As they loaded on the eighty-two trucks in the regimental area, the weather suddenly turned and fog completely enveloped the departure airfield. To make matters worse, a light rain began. It did not look like a good day for a jump.²¹ The movement to the two airstrips, Ward and Jackson, went like clockwork. Each truck, numbered from one to eighty-two, corresponded to the same numbered aircraft lined up on the field. The trucks were in three serials – one for each battalion. The first serial moved to the enplaning point and the other two followed at thirty-minute intervals. Each truck, with twenty-two personnel and supply bundles, proceeded to the airplane marked with its corresponding number.²²

At about 0730 hours, the rain suddenly stopped and the fog rapidly dissipated. A weather plane surveying the saddle of the Owen Stanley Mountain range gave an all-clear signal. The aircrews of the C-47s began warming up their engines and the paratroopers started putting on their parachutes and equipment. At 0825, the first C-47 rolled down the runway. Within fifteen minutes, three flights of C-47s with the entire 503^d PIR were in the air on its way to Nadzab. The formation started for the jump areas led by MacArthur in a B-17.²³

Several days before the operation, Kenney had discussed with MacArthur the details for covering and supporting the Nadzab operation. Kenney casually mentioned that he would be in one of the bombers during the airborne operation to see how things were going. MacArthur said that he did not think that Kenney should go. Kenney responded with a series of reasons why he should go, concluding with "they were my kids and I was going to see them do their stuff." MacArthur reflected a moment. "You're right, George, we'll both go," he said. "They're my kids, too."²⁴

Kenney arranged for the "brass hat" flight of three B-17s to fly just above and to one side of the troop carriers as they went into Nadzab. In the first plane was MacArthur, in the second was Kenney and Vasey rode in the third. MacArthur's only concern was that his stomach might get upset when they hit the rough air going over the mountains. He did not want to "get sick and disgrace himself in front of the kids."²⁵

The armada of over 300 aircraft climbed to 9,000 feet to cross over the saddle of Owen Stanley Mountains. The temperature dipped, but not for long. The formation dropped to 3,500 feet as it approached the secret airfield at Marilinan. The armada rearranged the flight into three columns, each six airplanes wide. Thirty minutes out from the jump areas, the crew chiefs and the jumpmasters started opening the jump doors. Aboard one of the airplanes, the sudden rush of wind caused the door to come loose from its hinges and become lodged, blocking the exit – and aborting the mission for the

frustrated paratroopers on board. This was the only airplane that had a problem and was not able to drop its contingent.²⁶

At the junction of the Watut and Markham Rivers, the troop carriers made a right turn for Nadzab and dropped to an altitude of 400 feet. The weather then became very hot and humid at the low altitude. The maneuvers of the airplanes and the bumpiness of the flight began to produce some airsickness and paratroopers commenced to fill the "honey buckets." By the time they reached Nadzab, they were anxious for the green light.²⁷

At 1009 hours, the red lights came on and the paratroopers began to stand and make final preparations for the airborne operation while the bombing and strafing began at the jump fields. Six squadrons of B-25 strafers flew at 1,000 feet; each had eight .50-caliber machine guns in the nose and sixty fragmentation bombs in each bomb bay. Immediately behind them were the six A-20s that laid smoke across the jump areas as the last fragmentation bombs exploded. At 1022 hours, the green lights came on across the C-47s. The jumpmasters pushed the door bundles out of the airplanes, then they went out right behind the bundles with twenty-one jumpers in rapid succession. In four and a half minutes, the entire regiment was on its way to the ground. The pilot's of 54th Troop Carrier Wing, for the first time in the war, dropped a regiment of paratroopers with pinpoint accuracy on its assigned jump areas.²⁸

Above the drop, MacArthur watched the operation, thrilled at the sight of the parachutes clustered neatly on the jump areas. After landing back at Port Moresby, Kenney recalled MacArthur's jumping up and down like a kid. "Gentlemen, that was as fine an example of discipline and training as I have ever witnessed,"²⁹ the supreme commander exclaimed. Reflecting later on the operation, he took keen pride in the precision drops. "One plane after another poured out its stream of dropping men over the target field. Everything went like clockwork . . . [T]he vertical envelopment became a

reality,"³⁰ he wrote of that day. To his astonishment, he received the Air Medal for having "personally led" the paratroopers and "skillfully directed" the operation.³¹

Kenney sent a letter to the Chief of the Army Air Force General H. H. Arnold describing the operation and his pride in his airmen (see Appendix A). He also thought that everything had gone smoothly until he landed and talked with the pilot of MacArthur's B-17. What Kenney did not know was that during the operation an engine had failed on Colonel Roger Ramey's B-17, and that Ramey had recommended turning around. MacArthur, knowing that Kenney would follow him back to Port Moresby, refused. MacArthur insisted that he wanted to stay and see the show. The dead engine was on the far side of Kenney's bomber, so he did not know until after they had landed and Ramey told him of the incident.³²

The airborne operation went extremely well, but not without tragic incident. Three paratroopers died during the airborne operation, two falling to their deaths when their parachutes malfunctioned and another landing atop a very tall teakwood tree and then falling some sixty feet to the ground. In addition to the three deaths, there were thirty-three minor injuries caused by rough landings.³³

A small glitch also occurred with the jump by paratroopers of Third Battalion. The first person to make the jump at Nadzab was its commander, the 26-year-old Colonel Tolson, who thus became the first American paratrooper to jump in a combat operation in the Pacific. His battalion, leading the regiment into Nadzab, had the mission of jumping on Field "C" and blocking the enemy on the east. As Tolson approached the drop zone, he recognized where he was from several reconnaissance flights with the Fifth Air Force's bomber runs on Lae. He watched the red light go off, but then the navigator failed to turn on the green light. Hesitating for a few seconds, Tolson still jumped out and landed in the middle of the jump area. Because of the delay, about half of Third Battalion landed in the trees at the eastern end of the drop zone.³⁴

The remainder of the regiment dropped accurately, but the paratroopers on the jump areas were no better off than those who landed in the trees. The razor-sharp kunai grass, supposedly only about four feet high, reached up to ten feet high and was thick with jungle vines. The paratroopers, in suffocating heat, hacked their way through with machetes and reached their assembly areas exhausted. That was the only fight for the 503^d PIR -- there was no opposition on the ground. The paratroopers had caught the Japanese totally by surprise.³⁵ Even if the Japanese had been at Nadzab, they probably would not have survived the pre-assault fires from the Fifth Air Force. In Second Battalion's area, a worn trail went from the jungle out onto their jump area. The trail across the clearing was a tribute to the Fifth Air Force. Every ten yards or so there was a new bomb crater.³⁶

There were also mishaps with the Australians. Within two hours of the jump, all units had assembled, moved to their assigned objectives and begun preparation of the landing strip. Everything went basically according to the plan. First Battalion seized the airstrip, Second Battalion blocked all approaches from the north and Third Battalion sealed all approaches from the east.³⁷ One hour after the initial assault, the thirty-one Australian gunners, led by their trainer, Lieutenant Armstrong, jumped into Nadzab with their two artillery pieces. The guns, disassembled and packed in padded bundles under the wings of the C-47s, dropped like parachute bombs on the drop zone.³⁸ The whole group landed in a small area, but took almost three hours to find the ammunition and all the pieces to one gun and put it into operation. It was not until the next day when they found all the pieces to the second gun. The Australian gunners became the first parachute artillery in the Pacific.³⁹

There was, moreover, a change in plans for resupply. The original plan called for eleven gliders to come in during the afternoon with supplies and equipment, but because of the completely unopposed parachute operation, immediate resupply proved unnecessary. Blamey also canceled the glider phase because he had his doubts about

the reliability of the gliders and he knew that their pilots had undergone only minimal training. The regiment did not go without resupply, however, because three specially configured B-17s loaded with supplies remained over the area during daylight hours for the first two days of the operation. The modified B-17s had a platform in the bomb bay to drop parachute supply bundles.⁴⁰

To assist the 503^d PIR in preparing the airstrip at Nadzab, there were two other Australian units -- the 2/6th Field Company and the 2/2nd Pioneer Battalion. The engineers and pioneers arrived secretly at the Tsili-Tsili airstrip a week before the operation. The units carefully disguised their mission by occupying the surrounding jungle where the Aussies assembled their equipment and began preparations for movement to Nadzab. Tsili-Tsili was near the swift, but barely navigable Watut River that ran northeast into the Markham River about twenty-five miles upstream from Nadzab.⁴¹ The engineers from 2/6th Field Company had the task of moving down the Watut and then down the Markham River to Nadzab on twelve large collapsible boats with all their heavy gear necessary for preparing the airstrip at Nadzab. The task was very dangerous because both of the rivers had rapids and constantly changing sandbars. The engineers planned for a possible 50 percent casualty rate, in men and equipment, but lost only three boats and one man who drowned. They arrived at their rendezvous point just south of Nadzab early in the morning of September 4.⁴²

The pioneers from 2/2nd Pioneer Battalion had the difficult task of moving sixty miles overland with a train of 800 natives. They crossed mountains and swamps, as well as dealt with many of the jungle annoyances such as heat and bees. On the morning of September 5, the pioneers arrived at the south side of the Markham River across from Nadzab and linked up with the engineers right on schedule. The pioneers constructed a bridge from the engineer's collapsible boats. Both units were able to watch the show as hundreds of aircraft and many more parachutes filled the skies overhead. They witnessed the greatest aerial caravan ever seen in the Pacific.⁴³

At 1800 hours, the engineers and pioneers linked up with First Battalion and began clearing the landing strip, which was 1,500 feet, but overgrown from twelve months of inactivity. Working throughout the night, they extended the runway to 3,300 feet by the next morning. The first C-47 landed at Nadzab at 10:00 AM on September 6 -- less than 24 hours after the jump.⁴⁴ By September 11, Prentiss' C-47s had carried in 420 planeloads of men and equipment from the 7th Australian Division.⁴⁵

The 7th Australian Division pushed down the Markham Valley to attack the Japanese at Lae from the west while the 9th Australian Division pressed the attack from the east. With the growing pressure on Lae, the reinforcements to Salamaua ended. The 5th Australian Division and the American 41st Division occupied Salamaua on September 13. Three days later, the 7th and 9th Australian Divisions converged on Lae. Around noon, September 16, Vasey sent a radio message to Kenney: "Only the Fifth Air Force bombers are preventing me from entering Lae."⁴⁶ Vasey and his 7th Australian Division were the first to enter Lae and win the bet.

