

WORKING TOWARD COHESION: THE MARINE AIR-GROUND TEAM IN KOREA,

1950

by

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To my grandfather, Harry A. Southard

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INTRODUCTION

These pilots knew the tactical situation through daily contact with it; they knew the position of each unit and could accurately judge those localities where targets were most likely to appear and what type of target it would be. This unity between air and ground elements became nearly ideal during the advance from Yudam-ni to the south, and it is no exaggeration to state that the successful conclusion of this operation would have been nearly impossible without the amount and quality of close air support that was provided. It was an ideal combat example of the ultimate perfection of the air-ground team needed to defeat an aggressive determined enemy.

General Oliver P. Smith, *The Sea War in Korea*

This quote from General Oliver P. Smith, commander of the First Marine Division, refers to Marine Close Air Support (CAS) during the withdrawal from the Chosin Reservoir during the Korean War in December 1950. CAS, defined as “air action against hostile surface targets which are so close to friendly targets as to require detailed integration of each air mission with the fire and movement of those forces,” played a critical role in helping infantry units achieve their tactical objectives in the Korean War.¹ The Marine Corps, which advocated CAS 50 to 200 yards from the frontlines, emphasized direct communication between air and ground elements when implementing air support. During the first year of war in Korea (1950), the Marines participated in three major campaigns: the defense of the Pusan perimeter, the Inchon-Seoul campaign, and the withdrawal from the Chosin Reservoir. All engagements featured Marine CAS, and more specifically the air-ground liaison teams, also known as Tactical Air Control Parties (TACPs). Developing from experiments and experiences with close support in the Pacific Theater of World War II, Marine tactical control parties during 1950 constantly improved on their already effective CAS system,

¹ Malcolm W. Cagle and Frank Manson, *The Sea War in Korea*, The Sea Services in the Korea War, 1950-1953, cd-rom (Annapolis: United States Naval Institute, 2000), Chapter 2: section entitled “Close Air Support at the Pusan Perimeter.”

which culminated during the Chosin Reservoir campaign. As the Korean War progressed in 1950, so did Marine CAS and its application by the air-ground control teams.

From Pusan to the Chosin Reservoir, all elements of the Marine air-ground teams – pilots, TACPs, and communication centers – improved with each battle. At Pusan, Marine control parties provided a solid base for future operations. The U.S. Navy, which practiced the same CAS method as the Marines, operated under Air Force control at Pusan. The Air Force, which preached strategic air strikes over CAS, interfered with many Navy sorties, forcing those aircraft to abandon the Marine-style support that they promoted. An analysis of those interferences at Pusan yields one major conclusion: the Air Force, established only three years prior, did not possess the practice that Marine and Navy aircraft had gained in World War II. Marines, without Air Force intervention, offered timely and effective CAS for their comrades on the ground during all three campaigns.

In the two remaining battles of 1950, Marine aircraft continued to fly without major interference from the Air Force. During the invasion of Inchon, the establishment of an innovative Tactical Air Coordinator helped to manage and direct Marine sorties during the drive of United Nations' forces to the South Korean capital of Seoul. Moreover, the constant availability of aircraft hovering over the front lines, or “on station,” and their coordination with ground controllers allowed Marine ground units to recapture the South Korean capital. The integration of the Marine air-ground team in Korea reached its peak during the withdrawal from the Chosin Reservoir, where tactical control parties created highly innovative methods of keeping aircraft “on station,” and providing sufficient CAS for the 78-mile retreat south to the port city of Hungnam.

Under Fifth Air Force control after the Chosin Reservoir campaign, Marine aircraft flew mostly strategic strikes instead of CAS. Therefore, this work ends after the Chosin Reservoir campaign in November and December 1950. A brief analysis of Marine CAS during World War II and training between wars provides a background and perspective on the origins of the Marine air-ground team that ultimately transformed into the tactical control parties that directed aircraft in the first year of the war in Korea.

Scholarly writings on the Korean War pay little attention to the role of Marine CAS. To this date, there is no acute analysis of the development of the Marine air-ground team in Korea, a clearly neglected aspect of the war. In analyzing the historiography of Marine CAS in the first year of the Korean War, three areas of study emerge: general histories of the conflict, studies pertaining directly to the Marine Corps, and works that deal with the Army, Navy, and Air Force. Most works mention air support at some point, yet the attention to Marine CAS varies widely. Overall, these publications offer no detailed analysis of the evolution of Marine CAS, much less the air-ground teams, from Pusan to the Chosin Reservoir.

Stanley Sandler's *The Korean War: No Victors, No Vanquished* makes note of Marine air support at Pusan, Inchon-Seoul, and the Chosin Reservoir, yet only focuses on the effects of aircraft ordnance on the enemy, such as a description of Corsairs that fired and "completed the work of destruction."² In addition, Sandler's two page section devoted to CAS centers on the doctrinal differences between the Air Force and Marines.³ David Rees preceded Sandler's work in *Korea: The Limited War*, with a focus on doctrinal differences

² Stanley Sandler, *The Korean War: No Victors, No Vanquished* (Lexington: The University Press of Kentucky, 1999), 78.

³ *Ibid.*, 192-193.

when referring to CAS.⁴ Robert Leckie's *The Korean War*, likewise concentrates on the effectiveness of Marine Corsairs, specifically at Pusan.⁵ Max Hastings's military history of the Korean War seldom acknowledges the role of Marine aircraft, let alone CAS, during the retreat from the Chosin Reservoir.⁶ "Without the dedicated support of the Marine Air Wings," Hastings writes, "few men believed they would ever have made it."⁷ This generalization of Marine air support constitutes the closest Hastings gets to describing CAS. In 2002, Allan Millett published *Their War for Korea*, a collection of personal accounts of the war, yet nothing that alludes to the development of Marine CAS in Korea.⁸ Marine air support is virtually non-existent in Carl Berger's *The Korea Knot* and Steven Hugh Lee's *The Korean War*. Lee offers a scant description of air support, showing that "from the air, US planes strafed civilians,"⁹ and Berger, who describes his book a military-political history of the Korean War, assigns one sentence to American air support in the war.¹⁰

Lynn Montross and Nicholas Canzona published perhaps the most important work on Marine operations during the three analyzed campaigns. *U.S. Marine Operations in Korea, 1950-1953* offers entire volumes on the defense of Pusan, the Inchon-Seoul operation, and the Chosin Reservoir campaign. Yet only one chapter in the Inchon-Seoul volume focuses strictly to Marine air support, and provides only an administrative and operational narrative. Throughout the series, Marine CAS appears, but again highlighting only the high efficiency of aircraft ordnance on the enemy. Allan Millett's history of the Marine Corps continues the

⁴ David Rees, *Korea: The Limited War* (New York: St. Martin's Press, 1964), 49-51.