Based on MacArthur's guidance, the 503^d PIR stayed near Nadzab with a defensive mission around the captured airstrip. Vasey did not employ the 503^d PIR in offensive operations because MacArthur did not want parachute troops doing what regular infantry troops could do. MacArthur directed that after relief by supporting troops, parachute units should be withdrawn to prepare for future operations. With its mission complete on September 17, the 503^d PIR began to redeploy to Port Moresby. By September 19, the entire regiment closed back on its base camp.⁴⁷

There were ten thousand Japanese troops in the Lae-Salamaua area before the Allied assault. According to captured Japanese war records, one thousand Japanese troops died in the first few days of fighting. Twenty-five hundred more died in the defense of Lae and Salamaua. The remainder of the Japanese troops withdrew northward along dense jungle trails, where another 600 perished from illness and exhaustion. In a postwar interview, the intelligence officer of the Japanese Eight Army defending the Lae-Salamaua

area said that the 503^d PIR airborne operation at Nadzab had taken place where the Japanese had thought the enemy would never attack. The operation nearly cut in half the retreating elements of the Japanese 51st Division. The seizure of Nadzab cut off the escape route through the Markham Valley and forced the remainder of the Japanese to withdraw over the more difficult jungle terrain to the north of Lae.⁴⁸

The Allied operation against Lae was a total success. It was a brilliant employment of all available sources of firepower and maneuver. The coordination of the feint against Salamaua, the amphibious assault east of Lae with the airborne drop at Nadzab were excellent examples of joint planning and operations. An additional benefit of the Lae offensive was the capture of the Nadzab airstrip, which gave Kenney another excellent forward base for attacks further to the west and north. Nadzab soon became one of the largest Fifth Air Force bases in New Guinea.⁴⁹

According to the Weapon System Evaluation Group's definition for success, the Nadzab airborne operation was an unqualified one. The air effort was an astounding success because the combination of air support and accurate execution of the jump were unprecedented. The degree of air superiority, a fundamental prerequisite for a successful parachute drop, attained was a major factor in determining whether it occurred during daylight or hours of darkness. The Fifth Air Force successes against the Japanese Air Force ensured the control of the skies that allowed the operation to occur during daylight hours making it the first large-scale American parachute drop conducted during hours of light. The daylight airborne operations also allowed the Fifth Air Force to conduct an extensive and accurate preparation of the objective area. Although there were no Japanese in the Nadzab area, few would have survived the intense preparation. The daylight operation also facilitated the accurate drop of the entire regiment, which was the most accurate one to date.

The definition of success for the airborne effort was to seize all of its objectives and held at the planned time. Again, this was another remarkable success. Within two

hours, the paratroopers secured all their assault objectives and within twenty-four hours, the airstrip was operational, all according to the plan.

The definition for success for the overall effort was that the airborne operation accomplished its planned purpose, and the success of the overall maneuver, measured in terms of the accomplishment of ultimate purpose, was dependent on the performance on the airborne forces. Again, the overall effort of the parachute drop was markedly successful. The airborne operation allowed the 7th Australian Division to seize Lae. Had it not been for the 503^d PIR, that division would have had to go over the rugged mountainous terrain to get to Lae. This approach would have cost it much in terms of time and combat power. And without the 7th, the 9th Australian Division would not have been able to capture Lae single-handedly. In addition to seizing the Nadzab airstrip, the 503^d PIR also blocked the Markham Valley from any Japanese reinforcements or escape.

The Nadzab airborne operation did not experience many of the failures or poor employment principles that plagued earlier parachute drops. Much of the doctrine for large-scale airborne operations had not yet been written, so it is not possible to evaluate the operation against doctrine. In any case, the Nadzab parachute drop was well planned and executed. The principles of mass, utilization as a theater level force, realistic and thorough joint rehearsals, and air superiority were all present. The degree of air superiority allowed the mission to take place during daylight hours, which probably contributed substantially to the success of the air effort of the airborne operation. The daylight parachute drop allowed a precise placement of paratroopers not possible at night that facilitated their quick assembly and seizure of their objectives.

The Nadzab parachute drop had a decisive impact on the deliberations of the so-called Swing Board, the special panel chaired by General Joseph Swing to evaluate the airborne operations in Sicily for the Chief of Staff of the Army and recommend changes in training, doctrine and employment principles. Indeed, the results of Nadzab reported to Washington and Fort Bragg were welcome news in sharp contrast to the operations in

Sicily two months earlier. Although the doctrine for large-scale airborne operations was still in development during 1943, the examples of Sicily and Nadzab provided valuable lessons that would shape basic doctrine. The Sicilian parachute drop showed airborne enthusiasts how *not* to conduct such an operation. Nadzab, on the other hand, was an inspiring case study of how vertical envelopment should be executed.

CHAPTER 6

THE IMPACT OF NADZAB

"Were the questions raised by analysis of airborne maneuvers in this country taken into account of in the Sicilian operations? Is the organizational set up such that the lessons of both and of the efficient New Guinea operation will be given effective application in prospective operations?"¹

-- Memorandum by Secretary of War Henry L. Stimson,
dated October 2, 1943

Major General Joseph Swing worked under the direction of Army Ground Forces Commander Lieutenant General Lesley McNair during the investigation that evaluated the Sicily airborne operation. McNair had already made up his mind about the future structure and organization of the airborne after the failures in North Africa and Sicily. These shortcomings convinced McNair of the impracticality of deploying large airborne units. He planned to recommend that the War Department abandon airborne divisions and restrict parachute units to battalion-size or smaller. Fortunately for the airborne, Marshall did not want to take such a drastic step without a test of the airborne division concept. He wanted to determine if there were ways of changing training and operating procedures to employ the airborne division effectively. He then wanted these principles tested in a giant maneuver before abandoning the airborne division concept. Marshall ordered the maneuvers in December 1943. The results of these maneuvers determined the life or death of the airborne division concept.²

Marshall selected Swing, at the time the commander of the 11th Airborne Division at Fort Bragg, because of his position of "airborne advisor" to Eisenhower during the planning and execution of the airborne operations in Sicily. Swing had detailed knowledge of the entire operation and could make the most informed recommendations. The board members included experienced paratrooper and glider unit commanders, and AAF troop carrier unit commanders and staff officers.³ Marshall could count on Swing, a

firm believer in the airborne division, to render a verdict that supported Marshall's own favorable views of the airborne concept. Swing already investigated the airborne operations for Eisenhower and published his opinion that the airborne operations could have been a decisive factor if employed correctly. To give a report of something other than favorable for the airborne division, Swing would have been voting himself out of his own job.⁴

MacArthur was not the only person interested in the success of the airborne concept. Secretary of War Henry L. Stimson also showed a keen interest in airborne operations. After a conversation with Stimson on October 2, 1943, G. H. Door, special assistant to the secretary, wrote down several questions for Marshall's staff to answer that Stimson raised about airborne operations, especially about ground forces and the AAF, which focused its efforts on ground support, and not troop transport or airborne operations. Stimson also wanted to make certain that the Army was applying lessons learned from the previous operations, particularly the successful Nadzab parachute drop, to future training and operation.⁵

The questions raised by Stimson went to the very essence of the problems arising from airborne operations. A week earlier, Swing had completed his investigation and submitted recommendations that answered many of Stimson's questions and concerns. The Swing Board had met during September 1943 at Camp Mackall, North Carolina to review both Axis and Allied parachute drops to date. It studied the organization of the airborne division and analyzed the problems encountered by the Army Air Force troop carrier units in the North Africa and Sicilian operations. During its deliberations, the Nadzab parachute drop occurred, energizing the board members who favored large-scale airborne operations.⁶ By the end of the month, the board finished its findings and submitted its recommendations, which consisted of twelve separate, but interrelated, issues of doctrine, training, organization, employment principles, and relationships between the Airborne and Troop Carrier Commands (see figs. 11 and 12).⁷

Implementation of Recommendations of Swing Board (AGF 353/17 (A/B))

TABLE II

Swing Board Recommendations:	G-3 Comment or Concurrence	Army Air Forces Comment or Concurrence	Army Ground Forces Comment or Concurrence	Operations Division Comment and Concurrence	Action taken or Recommendation made
1. That current training doctrine operational procedures and appropriate manuals be amended to incorporate in effect lessons learned from recent Airborne-Troop Carrier operations.	1. Concur.	1. Concur.	1. Concur.	1. Concur and recommend G-3 implement.	1. A new training circular on the employment of Airborne and Troop Carrier Forces has been prepared and forwarded to The Adjutant General for publication WDGT 300.5 Circular (11 Oct 43). Subject: Training Circular, dated 11 October 1943. Advanced copies have been sent to Army Air Forces and Army Ground Forces with instructions that they be immediately reproduced and distributed to Airborne and Troop Carrier units in the United States the size of a Company or larger. An advanced copy was also sent to each Theater Commander.
2. That Theater Commanders be informed of changes in doctrine indicated in 1 above.	2. Concur.	2. Concur.	2. Concur.	2. Concur and recommend G-3 implement.	2. Implemented in 1 above.
3. That strategic plans be based on maximum use of air transport.	3. Concur.	3. Concur.	3. Concur.	3. Concur and recommend Operations Division implement.	3. Implemented in 1 above.
4. That attached Training directive be issued to Army Air Forces and Army Ground Forces.	4. Concur as emphasized by G-3.	4. Concur as modified by G-3.	4. Concur.	4. Concur and recommend G-3 implement.	4. Training directive issued without change except the addition of remarks emphasizing responsibilities of Army Ground Forces and Army Air Forces.
5. That the troop basis provide: <ol style="list-style-type: none"> 1 Troop Carrier Wing of 4 Troop Carrier groups for each Airborne Division. Additional Troop Carrier Units that may be committed to T/O's with other than Airborne Divisions. Additional Troop Carrier Units that may be committed to lifting other than American Airborne Divisions. Two Troop Carrier groups for Troop Carrier Training. 1 replacement training group for each 7½ Troop Carrier group in Theaters. 	<ol style="list-style-type: none"> Non-concur. when required, Troop Carrier groups could be flown in a Theater launching Airborne operations by borrowing from adjacent theaters. Non-concur. Non-concur. Non-concur. Non-concur. 	5. Concur.	5. Believe Troop Carrier strength should be worked out according to specific operations contemplated.	5. Concur and recommend Operations Division implement.	<ol style="list-style-type: none"> There being enough Troop Carrier units to train the 11th and 17th Airborne Divisions, G-3 recommended to Chief of Staff 8 October 1943 that further plans for the employment of additional Airborne units (including the 13th Airborne Division) be so prepared as to permit the training periods necessary and to provide the Troop Carrier units necessary for the employment and training of Airborne units. See a above. See a above. The 10th and 63rd Troop Carrier Groups are now being used for replacement training centers training, and training provided in 4 above sufficient. Training being provided in 4 above plus further training received in theaters by Troop Carrier Groups makes this not necessary.

Figure 11. Implementation of Recommendation of Swing Board (part 1)
Source: Huston, *Out of the Blue*, p. 262.