⁵ Robert Leckie, *The Korean War* (New York: G.P. Putnam's Sons, 1962), 107-108.

⁶ Max Hastings, *The Korean War* (New York: Simon and Schuster, 1987), 147-164.

⁷ *Ibid.*, 158.

⁸ Allan Millett, *Their War for Korea: American, Asian, and European Combatants and Civilians, 1945-1953* (Washington D.C.: Brassey's Inc., 2002)

⁹ Steven Hugh Lee, *The Korean War*, Seminar Studies in History (Harlow, England: Pearson Education Limited, 2001), 63.

¹⁰ Carl Berger, *The Korea Knot: A Military-Political History* (Philadelphia: University of Pennsylvania Press, 1957), 107.

general description of Marine CAS in Korea, conveying that air support at the Chosin Reservoir simply “devastated the PLA.”¹¹

Over three years (2000-2002), the Marine Corps Historical Center published the Marines in the Korean War Commemorative Series, consisting of individual works on the campaigns of Pusan, Inchon, Seoul, and the Chosin Reservoir, each of which contains small sections on Marine air support. John P. Condon’s *Corsairs to Panthers* serves as the major contributor to Marine aviation in the series. Condon relegates half the book to Marine air support in 1950, giving detailed administrative and tactical descriptions. *Corsairs to Panthers* offers a substantial description of the air-ground team at the Chosin Reservoir, detailing the addition the R5D Airborne Control Center and the use of Tactical Air Controllers, yet it does not truly illustrate the evolution and innovations of the TACPs that originated at Pusan and progressed throughout 1950.

Two works on the Chosin Reservoir campaign stand out for mentioning not only Marine CAS, but also the air-ground teams in Korea: Martin Russ’ *Breakout* and Roy Appleman’s *East of Chosin*. Russ dedicates two pages to a Tactical Air Control Party headed by Captain Edward Stamford, the Forward Air Controller (FAC) for Task Force Faith. The author describes the personnel that comprised the Tactical Air Control Party, offers one paragraph on Stamford’s training as a ground controller, and like others, details the destructive power of Marine Corsairs.¹² Appleman goes into greater detail on Stamford’s air-ground team during the withdrawal from the Chosin Reservoir, including the recognition that the Marine Forward Air Controller provided the vital CAS link between air and ground

¹¹ Allan Millett, *Semper Fidelis: The History of the United States Marine Corps* (New York: The Free Press, 1980), 495.

¹² Martin Russ, *Breakout: The Chosin Reservoir Campaign, Korea 1950* (New York: Penguin Books, 1999), 190-192.

units.¹³ These two publications indicate the role that the Marine air-ground team played in Korea, yet neither offer a thorough analysis of the make-up of the TACP.

Malcolm Cagle's and Frank Manson's *The Sea War in Korea* book highlighting U.S. Naval operations, offers the most detailed analysis of Marine CAS. The authors provide an extensive examination of the concept of Marine CAS as well as stressing the importance of air liaison innovations at the Chosin Reservoir. As for Pusan, *The Sea War in Korea*, like most other works, focuses on the vast differences between Marine-Navy and Air Force air operations, and offers no sense of the evolution of the Marine air-ground team from all three major engagements: Pusan, Inchon-Seoul, and the Chosin Reservoir.

James Field's *United States Naval Operations* and Robert Futrell's *The United States Air Force in Korea* both focus on the respective military branch's operations, yet still offer insight into the role that Marine CAS played. Field analyzes the daily operations of the Marine squadrons, but does not offer an in depth analysis of the internal workings of the air-ground teams. Futrell focuses on the doctrinal differences on CAS between the Air Force and Marines. Unseen in other works, Futrell downplays the role of Marine aviation in Korea, contending that advocates of Marine CAS tend to exaggerate its effectiveness in Korea. "Had the Communists possessed an air-attack potential," Futrell argues, "they would have prevented the baby flattops from standing close inshore in Korean waters."¹⁴ Thus, he argues that Marine CAS would not have proven so effective without the Air Force's establishment of air superiority. Yet, the effectiveness of the Marine CAS system in Korea, specifically without Air Force interference at Pusan, is clear. The Air Force may have played a major

¹³ Roy E. Appleman, *East of Chosin: Entrapment and Breakout in Korea, 1950* (College Station: Texas A&M University Press, 1987), 61-65.

¹⁴ Robert F. Futrell, *The United States Air Force in Korea, 1950-1953* (New York: Duell, Sloan and Pearce, 1961), 115.

role in establishing air superiority for U.N. forces, paving the way for Marine CAS, but when analyzing the Air Force's early experiments with close support at Pusan, one finds that the Marines possessed a far superior close support system in Korea.

The review of the literature reveals the need for an in depth analysis of Marine CAS during the first year of the Korean War, specifically the evolution of the air-ground liaison teams, or tactical control parties. During the first year of the Korean War, tactical control parties played a vital role in CAS, proving essential for Marine Corps infantry advances at the Pusan, Inchon-Seoul, and the Chosin Reservoir campaigns. A detailed analysis of the inner-workings of the Marine air-ground teams in Korea reveals the significant impact these air liaison teams had on the advances of U.N. forces, specifically the Marine Corps.

To understand the success of Marine air-ground teams in Korea, this work provides a brief analysis of the origins of the tactical control parties in World War II. From walking to the frontlines to receive tactical ground information on Guadalcanal to ground controllers directly controlling aircraft via radio, Marine airmen gradually made progress in implementing CAS.