6. That shortages of Troop Carrier groups be corrected by one or more of the following means listed in order of preference: a. Increased activation of Troop Carrier units. b. Production of larger and better Troop Carrier airplanes and gliders. c. Production of commitments to theaters not having Airborne units. d. Reduction of commitments to lift other than Airborne Divisions. e. Reduction in number of Airborne Divisions.	6. a. Not necessary for Airborne Divisions now committed. b. Non-concur. c. Non-concur. d. Concur. e. Up to Operations Division.	6. Concur.	6. Concur.	6. Concur and recommend Operations Division implement.	6. a. See 5 a above. b. Not considered possible in time to be used in this war. c. See 5 a above. d. See 5 a above. e. See 5 a above.
7. That 1 troop carrier wing of 4 groups be provided for training in the United States by withholding all troop carrier groups after the 435th group not yet committed.	7. Non-concur.	7. Concur.	7. Concur.	7. Recommend action on recommendation be withheld till views of CG, ET, OUSA are obtained.	7. Not necessary in view of 4 and 5 above.
8. That future commitments be in accordance with attached table.	8. Concur as modified by G-3.	8. Concur as modified by G-3.	8. No comment.	8. Same as No. 7 above.	8. Schedule for troop carrier units was issued to Army Air Forces and Army Ground Forces on 24 September 1943 with minor changes approved by General Swing.
9. That Air Corps be responsible for navigational aids and that provision be made in troop carrier T/O's for personnel to man Rebecca-Eureka.	9. Non-concur.	9. Non-concur.	9. Concur.	9. Concur and recommend Army Air Forces implement.	9. G-3 does not concur in the need of Rebecca-Eureka personnel in the T/O's of troop carrier units as the ground component is dropped with parachutists and supply requires being turned on.
10. That a general officer be assigned as airborne advisor to Commander in Chief of Theater having airborne operations.	10. Non-concur.	10. Concur, except qualified officer rather than general officer.	10. Concur in principle on airborne special staff section necessary in theater headquarters.	10. Concur and recommend Operations Division implement.	10. War Department Circular No. 113 dated 9 October 1943, Employment of Airborne and Troop Carrier Forces, states as a primary principle that plans for the combined employment of airborne and troop carrier units must be prepared by the Commander in Chief or field Force Commander who controls all participating forces. Therefore this Division believes the Commander in Chief will designate an airborne advisor without any War Department action or recommendation being necessary.
11. That 1 depot Quartermaster Company supply be activated and trained by Airborne Command for each theater having airborne operations.	11. Handled by G-4.	11. Concur on G-4 solution.	11. Have agreed on another solution with G-4 and Army Air Forces.	11. Recommend refer to G-4 for comment.	11. G-4 with G-3, Army Ground Forces and Army Air Forces concurrence has directed Army Air Forces in memorandum dated 12 October 1943 to provide an organization to receive, package and load all classes of supplies to be delivered by air to ground force units, airborne or otherwise.
12. That a P-38 and B-17 unit or other suitable combat units participate in a glider operation to determine its feasibility.	12. Recommend obtaining Army Air Forces comment. Maximum allowable speed of a glider is about minimum speed of a combat plane. Greatest need for combat aircraft for combat will be during airborne operations.	12. Concur but doubt aircraft will be available as needed for support of airborne operations.	12. Concur.	12. Concur and recommend Army Air Forces implement.	12. Will be submitted to Army Air Forces for comment. Reproduced from chart incl (Tab A) with memo, G-3 WD for DCS USA, 19 Oct 43, sub: A/B ops Board. In OPD 381 case 186.

Figure 12. Implementation of Recommendation of Swing Board (part 2)
Source: Huston, Out of the Blue, p. 263.

The first four recommendations dealt with the publication of a training circular that defined the relationship between the Airborne and Troops Carrier Commands, the former's responsibilities, and the details of airborne operations from planning through execution. On October 9, the War Department published this document with only minor changes as Training Circular Number 113, Employment of Airborne and Troop Carrier Forces (see Appendix B). The Army Ground Forces, the Army Air Forces, and the War Department's Operations Division all endorsed the document. The publication of this document, which became the "bible" for subsequent airborne operations, and adherence to its principles were the most important results of the Swing Board.⁸

The purpose of the circular was "to provide, in a single reference, information based upon experience gained in recent combat operations concerning the employment of airborne and troop carrier forces."⁹ Both the Airborne Command and Troop Carrier Command had conducted business with each other based on gentlemen's agreement, rather than from a unified command structure. Now their interactions were binding. The only airborne operation that the circular cited by name for proper planning and execution was Nadzab. Indeed, the document emphasized many of the principles present in that operation. It stated that airborne and troop carrier units were theater of operation forces and, therefore, the planning and controlling headquarters had the authority to direct the necessary coordinated action of all ground, sea and air forces involved. Without this level of authority, the planning headquarters could not ensure its proper coordination. The airborne unit remained under the direct control of the theater commander until it landed in the combat area when it passed to the control of the ground commander. A related principle dealt with the missions that airborne units were to conduct once employed. Since an airborne unit was especially trained and equipped to accomplish a specific mission, it was not to be utilized on missions that could be performed by other forces. So, once it passed to the control of the ground commander, its mission was to remain limited.¹⁰

The next major principle was that the employment of airborne units should land in mass, and as rapidly as possible and within as small an area as practicable. In other words, the delivery of airborne units over several days throughout an area of operations as had been done in Sicily, had been a mistake. This principle was one that Eisenhower cited to Marshall as a lesson learned from the British participation in the Sicilian airborne operations. "A later operation on the British front brought out the lesson [that] when we land airborne troops on hostile territory, we should not do it in successive waves, but should do it all at once," Eisenhower wrote. "In the first wave, where we had surprise, losses were negligible, but in the succeeding waves they were very large."¹¹ This principle drove the requirement to have sufficient aircraft to transport the troops and equipment necessary at one time to accomplish the initial mission and maintain surprise. The circular also promoted the requirement for additional aircraft to conduct resupply operations.¹²

It was important for the theater or task force commander, according to the document, to have proficient airborne and troop carrier advisors and staffs. It also ensured that there was sufficient time to plan, coordinate and conduct the necessary training for the upcoming operation. This indispensable joint planning and coordination for the specific operation covered all the details and possible contingencies, and should culminate in a joint rehearsal of the operation under conditions that simulated as nearly as possible those of the intended operation.¹³

This joint training was crucial because it reinforced many of the standard operating procedures necessary between the airborne and troop carrier units. The more units became familiar with each other, the more confident they were in each other's abilities. The joint training was imperative because it ensured that the commanders and staffs of the airborne and troop carrier units communicated directly with each other throughout the planning and execution of the training operations. This was critical in a cooperative command structure. In planning parachute operations, airborne and troop carrier units

encountered numerous problems, but they generally overcame them, especially when the units conducted adequate joint training and preparation before an operation. This cooperative relationship resolved issues at the troop carrier - airborne unit level. Rarely was there ever an issue that either commander referred to a higher echelon for resolution.¹⁴

Another principle was that an airborne operation was an integral part of the basic maneuver plan. Airborne operations, by their nature, were complex, resource-intensive, and difficult to coordinate. Accordingly, there should not be an airborne operation unless the situation indicated that its employment was necessary for the accomplishment of the mission of the force as a whole. In addition, to superimpose an airborne operation on a major operation already planned would rarely, if ever, be successful.¹⁵

The one new principle introduced in the training circular was that there should not be an airborne operation unless ground or naval forces could support the airborne forces within approximately three days. The only exception was if the airborne forces withdrew after its mission was over. This seemed to rule out the strategic employment of airborne troops deep in enemy territory that Marshall and Arnold envisioned. However, related to strategic employment was the introduction of airborne forces as a constant threat. By their nature, airborne forces were a threat that could strike anywhere in theater within range of troop transport aircraft. Through their mere presence in the theater of operations, airborne forces caused the enemy to disperse its forces over a wide area in order to protect vital installations.¹⁶

The next four recommendations of the Swing Board dealt with several issues: the number of troop carrier units necessary to support an airborne division, and how to deal with shortages, a schedule of troop carrier unit participation necessary to sustain training in the United States, and a recommended number of future troop carrier units necessary based on the number of projected airborne units. The AGF, AAF and Operations Division

did not universally accept these recommendations. There was much disagreement over the roles and mission of troop carrier units.¹⁷

Swing defined the primary mission of troop carrier units as combat units to provide air transportation for airborne forces into combat and to resupply such forces until withdrawn or supplied by other means. The secondary mission of troop carrier units within the theater was emergency supply and evacuation, ferrying of troops and equipment, and finally transportation of personnel, supplies and mail. Swing felt strongly that while troop carrier units were not participating in actual combat operations, they should be training for them and not diverted to other missions that might prevent their proper training. The War Department did not concur with these narrow definitions because it viewed separate troop carrier units for the nearly exclusive use in airborne operations as an uneconomical use of airplanes. It countered with the conclusion that troop carrier units could fly in from other theaters as necessary to launch large-scale airborne operations.¹⁸

The War Department did follow the recommendation on the schedule of training requirements for troop carrier units. War Department Directive "Joint Training of Airborne and Troop Carrier Units," dated October 9, 1943, outlined the joint responsibilities of the Commanding Generals of the AAF and AGF. Some of the items in the directive were the essential minimum joint troop carrier - airborne training requirements before units departed for combat theaters. The Commanding General, AGF, was responsible for the training of the airborne units, while the Commanding General, AAF, had similar responsibility for the troop carrier units.¹⁹

Neither a troop carrier unit nor an airborne unit could receive this minimum essential training without joint participation of both the AGF and AAF. Therefore, it was a dual responsibility of the Commanding Generals, AGF and AAF, to require close coordination and cooperation, which would be possible only through effective long-range training plans and submission of requirements to the War Department sufficiently in

advance to ensure coordination. The initially agreed upon troop carrier - airborne requirements were in accordance with the schedule contained in War Department memorandum "Schedule of Troop Carrier Units" dated September 24, 1943.²⁰

The last requirement of the directive was the authorization for direct correspondence between the Airborne Command and the I Troop Carrier Command. The directive also encouraged the exchange of liaison officers between the two commands. All these efforts were to improve the cooperative basis for airborne unit training and make it more of a unified command to improve the efficiency and effectiveness of airborne operations.²¹

The last four recommendations of the Swing Board had to do with various other issues such as the development of navigation aids to assist in finding the drop zone, activation of a quartermaster company for each theater having airborne units to assist in the receipt, packaging and delivery of all classes of supply by air to ground force units, testing of combat aircraft in conjunction with glider operations to determine feasibility, and the assignment of a general officer to each theater commander to be an airborne adviser. The War Department directed an organizational study and to make recommendations on these issues and their feasibility, but based on the guidelines in Training Circular No. 113, it did not agree that the theater commander needed an airborne advisor because the airborne forces were to remain at the theater level for employment. Swing attempted unsuccessfully to keep a higher headquarters from pulling away the senior leaders from their units in order to assist in planning future operations.²²

Ridgway also gave the Swing Board a number of recommendations based on his experiences in Sicily and Italy when he returned to the United States and Swing also included them in his findings. Ridgway believed that the airborne disasters had occurred largely because the senior ground commanders (Generals Eisenhower, Alexander, Montgomery and Clark) and their airborne advisers (namely Browning -- not Swing) had not understood how to employ airborne forces properly. Swing criticized the piecemeal

and haphazard employment of airborne troops because they were available. This view coincided with Marshall's assessment that, in the words of his official biographer Forrest C. Pogue, "airborne units were being frittered away merely as support troops instead of being used decisively in an assault."²³ To prevent further misuse of airborne forces, Ridgway submitted a set of written principles, tactics and procedures that theater commanders should follow when considering the employment of airborne forces.²⁴ Ridgway's principles were very similar to the ones outlined in Training Circular No. 113.