The United States Marine Corps celebrates its birthday on 10 November 1775, when the Continental Congress approved the formation of two marine battalions to fight the British on land and sea. The Marine Corps served on land and sea for the United States during every major war of the eighteenth and nineteenth centuries. The air aspect emerged in the early twentieth century, as the Marine Corps assigned Lieutenants Alfred A. Cunningham and Bernard L. Smith to create an aviation section based on reconnaissance. By 1916, as the First World War loomed in Europe, the United States Congress, under President Woodrow Wilson, gave the Marine Corps naval appropriations that increased its aviation section to ten

officers and forty men.¹⁵ As the United States entered the First World War in 1917, Marine aviation had gradually played a more important role in battle. Cunningham and his fellow Marine aviators, alongside the Royal Air Force, fought German aircraft in aerial combat and dropped supplies to Allied infantry units. Despite the apparent early successes of air support from 1917-1918, Marine aviators wanted to offer support for their ground counterparts. Instead of eradicating German aircraft and dropping supplies, Cunningham sought ways to help Marine infantrymen accomplish their tactical objectives on the ground.¹⁶ As such, the need for CAS began to materialize in the Marine Corps.

In the 1920s, Marine aviators employed early CAS experiments during operations in the Dominican Republic, Haiti, and Nicaragua. During the former two engagements, Marine aviators bombed and strafed guerrilla units on the ground. After these two conflicts, operations in Nicaragua from the late 1920s to the early 1930s saw Marine aviators provide air support that showed a closer resemblance to CAS. Due to non-existent air-ground communications, Marine aviators obtained geographic information from Nicaraguan villagers for subsequent close support sorties. Other advances in CAS on Nicaragua came from the use of color panels used to mark frontlines and enemy positions, allowing Marine aircraft to bomb and strafe enemy positions. In all three engagements, a lack of air-ground communication complicated these early close support operations, yet the advantage of air power soon moved to the forefront of Marine Corps aviation.

The establishment of the Fleet Marine Force (FMF) in 1933 transformed the United States Marine Corps from an expeditionary force into an amphibious assault unit focused on

¹⁵ Millett, *Semper Fidelis*, 284.

¹⁶ Peter B. Mersky, *U.S. Marine Corps Aviation: 1912 to the Present* (Baltimore: The Nautical and Aviation Publishing Company of America, 1997), 13.

“the seizure of bases for naval operations.”¹⁷ The subsequent release of the *Tentative Landing Operations Manual* of 1935 gave aircraft a vital role in amphibious assaults, providing air support for beach landings.¹⁸ The Marines needed a way to offer timely and effective aerial support for troops conducting amphibious assaults, thus paving the way for CAS.

The FMF divided Marine aircraft into two units, the 1st and 2nd Marine Aircraft Groups (MAGs) located at Quantico and San Diego respectively, that participated in landing exercises throughout the 1930s. During these exercises, Marine aircraft attempted to develop CAS for the infantry. Yet since Marine aviators in the 1930s lacked a general knowledge of ground tactics, advancing the effectiveness of CAS proved a daunting task.¹⁹

By the late 1930s, the Marine Corps saw the improvement of communications between air and ground elements of the FMF as essential to executing CAS.²⁰ Yet the Marines made minimal gains in CAS improvements, as the high command consisted of ground officers focused on the infantry, not air operations, much less CAS.²¹ On 7 December 1941, the Japanese attack on Pearl Harbor propelled the United States into war with Japan, a conflict that presented Marine aviation, both air and ground elements, with an opportunity to improve CAS and show its advantages. Indeed, the Marine Corps capitalized on this opportunity. After the attack on Pearl Harbor, the Japanese advance across the Pacific forced General Douglas MacArthur to abandon the Philippines in March 1942. After engaging in air-to-air combat and strategic air support at Pearl Harbor, Wake Island, the

¹⁷ Robert Sherrod, *History of Marine Corps Aviation in World War II* (Washington: Combat Forces Press, 1952), 30.

¹⁸ Edward C. Johnson, *Marine Corps Aviation: The Early Years, 1912-1940* (Washington D.C.: History and Museums Division, Headquarters, United States Marine Corps, 1977), 65.

¹⁹ *Ibid.*, 79.

²⁰ Millett, *Semper Fidelis*, 335.

²¹ *Ibid.*, 335.

Coral Sea, and Midway, Marine aviators accompanied their fellow infantrymen at the battle of Guadalcanal. By the beginning of World War II, the Marines had established themselves as amphibious specialists, and the Pacific Theater offered an ideal opportunity to implement this newly developed doctrine.

WORLD WAR II

On 7 August 1942, the Marines initiated Operation Watchtower, or the invasion of Guadalcanal. On 12 August, after a successful landing, the Marines captured Henderson Field, a 2,600-foot long airstrip near Lunga Point on the north side of the island. The acquisition of Henderson Field presented the opportunity for land-based CAS, as Marine aircraft moved closer to infantry units on the small island of Guadalcanal, contrasted with flights from offshore carriers that took more time and fuel. Marine, Navy, and Army Air Force aircraft on Guadalcanal, collectively known as the Cactus Air Force, provided air support for the American infantry.²² Brigadier General Roy S. Geiger, a veteran of World War I, commanded the Cactus Air Force. On 20 August, two Marine squadrons landed on Henderson Field ready to provide air support. By 30 August, the remaining squadrons of Marine Aircraft Group-23 arrived at Henderson Field.²³

During its tenure on Guadalcanal, Marine air squadrons, like all Cactus Air Force groups, spent much of its time attacking Japanese air and naval forces. In this early stage of the war, Japanese aircraft posed a significant threat to both Marine infantrymen and pilots and their aircraft on land and sea. Marine aircraft focused on eliminating this threat by targeting Japanese aircraft and their carriers before concentrating on any type of close support. From 20 August to 16 October Marine Aircraft Group-23 downed 244 Japanese

²² Marine Air Group-23, consisting of VMF (Marine Fighter Squadron)-223, VMF-224, VMSB (Marine Scout Bomber Squadron)-231, and VMSB-232, constituted the primary Marine air contributors.

²³ In all, fifteen Marine squadrons landed at Henderson Field during the Guadalcanal campaign.

planes, and sank six enemy ships.²⁴ Although the majority of Marine sorties focused on air-to-air combat and destroying Japanese ships, developments in CAS also appeared on Guadalcanal.

Electronic transmission linking the air and ground units did not exist on Guadalcanal. Thus, upon receiving requests for air support from the front lines, Marine pilots walked to the respective ground unit's position and studied the location of the proposed Japanese target. During the pilot's examination of the probable target, the ground commander could physically point to a location on the battlefield, or an area on a map, for the Marine aviator to strafe or bomb. In some cases, ground units marked enemy targets with smoke shells. When the pilot felt he had thoroughly investigated the situation, he returned to Henderson Field to prepare for the ensuing strike on the Japanese position. When the Japanese failed to recapture Henderson Field in early November, Marine aircraft attacked enemy positions less than 100 yards from the frontline.²⁵ Offering air support within 100 yards of the frontline on Guadalcanal, which ultimately became prevalent in Korea, proved an enormous advance for Marine CAS, a tactic still in its early and unproven stages. These were the origins of Marine CAS which developed and improved as the war raged on.

Throughout the New Georgia campaign, Marine air-ground communication continued to evolve. During the summer of 1943, the Marines lacked aviators trained in air to ground liaison. Major Wilfred Stiles organized eight officers (including six Marine aviators) and eight radiomen to form air liaison teams equipped with command cars, radios, and air panels. Building from the Guadalcanal campaign, the air liaison teams did not need to walk to the

²⁴Sherrod, *Marine Corps Aviation in World War II*, 103. MAG-23 pilots noted four enemy ships they "believed" were sunk from their aircraft.

²⁵ Joe Gray Taylor, "American Experience in the Southwest Pacific," in *Case Studies in the Development of Close Air Support*, ed. Benjamin Franklin Cooling (Washington D.C.: Office of Air Force History, 1990), 301.

front lines to get CAS information. The Air Liaison Parties (ALPs) on New Georgia made seven requests from the front lines using the provided radio equipment, which led to four separate cases of air support.²⁶ Although four requests may seem an insignificant figure, they showed the improvements in communication between Marine air and ground elements in just one year of fighting. Yet, inadequacies in the CAS system soon emerged in the jungles of the South Pacific.

The dense jungle habitat in the Pacific Theater reduced vision, resulting in various ground units unknowingly separating from their respective front line positions. In addition, ground commanders often failed to locate their own unit's position on a map, much less that of the enemy. In early July 1943, twelve Marine pilots conducted a strike in support of the 169th Infantry. Yet the target, marked with mortar smoke, appeared 600 yards from the original coordinates due to the infantry's confusion from the jungle.²⁷ These early problems with CAS proved dangerous for the ground troops. Thus infantry on New Georgia, much like Guadalcanal, gradually lost confidence in the ability of aircraft to implement safe and accurate CAS.²⁸ Marine aircraft mostly provided strategic air support, attacking enemy bivouac areas and supply dumps. Despite the relative lack of close support in the early campaigns of the Pacific War, ensuing operations would prove the necessity of Marine air-ground teams.

On 1 November 1943, the Third Marine Division landed on Bougainville, the largest of the Solomon Islands. The Third Marine Division remained on Bougainville throughout November and by late December, XIV Corps, composed of two Army divisions, relieved the

²⁶ Sherrod, *Marine Corps Aviation in World War II*, 150.

²⁷ *Ibid.*, 151.

²⁸ Taylor, "American Experiences in the Southwest Pacific," in *Case Studies in the Development of Close Air Support*, 306.

Marines. Air Liaison Parties on Bougainville requested air support through the command of aircraft in the Solomons, a detachment of Air Force, Navy, and Marine aircraft. Three days before the assault, the 1st Marine Air Wing (MAW) instituted a school for liaison parties that preached the advantages and limitations of CAS, procedures for requesting air support, and descriptions of the use of air to ground communication equipment. The liaison school showed that air support at Guadalcanal and New Georgia did not reveal the true capabilities of Marine CAS.²⁹ The school also determined that white smoke grenades caused confusion during the previous Pacific battles. Thus, the air liaison school employed colored smoke grenades to mark enemy positions. In addition to increases in the ability to confirm enemy targets visually, the school made charts that exposed safety limitations in regards to how far specific bombs could explode from the frontlines without hampering the infantry. For example, a one hundred pound bomb should not hit less than one hundred yards from the frontline. In a desperate situation, the yardage could decrease to seventy-five.³⁰

Upon receiving a request from the frontlines, the command center for aircraft in the Solomons then relayed the request to the overall commander of aircraft in the respective area, Major General Roy Geiger – located at Munda - who accepted or declined the request. Air Liaison Parties possessed radios that connected the ground unit with the aircraft. Yet, Marines liaison parties did not use this unproven communication link to direct incoming aircraft to a target.³¹

²⁹ Sherrod, 189.

³⁰ Ibid., 190. For 500 pound bombs, the yardage was 500, with the closest possible use at 300 yards. For 1,000 pound bombs, the normal yardage was 1,000 yards, with the closest possible use at 500 yards. For 2,000 pound bombs, the yardage was 1,000, with the closest possible use set at 700 yards.

³¹ Taylor, “American Experiences in the Southwest Pacific,” in *Case Studies in the Development of Close Air Support*, 306.

Again, the majority of sorties constituted strategic bombing.³² Yet the Marines continued to build to its neophyte CAS system in the Pacific. In the early stages of the Bougainville campaign (November 1943), Marine pilots received a CAS request from an Air Liaison Party and upon approaching the designated target, the airmen noticed that the infantry had marked the objective, a village, with colored smoke grenades and white phosphorous shells. The striking aircraft quickly identified the target, dropped their bombs, and allowed the elements of the Third Marine Division to take the village. At Piva Village, after ground troops marked the target with colored smoke, Marine aircraft dropped bombs within 100 yards of the frontline.