In addition to these principles, there were also items similar to tactics and procedures employed only during the Nadzab operation. One of these items was the use of combat aircraft for resupply if transport planes were unavailable or unable to perform such missions. Another item was the use of air support in the form of air bombardment, smoke and diversionary attacks to support the airborne operation.²⁵

Training Circular No. 113 had a significant impact on future airborne operations as well as the development of doctrine for large-scale airborne operations. This training circular became the reference for subsequent airborne operations during the war. As the airborne operations grew larger in scale and complexity, the employment principles remained valid. Large portions of the training circular appeared verbatim in the War Department Field Manual 71-30, Employment of Airborne Forces, dated July 3, 1947. This field manual replaced War Department Field Manual 31-30, Tactics and Techniques of Air-Borne Troops, dated May 20, 1942, which was the basic doctrine for airborne operations during the war.

Training Circular No. 113 not only had an impact on the development of airborne doctrine, but it also had an impact on the development on troop carrier aviation doctrine. On January 31, 1944, by direction of Chief of the AAF General Arnold, the AAF Board initiated a project to prepare a field manual on the tactics and techniques of troop carrier operations. "It is desired that this project serve to consolidate the loose ends of Troop Carrier aviation into a compact manual which will serve as a useful guide and to clarify

many of the misunderstandings on this type of aviation," said the Board.²⁶ The primary reference for this project was Training Circular No. 113. The directive stated that the Nadzab airborne operation was a useful source of information for the project.

The purpose of the proposed manual was to present a complete picture of troop carrier operations in its various phases with special emphasis on training of crews and units, operations, communications, navigation aids, and employment of gliders. In addition, there was special emphasis on the close coordination that must exist between troop carrier and airborne forces when planning and conducting operations. The directive also underscored that close coordination between the Troop Carrier Command and the Airborne Command was necessary in the development of the troop carrier manual so that there would be no conflict in doctrine since the Airborne Command was in the process of updating their manual on airborne operations, War Department Field Manual 31-30, Tactics and Techniques of Air-Borne Troops.²⁷

On January 18, 1946, Arnold approved the AAF Board's tactics and techniques of troop carrier aviation project. Large portions of Training Circular No. 113 appeared verbatim in this report as well. The project's recommendations included the text for a field manual on troop carrier aviation operations. The text later appeared as War Department Field Manual 1-30, Tactical Doctrine of Troop Carrier Aviation, dated August 12, 1947. This manual was the first doctrinal manual on troop carrier operations in support of airborne operations.²⁸

Not a direct result of the Swing Board, but a follow-on action, was the publication of AGF's memorandum, "Joint Training of Airborne and Troop Carrier Units," dated November 2, 1943. This memorandum contained the newly developed program of instruction for combined airborne-troop carrier training for parachute battalions, parachute regiments and airborne divisions. The War Department had directed this training in its memorandum for "Joint Training of Airborne and Troop Carrier Units," issued on October 9. The training plan had three phases: small unit training, large unit training and divisional

training. Each phase built upon the previous phase. The memorandum laid out the tasks, conditions and standards for each phase of the training.²⁹

The memorandum specified the requirements an airborne division must satisfy before the Army Ground Forces certified the unit as combat ready. Each airborne division must satisfactorily complete a combined maneuver of the following scope:

- a. Duration -- approximately five days.
- b. Employ at least four departure air bases.
- c. Objective area to be reached by circuitous route of approximately 300 miles.
- d. At least one-half of the landings and assembly of units to be made at night.
- e. The maneuver will be planned so that contact with friendly ground forces will not be made prior to D plus 4.
- f. Re-supply and evacuation by air and/or air landing during period D to D plus 4.³⁰

The giant test maneuver that Marshall ordered used these standards to evaluate the feasibility of large-scale airborne operations and the ability to command and control the airborne division. Swing's 11th Airborne Division was the first unit to conduct the test.

Stimson was highly interested in the success of the airborne concept. Just before the test maneuver, he visited Swing and the 11th Airborne Division during a training exercise at Camp Mackall. On November 23, 1943, Stimson watched the division stage a nighttime parachute and glider, infantry and artillery, demonstration that was a huge success. The 11th Airborne Division impressed the secretary of war. In a note several days later to Swing, he wrote, "The Airborne Infantry Division will play a great part in our future successes, and I know that the 11th Airborne Division will render outstanding service to our country on some not too far distant D Day."³¹ He did not know how true that he would be.

The special test maneuver that Marshall ordered for the 11th Airborne Division took place during the first week of December 1943. The objective of the division was to capture the Knollwood Airport in North Carolina; thereafter, this exercise became known as the Knollwood Maneuvers. The senior evaluator for the exercise was none other than McNair, the sharpest critic of the airborne division concept. He directed the 11th Airborne

Division to conduct the maneuver according to Training Circular No. 113 and evaluated it according to his headquarters' memorandum "Joint Training of Airborne and Troop Carrier Units," of November 2, 1943.³²

Across five departure airfields on December 6, the 11th Airborne Division loaded its airplanes and gliders. The division and troop carrier staff synchronized the takeoffs from each of the airports so that each serial joined the column in its proper place in line as the entire division became airborne. The column headed east over the North Carolina shoreline, out over the Atlantic Ocean, turned north and then back west to the designated drop and landing zones. Golf courses around Pinehurst and Southern Pines, open fields outside towns, and areas adjacent to Knollwood Airport were the drop and landing zones for the maneuver.³³

Almost all the jumpers and gliders hit the proper drop and landing zones. In a few hours, the division assembled and seized its assault objectives. Before dawn, the Knollwood Airport was in the hands of the 11th Airborne Division. For the next five days, the division received a steady flow of troop carrier aircraft loaded with all the supplies. It successfully waged simulated combat against the defenders from the 17th Airborne Division over the sand hills of North Carolina near Knollwood. By the evening of the sixth day, McNair declared the Knollwood Maneuvers over. The maneuver was a huge success for the 11th Airborne Division and the airborne concept.³⁴

The week after the maneuver, McNair rendered his verdict on the Knollwood Maneuvers to Swing. McNair wrote:

I congratulate you on the splendid performance of your division in the Knollwood Maneuver. After the airborne operations in Africa and Sicily, my staff and I had become convinced of the impracticality of handling large airborne units. I was prepared to recommend to the War Department that airborne divisions be abandoned in our scheme of organization and that airborne effort be restricted to parachute units of battalion size or smaller. The successful performance of your division has convinced me that we were wrong, and I shall now recommend that we continue our present schedule of activating, training, and committing airborne divisions.³⁵

Swing's paratroopers convinced the top army leaders that airborne divisions were tactically sound, but it was the 503^d PIR's jump at Nadzab that nullified the doubts after Sicily that set the stage for the Knollwood Maneuvers. The Knollwood Maneuvers breathed new life into the nearly dead airborne division concept.

Also in attendance to watch the maneuvers was Ridgway. Afterward, he flew back to Ireland to rejoin his paratroopers already there preparing for their next mission. The invasion of Nazi-held Europe was to begin in just over four months. The vast Allied assault into Normandy began with three airborne divisions -- the American 82^d and 101st and one British. The large-scale American parachute drops on D-Day proved that McNair's decision to save the airborne division had been a wise one.

CHAPTER 7

CONCLUSION

"This operation by the 503^d was probably the classic text-book airborne operation of World War II. What the 503^d did was a vertical envelopment by parachute assault, seizing and then defending an airhead at Nadzab."¹

-- Lieutenant General (Ret.) John J. Tolson

After the disastrous results of the airborne operations at Sicily, the future of the airborne was in question. Many senior military leaders believed that the airborne division was not a sound concept. The skeptics argued that it was too large of an organization for a commander to regain control and operate the scattered forces as a functional unit after a parachute drop. Despite the initial failures of regimental-size airborne operations, the advocates of vertical envelopment insisted that a division-size structure with the capability of conducting large-scale offensive combat operations was necessary to support the planned invasion of Europe as well as Japanese-held territories in the Pacific Theater.

The initial string of failures was not different from any other development of a new military concept. Only through a series of trials and errors did the doctrine, training and employment principles develop to properly employ the new concept. The 503^d PIR's success at Nadzab was a powerful assertion of the possibilities of large-scale airborne operations. The fortuitous timing of this operation coincided with the Swing Board, which was studying the lessons learned from Sicily and recommending the necessary changes to employ this new concept effectively.

In a letter to the U.S. Army Center of Military History, retired Lieutenant General John J. Tolson stated that the 503^d PIR's airborne operation at Nadzab "was probably the classic text-book airborne operation of World War II."² Tolson knew a few things about airborne operations, since he was the first American paratrooper to jump into combat as the commander of Third Battalion. He also went on to command the 1st Cavalry Division

(Air Mobile) during Vietnam from March 1967 to August 1968 and the XVIII Airborne Corps from August 1968 to March 1971.

What Tolson did not say was that the textbook for that size operation had not been written at the time the parachute drop occurred. Most of the doctrine for large-scale airborne operations did not come out until the publication of Training Circular No. 113 as a result of the Swing Board. This recommendation, as well as the many other recommendations that the Swing Board made, established the necessary principles to employ an airborne division effectively. The success of the 11th Airborne Division in the Knollwood Maneuvers ended the debate. The airborne division concept, tried and tested, proved to be credible, workable and functional.

The commander of Second Battalion, 503^d PIR for Nadzab was retired Brigadier General George M. Jones. In a letter to one of his paratroopers writing a regimental history, Jones summed up the accomplishments of his regiment at Nadzab. "When the 503^d put all three battalions on their jump target within 4-1/2 minutes and, of course, with MacArthur looking on with members of his staff from an observation plane, it was bound to affect the thinking of the people in the War Department that said paratrooping was not a feasible means of entering troops into combat," he wrote. "We will never know, but in my opinion, the Jump saved the Airborne effort."³ Shortly after the Nadzab parachute drop, Jones became the commander of the 503^d PIR and commanded the regiment for the remainder of the World War II. The regiment made its next jump on the Island of Noemfoor in July 1944, but the one that made the 503^d PIR famous was the airborne assault onto Corregidor on February 16, 1945. After that jump, the regiment became famous for its seizure of the "The Rock."