To put Marine CAS in perspective, the Army bomblines - the geographic safety limit for CAS strikes - during operations in the southwest Pacific extended five to ten miles from friendly ground troops. The Army wanted to ensure that air operations operated far from their ground forces, allowing the infantry to maneuver without the possible threat of friendly air fire. For aircraft that flew within the ten-mile bomblines, the Army maintained a safety bombing line of 500 yards from the front lines. From 1 November 1943 to 1 February 1944, the Army reported only two exceptions to the 500-yard safety line: a strafing run on Cape Gloucester that came within 200 yards of the frontline, and dive bombers that attacked 100 yards from ground units at Shaggy Ridge. Moreover, the Army Air Forces did not accept CAS requests in which the Army liaison team asked for the strike at a specific time. Rather, the ground elements had to request a general timeframe for the strike, such as “not after 1200.”³³ Bougainville reveals the differences in CAS concepts between the Marine Corps and the Army Air Forces that continued into the Korean War with the United States Air

³² Ibid., 307.

³³ U.S. Army, IV Corps, Report on Air Support in the Southwest Pacific Area during the period 1 November 1943 to 1 February 1944, RG 127, National Archives II.

Force. When analyzing the Pacific Theater, one clearly sees that the Marine Corps, more than the other services, realized the importance and potential of CAS, developing its air-ground team and providing constant strikes within the bomblines.

Similar to New Georgia, close support on Bougainville still proved a work in progress. On “Hellzapoppin Ridge,” Lieutenant Colonel Ernest W. Fry, Jr. requested air support, in which the corresponding Marine air liaison parties relayed the information to Geiger, who ordered six Marine aircraft to orchestrate CAS. One Marine pilot mistakenly dropped a bomb offline, inflicting eight casualties.³⁴ The 300 Japanese soldiers on the hill had fortified the ridge with various bunkers, and Marine artillery failed to hit the enemy positions. Moreover, tall trees caused artillery rounds to explode before impact. Ultimately, the Marine aircraft struck the reverse side of the ridge with bombs that landed within 50 yards of the ground troops. Ground troops marked enemy positions with colored smoke grenades and white smoke to designate the Marine frontlines. Ninety percent of the bombs dropped hit the target.³⁵ On 18 December, eleven Marine pilots hit the enemy on the ridge, just 75 yards in front of ground Marines, which enabled the Marines to charge Hellzapoppin Ridge and take it from the Japanese.³⁶ Gradually Marine aircraft began to show that CAS implemented correctly, without friendly casualties in close proximity to the frontlines, proved a greater asset than liability for ground troops. Marine CAS, specifically at Hellzapoppin Ridge, made it feasible to destroy enemy positions the infantry failed to hit.

³⁴ Taylor, “American Experiences in the Southwest Pacific,” in *Case Studies in the Development of Close Air Support*, 310.

³⁵ Fred H. Allison, “The Black Sheep Squadron: A Case Study in the U.S. Marine Corps’ Innovations in Close Air Support” (Ph.D. diss., Texas Tech University), 141.

³⁶ Sherrod, *Marine Corps Aviation in World War II*, 191; Taylor, “American Experiences in the Southwest Pacific,” in *Case Studies in the Development of Close Air Support*, 310.

Until Okinawa in 1945, the campaign on Bougainville proved the last time Marine aircraft would directly support their ground counterparts in large numbers. General Douglas MacArthur's return to the Philippines provided the Marine Corps with an opportunity to reveal the benefits of CAS to the Army. Although the Army constituted the primary ground element, Marine aviation in the Philippines offers an extensive look into the evolution of its CAS innovations and implementation.

By May 1944, Marine doctrine called for the air liaison party to land ashore with the commanding officer of each respective unit. Once ashore, the air liaison officer established communications with the commander of all supporting aircraft for the sole purpose of requesting air support. The Support Air Request radio net connected the liaison officer to the commander of the striking aircraft. Upon hearing authorization from the commander, the ALP utilized radio nets to establish a link with the approaching aircraft. The use of smoke, panels, and flashing lights to designate targets only surfaced when communications failed from the Support Air Direction net.³⁷ Specifics regarding the process of requesting CAS accompanied the development of the air liaison parties.

When requesting CAS, the Marine Corps required the air liaison officer first to describe the proposed targets: enemy emplacements, artillery, bunkers, or guns. The liaison party then approximated the location of the target by giving coordinates from the operational map. Descriptions of nearby landmarks also helped pilots to identify the CAS target. In addition, the air liaison officer provided the time for the "on station" aircraft to arrive, and

³⁷U.S. Marine Corps, First Marine Division, Standard Operating Procedure for Close Air Support Aviation, 22 May 1944, RG 127, National Archives II.

the number of planes and ordnance needed.³⁸ This system mirrored subsequent Marine CAS missions.

In September 1944, the Joint Chiefs of Staff ordered MacArthur to invade Leyte in the Philippines. In October, Major General Ralph J. Mitchell, commander of the 1st Marine Air Wing, had confirmed Marine close support of the Sixth Army through Lieutenant General George C. Kenney, MacArthur's senior air commander. Early December saw the arrival of five Marine fighter squadrons, including a night fighter unit to Leyte. By the end of the month, seven Marine squadrons had arrived in support of Army units. Throughout December, Marine aircraft targeted mostly Japanese ships and aircraft.³⁹ In addition, aircraft from Marine Aircraft Group-12 attacked Japanese positions on Luzon in preparation for the Army's landing in January 1945.

Marine aviation provided constant air support for the Sixth Army on Luzon and the Eighth Army's advance in the central Philippines. After the Sixth Army's landing at Lingayen Gulf, Luzon, on 9 January 1945, Colonel Clayton B. Jerome ordered the construction of an airstrip near Dagupan, where Marine Aircraft Groups 24 and 32 ultimately provided air support for Army units on Luzon. From the Dagupan airstrip, Marine aircraft showed the reliability and consistency in air to ground cohesiveness that they consistently practiced in previous engagements.

During initial operations on Luzon, Marine aircraft operated with Army units that lacked ground liaison. Close support missions originated from Sixth Army Headquarters, not forward ground controllers, the air-ground element that ultimately became an indispensable asset of Marine CAS. Under Sixth Army control, CAS requests usually endured a one day

³⁸ Ibid.

³⁹ Millett, *Semper Fidelis*, 424.

delay before the strike actually occurred.⁴⁰ Marine commanders at Dagupan usually received air requests in the morning in which the squadrons received the number of planes for the strike and the suggested time on target. Marine air commanders had to assign ordnance loads and designate a squadron on their own. This arduous, time-consuming process resulted in Marine groups providing air support far from friendly forces that had moved positions during the allotted time for a CAS request.⁴¹ Throughout January, under Sixth Army control, Marine aircraft bombed and strafed far ahead of Army front lines.⁴² Army doctrine simply did not advocate directing air strikes from a forward observation post. Instead, the Army had assigned radio control of aircraft through a communications center behind the front lines, usually at division level.⁴³ Moreover, similar to Guadalcanal, Marine pilots walked to the frontlines to receive information on the requested air support from the ground commanders.⁴⁴

Despite the initial lack of CAS missions, the ultimate drive to the Philippine capital of Manila in February saw Marine aircraft implementing their style of close support. Sixth Army and Marine commanders agreed to provide jeeps for the frontlines, equipped with radios and operators. Air Liaison Parties, which escorted the 1st Cavalry Division on its way to Manila, relayed tactical air information to the respective MAG operations headquarters. The Marines first attached Air Liaison Parties to ground units in late 1943. The air liaison teams originally consisted of one aviation intelligence officer and anywhere from three to seven communication technicians. The intelligence officer advised ground commanders on the need for CAS in situations where the aviator deemed it necessary.⁴⁵ Essentially, air

⁴⁰Charles W. Boggs, *Marine Aviation in the Philippines* (Washington D.C.: Historical Division Headquarters, United States Marine Corps, 1951), 70.

⁴¹ *Ibid.*, 71.

⁴² Mersky, *U.S. Marine Corps Aviation: 1912 to the Present*, 105.

⁴³ Boggs, *Marine Aviation in the Philippines*, 59

⁴⁴ Sherrod, *Marine Aviation in World War II*, 299.

⁴⁵ Boggs, *Marine Aviation in the Philippines*, 59.

liaison parties in the Philippines functioned as Korean War style ground controllers, but in their infant stages of development. Indeed, the liaison party's ability to request and direct Marine aircraft secured a quick and concise employment of CAS for ground troops.

In the Philippines, the flight leader of a Marine strike sometimes acted as a tactical air controller, receiving instructions from the Air Liaison Parties to relay to the remaining aircraft. Later, in the southern Philippines, air coordinators would direct strikes while on station over the target. Yet the air controller proved only an observation aircraft, as the ground elements of the Air Liaison Party remained central to Marine CAS.⁴⁶

On 1 February 1945, Marine jeeps from Marine Aircraft Groups 24 and 32 accompanied the 1st Cavalry Division and directed pilots to scout the approaching horizon for the ground troops.⁴⁷ In addition to the reconnaissance work, Marine airmen communicated directly with Marine Air Liaison Parties, attached to the forward ground elements, and provided dawn-to-dusk close support for the previously exposed left flank of the Sixth Army.⁴⁸ Marine Captain Samuel H. McAloney stayed close to Brigadier General William C. Chase, one of the Army unit's commanders, keeping him informed of the available CAS aircraft. The Air Liaison Parties communicated with the striking aircraft, describing the target and the current friendly troop positions. The flight leader would then conduct a dummy run to allow the air liaison parties to make any corrections that may help the subsequent attacking aircraft.⁴⁹

⁴⁶ Taylor, "American Experiences in the Southwest Pacific," in *Case Studies in the Development of Close Air Support*, 326.

⁴⁷ Boggs, *Marine Aviation in the Philippines*, 76. The Marine aircraft retained a constant "flying column," thirty miles ahead and twenty miles behind the advancing Army unit.

⁴⁸ Philip A. Crowl and Jeter A. Isely, *The U.S. Marines and Amphibious War* (Princeton: Princeton University Press, 1951), 426.

⁴⁹ Boggs, *Marine Aviation in the Philippines*, 74.

Army units quickly began to witness the devastating effect that Marine CAS had on enemy positions. While moving towards Manila, Marine Air Liaison Parties directed aircraft to strike Japanese targets near the town of San Isidro. The Marine aircraft made several passes without firing, ensuring that ordnance would not endanger the ground units. The hovering on station aircraft forced the Japanese to focus on possible Marine air strikes, allowing the Army units to overrun the preoccupied enemy forces.⁵⁰

The Sixth Army reached Manila on 3 February and Marine aircraft provided unrelenting air support. While proceeding east of Manila, a Sixth Army patrol unit fell down a cliff, thus stranded and threatened by nearby Japanese forces. The commanding officer of the patrol unit proved reluctant to send in air support due to the close proximity of his forces with the approaching Japanese. Ultimately, the Army officer realized the increasing danger of his exposed troops and requested air support to divert the Japanese. The ensuing bomb loads from Marine aircraft scored direct hits on the Japanese, who had constructed an eighty-yard circular perimeter.⁵¹ General Walter Krueger, commanding officer of the Sixth Army, showed his admiration of Marine CAS, offering that CAS “was of such high order that I personally take great pleasure in expressing to every officer and enlisted man in that group my appreciation and official commendation for their splendid work.”⁵² By March 1945, the Army had gradually grown accustomed to the efficient CAS provided by the Marines.

In March and April 1945, Marine aviation focused on the southern Philippine islands, as Army units on Luzon had to contest small pockets of Japanese resistance. Marine Aircraft Group-14 continued to fly from Samar, northeast of Leyte, and groups 12, 24, and 32 relocated to Zamboanga, on the western tip of Mindanao in the southern Philippines.

⁵⁰ Mersky, *U.S. Marine Corps Aviation*, 106.

⁵¹ Crowl and Isely, *U.S. Marines and Amphibious War*, 427.

⁵² Gen. Walter Krueger to Commanding Officer, 1st MAW, dated 16 May 1945, RG 127, National Archives II.