In spite of the fame from Corregidor, the 503^d PIR's parachute drop at Nadzab had the greatest impact on the development of the airborne concept. This airborne operation achieved more than just its tactical objectives. It was the first unqualified successful American parachute drop of World War II and was decisive in allowing the advocates of

vertical envelopment make to make a convincing case for the soundness of the airborne concept, as well as that of the airborne division.



Figure 13. 503^d Parachute Infantry Regiment Patch

ENDNOTES

CHAPTER 1

- ¹ F. O. Miksche, Paratroops, p. 15.
- ² Geoffrey Perret, There's A War to be Won, p. 10.
- ³ Gerard M. Devlin, Paratrooper!, pp. 125-126.
- ⁴ Ibid.
- ⁵ Douglas MacArthur. Reminiscences, p. 172.

CHAPTER 2

- ¹ Devlin, Paratrooper!, p. 34.
- ² Ibid., p. 36.
- ³ Ibid., p. 37.
- ⁴ Ibid., p. 39.
- ⁵ John T. Ellis, Jr., The Airborne Command and Center Study No. 25, pp. 2-3.
- ⁶ Ibid., pp. 42-46.
- ⁷ Devlin, Paratrooper!, pp. 71 - 75.
- ⁸ Ibid., p. 7.
- ⁹ Ellis, Airborne Command, p. 5.
- ¹⁰ United States, War Dept., Origins of the Army Ground Forces: General Headquarters, U.S. Army 1940-1942, pp. 54-55.
- ¹¹ Ibid., p. 53.
- ¹² Roger E. Bilstein, Airlift and Airborne Operations in World War II, pp. 10-11.
- ¹³ Ronald G. Boston, "Doctrine by Default: The Historical Origins of Tactical Airlift," Air University Review, p. 43.
- ¹⁴ Ellis, Airborne Command, p. 13.
- ¹⁵ Christopher R. Gabel, The U.S. Army GHQ Maneuvers of 1941, pp. 190-191.
- ¹⁶ Ellis, Airborne Command, pp. 13-14.
- ¹⁷ Ibid., p. 14.

¹⁸ James A. Huston, Out of the Blue, p. 68. The Troop Carrier Command was originally the Air Transport Command, and subsequently renamed the I Troop Carrier Command. The Troop Carrier Command was the training agency of the Army Air Forces in airborne operations. This unit was often confused with the later Air Transport Command, formed out of the Air Forces Ferrying Command and the Air Cargo Division of the Air Service Command. The Air Transport Command had the primary mission of transporting personnel, supplies, and mail between theaters.

¹⁹ Ibid.

²⁰ United States, War Dept., Field Manual 100-20, Command and Employment of Air Power, p. 1.

²¹ Ibid.

²² Huston, Out of the Blue, pp. 52-53.

²³ Ellis, Airborne Command, pp. 19-20.

²⁴ United States, War Dept., Field Manual 31-30, Tactics and Techniques of Air-Borne Troops, pp. 31-32.

²⁵ Huston, Out of the Blue, p. 49.

²⁶ United States, War Dept., Tactical Doctrine of Troop Carrier Aviation, p. 5.

²⁷ Ibid., p. 51.

²⁸ United States, Dept. of the Army, USAF Airborne Operations, World War II and Korean War, pp. 1-3.

²⁹ Ibid., pp. 3-4.

³⁰ Clay Blair, Ridgway's Paratroopers, p. 83.

³¹ Omar N. Bradley, A Soldier's Story, p. 126.

³² United States, Dept. of the Army, USAF Airborne Operations, World War II and Korean War, p. 9.

³³ James M. Gavin, On to Berlin, pp. 18-22; Samuel T. Moore, Tactical Employment in the U.S. Army of Transport Aircraft and Gliders in World War II, pp. 35-36.

³⁴ Omar N. Bradley and Clay Blair, A General's Life, pp. 179-180; Bradley, A Soldier's Story, p. 126; Blair, Ridgway's Paratroopers, pp. 86-88.

³⁵ Blair, Ridgway's Paratroopers, p. 88.

³⁶ United States, Dept. of the Army, Airborne Operations. A German Appraisal, p. 25.

³⁷ Blair, Ridgway's Paratroopers, p. 95; Bradley, A Soldier's Story, p. 127; Bradley and Blair, A General's Life, p. 180.

³⁸ United States, Dept. of the Army, A Historical Study of Some World War II Airborne Operations, p. 16.

³⁹ Ibid., p. 17.

⁴⁰ Ibid., pp. 16-17.

⁴¹ Bradley, A Soldier's Story, p. 126; United States, Dept. of the Army, USAF Airborne Operations, World War II and Korean War, p. 11.

⁴² Blair, Ridgway's Paratroopers, pp. 100-102; Moore, Tactical Employment in the U.S. Army of Transport Aircraft and Gliders in World War II, pp. 38-39.

⁴³ Blair, Ridgway's Paratroopers, pp. 100-102; Moore, Tactical Employment in the U.S. Army of Transport Aircraft and Gliders in World War II, p. 39.

⁴⁴ Huston, Out of the Blue, p. 273.

⁴⁵ Devlin, Paratrooper!, p. 245.

⁴⁶ Ellis, Airborne Command, p. 47.

⁴⁷ Ibid.

⁴⁸ Huston, Out of the Blue, pp. 166-167.

⁴⁹ Blair, Ridgway's Paratroopers, p. 107.

⁵⁰ Ibid., p. 106.

⁵¹ Ibid., p. 107.

⁵² Dwight David Eisenhower, The Papers of Dwight David Eisenhower, eds. Alfred D. Chandler, Jr. and Stephen E. Ambrose. V, 1440.

⁵³ Devlin, Paratrooper!, p. 246.

CHAPTER 3

¹ MacArthur. Reminiscences, p. 169.

² Ibid.

³ Ibid., pp. 166-167.

⁴ Ibid.

⁵ United States, War Dept., Offensive Operations in the South and Southwest Pacific Areas during 1943, p. 1.

⁶ John Miller, Jr., CARTWHEEL: The Reduction of Rabaul, p. 19.

⁷ Louis Morton, Strategy and Command: The First Two Years, pp. 675-685.

⁸ Miller, CARTWHEEL: The Reduction of Rabaul, pp. 26-29.

⁹ Ibid., p. 22-29.

¹⁰ Edward J. Drea, New Guinea, pp. 8-9.

¹¹ MacArthur, Reminiscences, pp. 177-178.

¹² George C. Kenney, General Kenney Reports, pp. 251-253.

¹³ Ibid., pp. 270-275.

¹⁴ Ibid., pp. 270-274.

¹⁵ Steve Birdsall, Flying Buccaneers, pp. 87-88.

¹⁶ Drea, New Guinea, p. 10.

¹⁷ Miller, CARTWHEEL: The Reduction of Rabaul, p. 190.

¹⁸ David M. Horner, General Vasey's War, pp. 257-258.

¹⁹ Ibid.

²⁰ Ibid.

²¹ Ibid.

²² Kenney, General Kenney Reports, p. 282.

²³ Australian Military Forces, Reconquest, p. 6.

²⁴ Kenney, General Kenney Reports, p. 286.

²⁵ Reconquest, p. 5.

²⁶ Miller, CARTWHEEL: The Reduction of Rabaul, p. 192.

²⁷ Ibid.

²⁸ Kenney, General Kenney Reports, p. 288.

CHAPTER 4

¹ Bennett M. Guthrie, Three Winds of Death, pp. 12-16.

² Devlin, Paratrooper!, pp. 71-77.

³ Guthrie, Three Winds of Death, p. 13-18.

⁴ Ibid., p. 20.

⁵ Ibid., p. 21.

⁶ Devlin, Paratrooper!, p. 256.

⁷ Guthrie, Three Winds of Death, p. 24.

⁸ William T. Calhoun, Bless 'Em All, p. 5.

⁹ Devlin, Paratrooper!, p. 256.

¹⁰ Guthrie, Three Winds of Death, pp. 26-27.

¹¹ Calhoun, Bless 'Em All, p. 5.

¹² Guthrie, Three Winds of Death, pp. 33-43.

¹³ John W. Britten, Letters from a Pacific Paratrooper, p. 197.

¹⁴ Guthrie, Three Winds of Death, pp. 46-48.

¹⁵ Samuel T. Moore, Tactical Employment in the U.S. Army of Transport Aircraft and Gliders in World War II, p. 18.

¹⁶ United States, War Dept., "Report on "OUTLOOK OPERATION"," p. 1.

¹⁷ David Horner, General Vasey's War, p. 259.

¹⁸ Ibid.

¹⁹ Devlin, Paratrooper!, p. 258.

²⁰ Guthrie, Three Winds of Death, p. 52.

CHAPTER 5

¹ George C. Kenney, The MacArthur I Know, p. 108.

² Australian Military Forces, Reconquest, p. 26.

³ Horner, General Vasey's War, pp. 262-263.

⁴ Australian Military Forces, "Opn Order No. 5., Operation "Outlook"," p. 1.

⁵ Ibid.

⁶ E. M. Flanagan, Jr., Corregidor, p. 117.

⁷ Ibid., p. 118.

⁸ Elden C. Campbell, "Personal Experience of a Regimental Parachute Officer," p. 8. Devlin, Paratrooper!, pp. 259-260; Flanagan, Corregidor, p. 118; Guthrie, Three Winds of Death, p. 59; Horner, General Vasey's War, p. 263.

⁹ Campbell, "Personal Experience of a Regimental Parachute Officer," p. 8; Devlin, Paratrooper!, pp. 259-260; Flanagan, Corregidor, p. 118; Guthrie, Three Winds of Death, p. 59; Horner, General Vasey's War, p. 263.

¹⁰ United States, War Department, "Report on "OUTLOOK OPERATION"," p. 2.

¹¹ Devlin, Paratrooper!, p. 260.

¹² Luther L. Sexton, "The Operations of the 503d Parachute Infantry Regiment in the Markham Valley - Lae Operation, 5-17 September 1943," p. 3.

¹³ Jerry B. Riseley, "Adjutant's Journal, Second Battalion, 503d Parachute Infantry," p. 17.

¹⁴ United States, War Department, "Report on "OUTLOOK OPERATION"," p. 2. Flanagan, Corregidor, p. 119.

¹⁵ Flanagan, Corregidor, p. 119. United States, War Department, "Field Order 1," p. 3.

¹⁶ United States, War Department, "Field Order 1," p. 2. Kenney, General Kenney Reports, p. 288.

¹⁷ United States, War Department, "Field Order 1," pp. 1-4.

¹⁸ Ibid.

¹⁹ Devlin, Paratrooper!, p. 260; Calhoun, Bless 'em All, p. 17.