More important for the implementation of Marine CAS, the Air Liaison Parties joined their air counterparts in the southern Philippines. By 17 April, three airfields existed on Mindanao which had housed at least one Marine Air Group: Zamboanga, Dipolog, on the northwest part of Mindanao, and Malabang, just inland from Illana Bay, in closer proximity to the main portion of Mindanao.

Marine aircraft on Zamboanga constituted the only aviation organization in the area to provide CAS. The Marine operations officer on Zamboanga controlled all air operations and ordered the construction of Support Air Parties for the regiment level. The Support Air Parties then delivered their respective liaison teams to Army battalions in the field. During the initial operations near Zamboanga in March 1945, Marine air liaison members boarded observation planes and relayed information to the approaching aircraft. The Air Liaison Party officer could direct the aircraft through a forward artillery officer and a fellow air liaison member on the ground. This helped Marine aircraft to hit reverse slopes of mountains that artillery failed to destroy.⁵³ As the Army began solidifying their positions in the Philippines, the need for CAS decreased. Yet Marine aircraft continued to offer CAS to Army units throughout the summer of 1945. In the Philippines, the confidence and reliability in CAS had not fully accumulated, but it did increase as the Marines developed the air-ground teams throughout the Pacific.

American forces continued to fight throughout the Pacific, getting closer to the main islands of Japan. After Marines secured Iwo Jima in March, they looked to Okinawa, a mere 360 miles from Kyushu, the southernmost island of Japan. Although Marine aircraft on

⁵³ Boggs, *Marine Aviation in the Philippines*, 116.

Okinawa focused on eliminating the Japanese kamikaze threat, an examination of CAS proves useful in understanding its development in the Marine Corps.⁵⁴

Assigned to the Third Corps on Okinawa, Landing Force Air Support Control Unit One, commanded by a marine officer, retained control of all air support for the corps' area of operations. Landing Force Air Support Control Unit Two supported the XXIV Corps. The intense fighting on Okinawa (1 April to 21 June 1945) resulted in ground Marines requesting close support strikes. The landing force control units connected to troop units in the field via land wire. Marine air liaison officers at battalion level requested CAS from the regimental headquarters. In turn, the regimental liaison officer radioed the respective control unit, which then contacted Marine squadrons for the strike. Meanwhile, Marine division headquarters could veto CAS requests they deemed detrimental to the ground situation. Silence from division level meant approval.⁵⁵

Despite the apparent advances in the evolution of air to ground control of CAS aircraft, many Marine commanders still showed frustration because their air liaison parties could not directly control the approaching aircraft.⁵⁶ Colonel Vernon E. Megee, Marine commander of the landing force on Okinawa, decreed that granting permission to battalion level air liaison parties to communicate directly with the CAS aircraft would result in simultaneous air strikes, and thus “pandemonium,” and “a grave hazard for all those concerned.”⁵⁷ The Marine commander did not stray from advocating Air Liaison Party

⁵⁴ Mersky, *U.S. Marine Corps Aviation*, 116-117. The first Marine CAS sortie on Okinawa came on 13 April. For the next three weeks, only twenty percent of Marine sorties constituted CAS.

⁵⁵ Crowl and Isely, *U.S. Marines and Amphibious War*, 565-566.

⁵⁶ *Ibid.*, 566.

⁵⁷ Crowl and Isely, *U.S. Marines and Amphibious War*, quoted from 567.

control of aircraft from the regimental level. Megee simply deemed that direct control of aircraft from the battalion level would result in constant confusion.⁵⁸

Although the Marine Corps had made tremendous advances in improving its air to ground CAS control system throughout World War II, many still did not trust the accuracy of bombing and strafing close to front lines. Still, the air-ground team constituted one of the most important aspects for Marine Corps air support in World War II.⁵⁹ In retrospect, the Marine CAS system had gained ample training during battles in the Pacific, which helped to ensure the success of tactical control parties and close support in Korea. After making formidable advances in CAS during World War II, Marine pilots continued to train between wars. Although Marine airmen gained ample CAS practice from sorties in World War II, they continued to train both during and after the conflict, which prepared them for combat in Korea.

⁵⁸ Ibid., 567.

⁵⁹ U.S. Pacific Fleet, Air Support of Pacific Amphibious Operations, Prepared by Air Support Control Units Amphibious Forces, RG 127, National Archives II.

TRAINING

Both during and after World War II, the Marine Corps instilled a rigorous training program for its aviators. Based on the concept of making every Marine a rifleman first, aviators endured the same training as their infantry counterparts. Subsequently, Marine aviators showed a keen awareness of infantry tactics that made them more cognizant of the ground situation, proving essential to implementing effective CAS. In training, the Marines emphasized the importance of air and ground components of the liaison parties. To accomplish this air-ground cohesion, Marine aviators participated in numerous exercises and schools.

In late 1944, at the Amphibious Training Base in Coronado, California, the newly established Air Liaison School prepared Air Liaison Parties for amphibious operations. Nine officers and fourteen enlisted men taught trainees the following: air-ground communications, map reading and aerial photographs, target suitability and bomb loads, field problems, air liaison, support air control activities in past operations, and the field order and overall operations plan.⁶⁰

Air Liaison Party trainees averaged thirty days in training, eighteen in the classroom and the remaining twelve in field exercise. Support Air Control Parties averaged forty-two days at the Air Liaison School, twenty-three days consisting of classroom work, and the remaining nineteen in field exercises.⁶¹ Upon completing exercises at the school, the Air

⁶⁰U.S. Pacific Fleet, Training Command, Amphibious Forces, Resume of Training and Other Activities, Quarter Ending 30 June 1944, RG 127, National Archives II.

⁶¹Ibid. For Air Liaison trainees during this quarter examined, the least amount of training equaled twenty-six days, while the most totaled thirty-seven.

Liaison Parties returned to their respective units for further indoctrination in field problems and utilizing supporting aircraft in an amphibious operation.