²⁰ Flanagan, Corregidor, pp. 118-119.

²¹ Calhoun, Bless 'em All, p. 17; Guthrie, Three Winds of Death, p. 58.

²² United States, War Department, "Report on "OUTLOOK OPERATION"," p. 3.

²³ Calhoun, Bless 'em All, p. 17; Devlin, Paratrooper!, p. 261; Guthrie, Three Winds of Death, p. 59; United States, War Department, "Report on "OUTLOOK OPERATION"," p. 3.

²⁴ Kenney, General Kenney Reports, p. 288-289.

²⁵ Ibid.

²⁶ Calhoun, Bless 'em All, p. 18; Devlin, Paratrooper!, p. 262; Flanagan, Corregidor, pp. 119-120; Guthrie, Three Winds of Death, p. 61.

²⁷ Guthrie, Three Winds of Death, p. 61.

²⁸ Calhoun, Bless 'em All, p. 18; Devlin, Paratrooper!, p. 262; Flanagan, Corregidor, p. 120; Guthrie, Three Winds of Death, p. 63.

²⁹ Kenney, The MacArthur I Know, p. 108.

³⁰ MacArthur, Reminiscences, p. 179.

³¹ Ibid. The citation read: "On September 5, 1943, General MacArthur in a B-17 bomber called the Talisman, personally led the American paratroopers on the very successful and

important jump against the Nadzab airstrip. General MacArthur flew through enemy infested air lanes and skillfully directed this historic operation which was accomplished with the greatest success and made possible the later landing of Australian airborne troops and the closing of the western inland approaches of the Markham Valley. He remained over the combat area until all paratroops had landed in initial contact with the enemy in this battle."

³² Kenney, The MacArthur I Know, pp. 108-109. In September 1942, just after General Kenney arrived in Australia, he flew with General MacArthur from Brisbane to Port Moresby. On the trip, one of the engines on the B-17 went out while General MacArthur was sleeping. General Kenney woke General MacArthur up to inform him of the problem. He said, "I just want to tell you that this is a good airplane. In fact, it flies almost as well on three engines as it does on four." General MacArthur responded, "I like to listen to you enthusiastic aviators, even when you exaggerate a little." General Kenney responded, "All right, we've been flying on three engines for the last twenty minutes and you didn't know it. In fact, you didn't even wake up." General MacArthur looked out the window, listened carefully for a while, grinned and said, "Nice comfortable feeling, isn't it?" pp. 103-104.

³³ Guthrie, Three Winds of Death, p. 63.

³⁴ William B. Breuer. Geronimo!, p. 107.

³⁵ John R. Galvin. Air Assault: The Development of Airmobile Warfare, p. 155.

³⁶ Calhoun, Bless 'em All, p. 20.

³⁷ United States, War Department, "Report on "OUTLOOK OPERATION"," p. 3.

³⁸ United States, War Department, "Field Order 1," p. 2.

³⁹ Devlin, Paratrooper!, pp. 264-265.

⁴⁰ Galvin, Air Assault: The Development of Airmobile Warfare, p. 115.

⁴¹ Australian Military forces, Reconquest, p. 27.

⁴² Ibid., pp. 27-30.

⁴³ Ibid.

⁴⁴ Calhoun, Bless 'em All, p. 21.

⁴⁵ Galvin, Air Assault: The Development of Airmobile Warfare, p. 116.

⁴⁶ Kenney, General Kenney Reports, p. 295-296.

⁴⁷ United States, War Department, "Report on "OUTLOOK OPERATION"," pp. 3-5.

⁴⁸ Devlin, Paratrooper!, p. 266.

⁴⁹ Galvin, Air Assault: The Development of Airmobile Warfare, p. 116.

CHAPTER 6

¹ Huston, Out of the Blue, pp. 51-52.

² Devlin, Paratrooper!, p. 246.

³ E. M. Flanagan, Jr., The Angels. A History of the 11th Airborne Division, pp. 48-50.

⁴ Blair, Ridgway's Paratroopers, p. 172.

⁵ Huston, Out of the Blue, pp. 51-52.

⁶ Flanagan, The Angels. A History of the 11th Airborne Division, pp. 49-50.

⁷ Huston, Out of the Blue, pp. 261-263.

⁸ *Ibid.*, p. 263.

⁹ United States, War Department, Training Circular No. 113. Employment of airborne and troop carrier forces, p. 2.

¹⁰ Flanagan, The Angels. A History of the 11th Airborne Division, p. 50.

¹¹ United States, War Department, Training Circular No. 113, p. 2.

¹² Eisenhower, The Papers of Dwight David Eisenhower, Eds. Alfred D. Chandler, Jr. and Stephen E. Ambrose. V, 1259.

¹³ United States, War Department, Training Circular No. 113, pp. 2-4.

¹⁴ *Ibid.*

¹⁵ United States, War Department, "A Historical Study of Some World War II Airborne Operations," p. 132.

¹⁶ *Ibid.*, pp. 2-7.

¹⁷ Huston, Out of the Blue, p. 54.

¹⁸ *Ibid.*, pp. 262-263.

¹⁹ *Ibid.*, p. 52.

²⁰ United States, War Department, "Joint Training of Airborne and Troop Carrier Units," p. 1.

²¹ *Ibid.*

²² *Ibid.*

²³ Huston, Out of the Blue, pp. 262-263.

²⁴ Blair, Ridgway's Paratroopers, p. 172.

²⁵ Ibid.

²⁶ Matthew B. Ridgway, "Summary of Principles Covering the Use of the Airborne Division," p. 1.

²⁷ United States, War Department, "Tactical Doctrine of Troop Carrier Aviation," p. 5.

²⁸ Ibid.

²⁹ Ibid., pp. 2-3; United States, War Department, War Department Field Manual 1-30, Tactical Doctrine of Troop Carrier Aviation, p 12.

³⁰ United States, War Department, "Joint Training of Airborne and Troop Carrier Units," pp. 1-3.

³¹ Ibid.

³² Flanagan, The Angels. A History of the 11th Airborne Division, pp. 51-52.

³³ Ibid.

³⁴ Ibid., p. 56.

³⁵ Ibid., pp. 57-58.

³⁶ Devlin, Paratrooper!, p. 248.

CHAPTER 7

¹ John J. Tolson, "Letter to U.S. Army Center of Military History," dated 24 March 1979.

² Ibid.

³ George M. Jones, "Letter to Jerry Riseley," dated 8 March 1989.

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APPENDIX A

HISTORY OF THE 503^D PARACHUTE INFANTRY REGIMENT

On August 22, 1941, the War Department activated the 503^d Parachute Battalion under the command of Major Robert Sink, who was a member of the 501st Parachute Battalion, the first parachute battalion, formed in September 1940 from the original Test Platoon.¹ On August 29, 1940, the Test Platoon had completed its fifth and final qualifying jump for a prestigious audience. The two most notable personnel present were the Secretary of War Honorable Henry L. Stimson and Chief of Staff of the Army General George C. Marshall. Fortunately for the airborne concept, the Test Platoon made a favorable impression on both of them that they did not quickly forget. The members of the Test Platoon formed the cadre of the 501st Parachute Battalion and many later became members of the 503^d PIR when the 501st Parachute Battalion became the Second Battalion, 503^d PIR in November 1942.²

The executive officer for the 503^d Parachute Battalion was one of the most famous paratroopers of World War II, then Major James M. Gavin who later became the commander of the 505th PIR at Sicily, Assistant 82^d Airborne Division Commander at Normandy, and 82^d Airborne Division Commander in Operation MARKET-GARDEN. The operations officer was Captain Joseph Lawrie, who later commanded the First Battalion, 503^d PIR and was the executive officer for the regiment in the Pacific.³

Sink had formed the battalion at Fort Benning, Georgia from thousands of volunteers. He selected based solely on merit only 341 enlisted men and 37 officers. On October 3, 1941, the battalion made its fifth qualifying jump and then moved onto other advanced infantry training under the direction of Colonel Lee's Provisional Parachute Group. Soon the battalion reached its authorized strength of 456 enlisted men by tapping into the first group of selective service personnel at Camp Roberts,

California. These draftees volunteered for paratrooper training in October 1941. Once they completed jump training, they became a part of Company A, 503^d Parachute Battalion.⁴

On October 5 the War Department activated the next parachute battalion, the 504th Parachute Battalion under the command of Major Richard Chase, who was also a member of the 501st Parachute Battalion and previously an executive officer of the 503^d Parachute Battalion. Unlike the other three previous parachute battalions, this unit entered and left jump school as a unit. The battalion planned to make its final qualifying jump on December 15. With the outbreak of war on December 7, there were not enough airplanes available and the battalion did not make its final jump until January 26, 1942.⁵

Just after the 504th Parachute Battalion completed basic airborne training, the 503^d and 504th Parachute Battalions moved to Fort Bragg because of the crowded conditions at Fort Benning and the formation of the Airborne Command at Fort Bragg. On March 2 with the peacetime allocations for army troop strengths lifted, the War Department ordered the formation of four parachute regiments from the existing parachute battalions. Uniting the 503^d and 504th Parachute Battalions, the two units formed the 503^d PIR. The 503^d Parachute Battalion became the First Battalion and the 504th Parachute Battalion became the Second Battalion of the 503^d PIR. The first commander of the regiment was Lieutenant Colonel William M. Miley, who was then commanding of the first parachute battalion, 501st Parachute Battalion, at Fort Kobbe, Panama.⁶

On May 20, less than three months after the regiment formed, the War Department ordered Miley to provide a parachute battalion for duty in Europe. He released the Second Battalion (originally the 504th Parachute Battalion), which was later renamed the 509th Parachute Infantry Battalion and gained the distinction of being the first American unit to jump in combat during Operation TORCH in North Africa.⁷

In March 1942, the 82^d Infantry Division reactivated at Camp Claiborne, Louisiana under the direction of Major General Omar Bradley. Brigadier General Matthew B. Ridgway, the Assistant Division Commander, replaced General Bradley as the commander in June. Miley then departed the 503^d PIR to be the Assistant Division Commander for the newly redesignated 82^d Airborne Division.⁸ Sink, then executive officer for the 503^d PIR, became the commander of the regiment on July 20. His new executive officer was Lieutenant Colonel Kenneth H. Kinsler, who, like Sink, was a member of the original 501st Parachute Battalion at Fort Benning. Kinsler had just returned to Fort Bragg from his command of the 501st Parachute Battalion that was in Panama. When Kinsler departed from Panama, he relinquished command to his executive officer, Major George M. Jones.⁹

Sink did not command the 503^d PIR very long. Shortly after taking command, he left to take charge of the newly activated 506th PIR at Camp Toccoa, Georgia. This regiment later became part of the 101st Airborne Division. Kinsler moved up to be the next commander of the 503^d PIR.¹⁰

With the departure of Second Battalion for Europe, the 503^d PIR had only one remaining battalion at Fort Bragg. On June 4, the War Department activated the Third Battalion of the 503^d PIR. Just before the Second Battalion departed for Europe, Miley reassigned the executive officer, Major John J. Tolson III, to form the newly authorized Third Battalion of the 503^d PIR. The paratroopers who formed the newly activated unit came from the cadre of the 502^d Parachute Battalion who were still at Fort Benning. The Headquarters Company of the 502^d became the Headquarters of Third Battalion, 503^d PIR. Company A, B and C of the 502^d Parachute Battalion became Company G, H and I, Third Battalion, 503^d PIR respectively.¹¹

In October 1942, the War Department secretly ordered the 503^d PIR to the Pacific Theater. On October 10, the 503^d PIR completed loading all the men and equipment on trains under the direction of Tolson. Kinsler temporarily transferred Tolson, Third

Battalion Commander, to job of regimental executive officer and acting commander of the regiment for the move when he departed early for Australia to prepare for his unit's arrival.¹²

¹ Guthrie, Three Winds of Death, pp. 12-16.

² Devlin, Paratrooper!, pp. 71-77.

³ Guthrie, Three Winds of Death, p. 16.

⁴ Ibid., p. 13.

⁵ Ibid., pp. 13-16.

⁶ Ibid., p. 18.

⁷ Ibid., p. 20.

⁸ Blair, Ridgway's Paratroopers, pp. 18-32.

⁹ Guthrie, Three Winds of Death, pp. 20-22.

¹⁰ Ibid.

¹¹ Ibid.

¹² Devlin, Paratrooper!, p. 256.

APPENDIX B
GENERAL KENNEY LETTER TO GENERAL ARNOLD,
DATED SEPTEMBER 7, 1943

You already know by this time the news of the preliminary moves to take out Lae, but I will tell you about the show on the 5th September, when we took Nadzab with 1700 paratroops and with General MacArthur in a B-17 over the area watching the show and jumping up and down like a kid. I was flying number two in the same flight with him and the operation really was a magnificent spectacle. I truly don't believe that another air force in the world today could have put this over as perfectly as the 5th Air Force did. Three hundred and two airplanes in all, taking off from eight different fields in the Moresby and Dobodura areas, made a rendezvous right on the nose over Marilinan, flying through clouds, passes in the mountains, and over the top. Not a single squadron did any circling or stalling around but all slid into place like clockwork and proceeded on the final flight down the Watut Valley, turned to the right down the Markham, and went directly to the target. Going north down the valley of the Watut from Marilinan, this was the picture: Heading the parade at one thousand feet were six squadrons of B-25 strafers, with the eight .50-caliber guns in the nose and sixty frag bombs in each bomb bay; immediately behind and about five hundred feet above were six A-20s, flying in pairs-three pairs abreast-to lay smoke as the last frag bomb exploded. At about two thousand feet and directly behind the A-20s came ninety-six C-47s carrying paratroops, supplies, and some artillery. The C-47s flew in three columns of three-plane elements, each column carrying a battalion set up for a particular battalion dropping ground. On each side along the column of transports and about one thousand feet above them were the close-cover fighters. Another group of fighters sat at seven thousand feet and, up in the sun, staggered from fifteen to twenty thousand, was still another group. Following the transports came five B-17s, racks loaded with 300-pound packages with parachutes,

to be dropped to the paratroopers on call by panel signals as they needed them. This mobile supply unit stayed over Nadzab practically all day serving the paratroops below, dropping a total of fifteen tons of supplies in this manner. Following the echelon to the right and just behind the five supply B-17s was a group of twenty-four B-24s and four B-17s, which left the column just before the junction of the Watut and the Markham to take out the Jap defensive position at Heath's Plantation, about halfway between Nadzab and Lae. Five weather ships were used prior to and during the show along the route and over the passes, to keep the units straight on weather to be encountered during their flights to the rendezvous. The brass-hat flight of three B-17s above the center of the transport column completed the set-up.

The strafers checked in on the target at exactly the time set, just prior to take-off. They strafed and frag-bombed the whole area in which the jumps were to be made, and then as the last bombs exploded the smoke layers went to work. As the streams of smoke were built up, the three columns of transports slid into place and in one minute and ten seconds from the time the first parachute opened the last of 1700 paratroopers had dropped. During the operation, including the bombing of Heath's, a total on ninety-two tons of high-explosive bombs was dropped, thirty-two tons of fragmentation bombs and 42,580 rounds of caliber .50 and 5180 rounds of caliber .30 ammunition were expended. At the same time nine B-25s and sixteen P-38s attacked the Jap refueling airdrome at Cape Gloucester. One medium bomber and one fighter on the ground were burned and three medium bombers and one fighter destroyed in combat. Two ack-ack positions were put out of action and several supply and fuel dumps set on fire. Between five and a half and six tons of parafrags were dropped and 19,000 rounds of caliber .50 ammunition fired. Simultaneously also, ten Beauforts, five A-20S, and seven P-40s from the R.A.A.F. put the Jap refueling field at Gasmata out of action. No air interception was made by the Japs on any of the three missions. Our only losses were two Beauforts shot down by ack-ack at Gasmata.

APPENDIX C

TRAINING CIRCULAR NO. 113

[TO 113]

TRAINING CIRCULAR }
No. 113 }

WAR DEPARTMENT,
WASHINGTON 25, D. C., 9 October 1943.

Employment of airborne and troop carrier forces.—Pending revision of War Department publications which are affected by this circular, the following instructions will govern:

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SUMMARY

The following principles are so vital to the success of any airborne operation that they are repeated at the beginning of this publication.

Airborne and troop carrier units are theater of operations forces. Plans for their combined employment must be prepared by the agency having authority to direct the necessary coordinated action of all land, sea, and air forces in the areas involved. This responsibility should not be delegated to lower headquarters since positive coordination can be insured only by the one agency in control of all elements.

The coordinating directive must be issued in ample time to insure its receipt by all agencies concerned, including isolated antiaircraft units and individual naval and other vessels.

Routes, altitudes, time schedules, and means of identification, both while in the air and on the ground must be known in advance by all concerned. Procedures must be prescribed which will insure that troop carrier aircraft which are on course, at proper altitudes and on the correct time schedules are not fired upon by friendly land, sea or air forces.

Plans should provide for the necessary preparation by troop carrier and airborne units to include training and practice operations and the concentration of these units in the departure areas.

Airborne units should remain under the direct control of the theater commander until they land in the ground combat area when control passes to the officer in command of that area.

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SECTION I

GENERAL

1. **Purpose.**—This training circular is published to provide, in a single reference, information based upon experience gained in recent combat operations concerning the employment of airborne and troop carrier forces.

2. **Definitions.**—For purposes of use of particular terms in this text, the following definitions are given:

a. Airborne forces.—Army Ground Forces units which are specially organized, trained, and equipped to utilize air transportation for entry into combat. Normally such units will include parachute and glider borne elements. Airborne units should not be confused with other light units of the Army Ground Forces, many of which may be transported by air, which are not specifically organized, trained, nor equipped for this method of movement.

b. Troop carrier forces.—Army Air Forces units which are specially organized, trained, and equipped to transport airborne troops and supplies into combat. Troop carrier units should not be confused with elements of the Air Transport Command which have the primary mission of transporting personnel, supplies, and mail between theaters.

3. **References.**—This training circular does not in any way undertake to review basic doctrine as prescribed for the Army as a whole. For a general discussion of troops transported by air and of air task forces see chapters 13 and 14, FM 100-5. For pertinent data relative to troop movement by air transport see chapter 10, FM 101-10. For supply of ground units by air see FM 31-40. For detailed discussion of aviation in support of ground forces see FM 31-35. For the command and employment of air power see FM 100-20. For a discussion of the tactics and technique of airborne troops see part I, FM 31-30.

4. **Principles of employment.**—*a.* Airborne troops ordinarily will be employed as a part of a combined effort, and their operations usually will be performed in close coordination with other military or naval forces.

b. Airborne troops are especially trained and equipped to accomplish specific missions. (See par. 5a.) They should not be employed on missions that can be more expeditiously and economically performed by other forces.

c. Airborne operations are difficult to coordinate. Therefore, airborne units should not be employed unless the situation indicates that their use is necessary for the accomplishment of the mission of the force as a whole. The inaccessibility of an objective to the ground force because of its geographical location will be a major factor in considering the employment of airborne forces.

d. Airborne troops should not be employed unless they can be supported by other ground or naval forces within approximately 3 days, or unless they can be withdrawn after their mission has been accomplished. No fire support, except from combat aviation, can be expected until contact is made with other forces.

e. Airborne troops should be employed in mass. The bulk of the force should be landed rapidly in as small an area as practicable.

f. Air superiority is a fundamental prerequisite for successful airborne operations. The degree of air superiority which can be attained will be

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a major factor in determining whether airborne operations should be initiated during daylight or under cover of darkness.

g. Realistic and thorough joint training for all units participating in an airborne operation should be conducted. Thorough training in technical aspects is not sufficient. Training for specific operations must cover all details and contingencies, and culminate in a rehearsal of the operation with conditions approximating as closely as possible those of the actual operation.

h. The altitude and route to be flown by troop carrier aircraft must be carefully selected and coordinated with all major elements of the participating forces.

- (1) The routes selected should avoid naval convoys. If such is impossible, an air lane, not to be entered by naval vessels at prescribed times, must be clearly delineated. The lane must be of sufficient width to insure safe passage for the troop carrier aircraft.
- (2) The route for troop carrier aircraft should be selected so as to avoid antiaircraft fire rather than attempting to gain altitude or use evasive action.
- (3) Pathfinder aircraft with highly trained crews should be employed to precede the leading troop carrier flight to the landing area. Provision should be made for marking the landing area for later airborne flights.
- (4) The initial approach to hostile positions should be made at low altitude in order to prevent early detection.

i. All participating units must be informed of scheduled airborne operations. Airborne troops must be advised of the identification means used by the ground troops with whom they may operate. Establishment of a common countersign and parole for all troops by the highest command is essential.

j. The following considerations affect the selection of landing areas:

- (1) Airborne units must have a reasonable chance of being brought under effective command control before entering combat.
- (2) The objective should be sufficiently close to the landing area to insure surprise.
- (3) If enemy strong points lie between the landing area and the objective, the terrain should be such that enemy positions can be bypassed.
- (4) Cover should be near the landing area, especially in daylight operations. Covered routes to the objective are desirable.
- (5) Terrain should be favorable for defense against armored attack.
- (6) Alternate landing areas should be previously selected, so that subsequent serials can be diverted if initial landing areas prove to be heavily defended or otherwise unsatisfactory.
- (7) The landing area must be easily identifiable from the air under the expected conditions of visibility. Two prominent checkpoints on the final approach path are desirable.

k. Successful employment of airborne and troop carrier forces will be dependent upon the following factors:

- (1) Achievement of the necessary degree of air superiority.
- (2) Suitable weather conditions.

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- (3) Vital enemy objectives which are within the capabilities of the available airborne force.
- (4) Sufficient aircraft to transport the troops, equipment, and supplies required to accomplish the mission.
- (5) Adequate facilities at points of departure and suitable landing areas near the objective.
- (6) Capable airborne and troop carrier staff advisors for the theater or task force commander.
- (7) Sufficient time to carefully plan, coordinate, and conduct specialized training for the operation.
- (8) Complete and accurate information for advance planning.
- (9) Navigational aids and pathfinder aircraft.
- (10) Effective signal communication between the departure area and objective area.

SECTION II

PLANNING

5. Missions.—a. Airborne units may be used as follows:

- (1) To seize, hold or otherwise exploit important tactical localities in conjunction with or pending the arrival of other military or naval forces.
- (2) To attack the enemy rear and assist a break-through or landing by the main force.
- (3) To block or delay enemy reserves by capturing and holding critical terrain features, thereby isolating the immediate battlefield.
- (4) To capture enemy airfields.
- (5) To capture or destroy vital enemy establishments, thereby paralyzing his system of command, communication, and supply.
- (6) To create diversions.
- (7) To assist the tactical air force in delaying a retreating enemy until the main forces can destroy him.
- (8) To reinforce threatened or surrounded units.
- (9) To seize islands or areas which are not strongly held and which the enemy cannot easily reinforce.
- (10) To create confusion and disorder among the hostile military and civil personnel.
- (11) As a constant threat by their mere presence in the theater of operations thereby causing the enemy to disperse his forces over a wide area in order to protect vital installations.

b. Troop carrier units may be used as follows:

- (1) The primary mission of troop carrier units is to provide air transportation for airborne forces into combat; and to resupply such forces until they are withdrawn or can be supplied by other means.
- (2) The secondary mission of troop carrier units within the combat theater is:
 - (a) Emergency supply and evacuation.
 - (b) Ferrying of troops and supplies.
 - (c) Routine transportation of personnel, supplies and mail.

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(3) Troop carrier units must be diverted from secondary missions, by the highest headquarters in a theater, in ample time to allow complete preparation to accomplish primary missions.

6. Characteristics.—A knowledge of the powers and limitations of airborne and troop carrier forces is a prerequisite to sound tactical employment of these units. Only when employed to exploit their strongest characteristics and to minimize the effects of their inherent weaknesses can their maximum usefulness be obtained.

a. *Airborne units*.—(1) Favorable characteristics:

- (a) Wide latitude in selection of suitable objectives.
- (b) Capability to strike deeply into hostile territory and exploit fully the elements of speed and surprise.
- (c) Detrimental effect upon enemy morale.
- (d) Capability of operating day or night.
- (e) Capability of operating against selected limited objectives within a relatively small area.
- (f) Opportunity usually afforded to prepare and rehearse for a specific operation.

(2) Unfavorable characteristics:

- (a) Dependent upon favorable weather conditions for employment.
- (b) Mobility after landing is limited to use of captured vehicles or those which have been transported by air.
- (c) Extremely vulnerable to attack by hostile armored elements and to attack by any hostile forces during landing and assembly.
- (d) Staff planning and coordination are complicated and require considerable time.
- (e) Limited information with which to operate in strange territory.
- (f) Difficulty in assembling after landing and establishing command control.
- (g) Not equipped for sustained action.

b. *Troop carrier units*.—(1) Favorable characteristics:

- (a) Capability of transporting personnel and equipment of airborne forces to any desired area within the operating range of the aircraft.
- (b) Capability of operating by day or night.
- (c) Opportunity usually afforded to prepare and rehearse for accomplishment of a specific operation.
- (d) Equipped with best available aircraft for transporting airborne units.
- (e) Equipped with gliders capable of landing in unprepared, restricted areas.
- (f) Equipped with special navigational aids for locating objectives in enemy territory.

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(2) Unfavorable characteristics:

- (a) Lack of speed, armor, and armament.
- (b) Dependence upon fighter cover, low altitude operation, route selection, or poor visibility conditions for security.
- (c) Difficulties in navigating to specific objectives imposed by the probable necessity of operating at low altitude and under conditions of poor visibility.

7. Weather.—Weather is an important factor in airborne operations and must be studied carefully during the planning phase. In combined operations, in the event of unexpected weather conditions, commanders must be prepared either to postpone launching the main attack, or to operate without airborne forces.

8. Time to initiate operations.—a. Airborne units must be prepared to operate by day or night since no invariable time can be prescribed for such operations.

- (1) When operating in conjunction with ground forces only, the time of attack should be so coordinated as to give maximum assistance to the main effort.
- (2) When operating in conjunction with amphibious forces, experience in combat has indicated that the airborne attack should be so timed that it precedes that of the amphibious force. Essential surprise must not be lost by premature action; therefore the airborne troops must usually land under cover of darkness.
- (3) In night operations, unless a quarter moon or better is assured, accurate mass dropping of parachute troops and glider landings are not feasible.
- (4) Where proper conditions for a daylight attack exist, such as in the operations in New Guinea, daylight operations afford greater chances of success than a night operation.
- (5) Daylight landings in conjunction with opportune use of smoke will combine some of the advantages of both a day and night operation.

b. Airborne operations carried out at night have the following advantages:

- (1) The chances of surprise are greatly increased, because the exact area of landing and the strength of the force employed cannot quickly be determined by the enemy.
- (2) Attack by enemy aircraft during the air movement is less likely.
- (3) Aircraft and gliders are less vulnerable to antiaircraft fire.
- (4) The final preparations for take-off can be concealed from the enemy.

c. Operations at night have the following disadvantages:

- (1) A much higher state of training of pilots and airborne troops is required.
- (2) Operational difficulties in landing, a slower rate of arrival, and difficulty in assembling and regaining command control must be accepted.

d. In some instances a combination of a night take-off followed by a daylight or dawn landing, or a daylight take-off followed by a dusk or night landing may be a proper compromise.

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9. **Command and coordination.**—*a.* Airborne operations require the highest degree of coordination between all participating units.

b. The commander-in-chief or field force commander, who controls all participating forces, is responsible for the planning of an airborne operation. This responsibility should not be delegated to lower headquarters since the necessary coordination can be made only by the one agency which controls all elements.

c. The airborne operation should be an integral part of the basic plan. To superimpose an airborne operation on a major operation already planned will rarely, if ever, be successful.

d. The airborne and troop carrier commanders concerned will develop the detailed plans for the concentration of troops, the air movement, and the tactical operation at the objective. Troop Carrier-Airborne Standing Operating Procedure should be developed and followed for all airborne operations. During the planning phase, contacts by all commanders and staffs concerned with the operation should be intimate and continuous. Commanders of airborne and troop carrier forces should be authorized to communicate directly in all phases of operational planning.

10. **Importance of simplicity.**—The plan must be simple and flexible. The following should be avoided:

a. A complicated plan for distribution of troops at departure airfields.

b. Insufficient allowance in air movement tables for operational delays in take-off, assembly of formations, rendezvous, landing, and preparation for subsequent serials.

c. Directional changes in the route at other than prominent check points.

d. Selection of glider release points and parachute landing areas without careful consideration of unexpected variables such as deterioration of visibility, wind changes, and smoke, dust, and fires caused by bombing.

e. Use of landmarks difficult to locate from the air.

f. A complicated scheme of landing.

g. A plan completely dependent upon the arrival of any one subserial or ground unit.

h. Interference between arriving and returning aircraft.

SECTION III

EXECUTION

11. **High command responsibilities.**—*a.* Initially the airborne forces should operate directly under the field force commander. Upon arrival in the ground combat area, the airborne forces should operate under the major unit in whose combat area the airborne units are employed.

b. During night air movement and landings, great care must be taken to insure that military and naval bombardment does not so light up the ground by explosions and fires, with resultant dust and smoke, that recognition of routes and landing areas becomes impossible.

12. **Troop carrier commander's responsibilities.**—Since the air movement is essentially an air operation, the delivery of airborne troops to their destination is a responsibility of the troop carrier commander. He will—

a. Prescribe the use and allocation of troop carrier units in a manner as favorable to the requirements of the airborne commander as technical and tactical conditions permit.

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b. Prescribe all details for the air movement to include times, routes, altitude, speed, rendezvous, check points, use of navigational aids, and other means of controlling or regulating the flight to the objective area.

c. Accomplish resupply missions.

13. Airborne commander's responsibilities.—a. To assemble troops, equipment, and supplies at designated air bases.

b. To prescribe the tactical plan for the ground operation after landing.

c. To indicate the ground mission to be performed by glider pilots after landing and pending evacuation.

d. To establish resupply requirements and arrange for delivery to departure air bases.

14. Airborne and troop carrier commanders' joint responsibilities.—

a. To designate troops and aircraft that depart from specific air bases.

b. To supervise loading of troops, equipment, and supplies.

c. To select landing areas.

d. To plan and supervise resupply.

15. Retention of initiative.—After capturing the objectives it is most important that the initiative be retained. This may be done by—

a. Raiding enemy headquarters.

b. Ambushing hostile forces.

c. Harassing enemy communications.

d. Maintaining vigorous counterpatrol activity.

16. Identification.—Recognition of troop carrier formations is a mutual responsibility of all friendly forces. Procedures must be prescribed which will insure that troop carrier aircraft, which are on course at the proper time and proper altitude, will not be fired upon by friendly forces.

[A. G. 370.5 (9 Oct 43).]

BY ORDER OF THE SECRETARY OF WAR:

G. C. MARSHALL,
Chief of Staff.

OFFICIAL:

J. A. ULIO,
*Major General,
The Adjutant General.*

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VITA

James P. Lowe was born and raised in Muncy, Pennsylvania. He graduated from Muncy High School in 1986 and entered the United States Military Academy at West Point the same year. Upon graduation in 1990 with a Bachelor of Science Degree, he was commissioned as a Second Lieutenant of Field Artillery. He spent two tours at Fort Bragg, North Carolina, where he commanded two airborne field artillery batteries in the 82^d Airborne Division Artillery. His next assignment was at the Joint Readiness Training Center at Fort Polk, Louisiana. His current assignment is at Fort Campbell, Kentucky, assigned to the 101st Airborne Division (Air Assault). He will receive the degree of Master of Arts in Liberal Arts in December 2004. His military schooling consists of the Field Artillery Basic and Advanced Courses, Combined Arms Services Staff School, Joint Air Operations Staff Course, Joint Targeting Course, Joint Firepower Control Course, Command and General Staff College, the Airborne, Air Assault, Jumpmaster and Pathfinder Schools and the Ranger Course. He is married to the former Amy Lambdin of Fayetteville, North Carolina. They have one son, Gavin, age 6 years and are expecting a second child in December.