Marine aviators attended the Marine Air-Infantry School in Quantico, Virginia to master infantry strategy and tactics, and to improve the air-ground team. Ultimately, the aviators learned and experienced the problems that grunts face on the ground, leading to a mutual respect between the two groups.⁶² Major William Porter, USMC, believed that flying CAS “was more than teamwork with the troops on the ground; it was with full sympathy and understanding of the problems of the rifleman.”⁶³ In their ground training, Marine aviators attacked “enemy” defensive positions loaded with explosives, emulating authentic combat experiences. After training as ground soldiers at the Air-Infantry School, the aviators split into two groups. The first group of aviators flew aircraft while the second acted as the ground element of the air-ground team, directing the planes to the designated target. The two groups of aviators then switched, giving both groups the viewpoint from both the ground and air, proving to the pilots the importance of communication in a CAS strike.⁶⁴

Further indoctrination in the ground element of the air-ground team came from the Naval Amphibious Base in Coronado, California, where Marine aviators learned how to become Forward Air Controllers. For five weeks, prospective Forward Air Controllers studied under Navy, Marine, Army, and Air Force instructors who described how each military unit worked in amphibious assaults. In accordance with teaching the make-up of an amphibious assault, instructors spent most time teaching the preparations involved in setting up the communications between Marine forces at the division and corps level. The hopeful

⁶² Edward P. Stamford, interview, Seoul-Chosin Reservoir, Marine Corps History and Museums Division, March 16, 1951.

⁶³ William T. Porter, interview by Nolan J. Beat, Close Air Support in Korea, Marine Corps History and Museums Division, October 12, 1951.

⁶⁴ Edward P. Stamford, interview, Seoul-Chosin Reservoir.

trainees learned the distinct tasks of the advance elements going ashore, including the air-ground controller, artillery liaison officer, and the naval gunfire officer. Courses in map reading, aerial photography, and various field demonstrations provided the students with sufficient background for becoming a Forward Air Controller. Occasionally, the students made staged amphibious landings themselves.

During the last week at the Naval Amphibious Base, the aviators directed live aircraft in the field. Additional forward controller practice occurred near Camp Pendleton, where two designated tactical control parties dispersed to two different locations near the base. The tactical control parties, each equipped with a forward controller, opposed each other in a simulated combat situation, directing aircraft to designated target areas. Only the ground controllers could direct the strike, and afterwards referees offered suggestions for improvement. During the remaining days of training, the prospective Forward Air Controllers directed Marine aircraft with live ammunition in the target area. Captain Edward P. Stamford, a forward controller in training at the time, contended that the Marine aircraft “gave us a good idea of their capabilities and also the lethal range of the ordnance they carried.”⁶⁵

In 1944, the Airborne Forward Firing Rocket Training and Tactics Manual informed Marines on the attributes of the rocket. Experienced rocket pilots lectured the aviators on how to employ the weapon. After the lectures, each Marine aviator logged eleven flights, totaling 9.4 hours in rocket training. The pilots flew dry runs, single and multiple firing runs, and flights at night, firing at stationary and mobile targets. During rocket training, Marine aviators learned that flattening out of a steep dive - as opposed to holding the same angle - provided the most effective means of providing a successful rocket strike. Thus in addition

⁶⁵ Ibid.

to air-ground liaison practice, Marine aviators also trained in the basics of CAS ordnance implementation.

Between World War II and Korea, Marine pilots often trained aboard carriers, firing live ordnance in support of amphibious assault practices. Marine squadrons spent several weeks aboard carriers, practicing take offs and landings, as well as firing ordnance.⁶⁶ In February 1948, Marine Aircraft Group-12 boarded the *U.S.S. Boxer* in San Francisco for a one-week training session. Twice a day, the Marine squadrons conducted tactical exercises, eventually totaling 442 hours, and 935 landings made, resulting in the qualification of 122 pilots.

Throughout the interwar period, Marine pilots flew both land and carrier-based missions on various bases on the west coast. From October 1949 to May 1950, Marine Corps aircraft participated in eight major training exercises with the Fleet Marine Force. Leading to the Korean War, the 1st Marine Air Wing practiced everything from CAS for amphibious landings to field exercises with air-ground teams. All exercises focused on cohesiveness in the air-ground team by teaching joint planning and logistical coordination, further assisting the air and ground elements to communicate effectively with each other.⁶⁷

In October 1948, during Operation Demon II, the 1st Marine Air Wing provided air support for amphibious landings at San Clemente. During this operation, Marine Aircraft Group-12 exhausted 2,283 rockets, 35 500-pound bombs, and 22 napalm tanks. Marine Aircraft Group-12 established a simulated overseas air base on San Clemente, and flew strikes for mock land and air invasions. On 25 October, Marine aircraft captured the Camp

⁶⁶U.S. Marine Corps, Marine Aircraft Group – 12, A History from 1 July to 10 September 1948, RG 127, National Archives II. In 1948, Marine Fighter Squadron-452 boarded the *U.S.S. Bairoko* and spent three weeks at sea practicing aircraft maneuvers.

⁶⁷CincPacFleet Evaluation Report, Number 1, Volume 4, 558.

Pendleton airstrip, the objective of the exercise.⁶⁸ Overall, three hundred aircraft and thirty thousand men participated in the maneuver.⁶⁹ Exercises of this type proved extremely beneficial for Marine aviators, giving the pilots extended experience in CAS and general aviation tactics.

On 5 November 1948, Marine Aircraft Group-12 joined the First Tank Battalion for air-tank exercises at Camp Pendleton in hopes of giving Forward Air Controllers practice and gauging the effectiveness of Corsair ordnance on tanks. During the exercise, four aircraft embarked on a mission to search and locate six tanks, camouflaged under trees and bushes. Forward Air Controllers communicated directly with Corsairs that scored direct rocket hits on the targets. Subsequently, Marine aviators attempted to improve communication between the ground controller and the attacking aircraft. The Forward Air Controller reported that an AN-ARC-1 aircraft radio installed in the tank significantly improved air-ground communications. For the remaining air-tank exercises, the ground controller had no problems requesting and directing strikes.⁷⁰

To measure the effectiveness of napalm against tanks, Corsairs made low level bombing runs from an altitude of 100 feet or less. Eight out of thirty-two napalm canisters scored direct hits on the tanks. The flames from the napalm burned off the rubber on the tank wheels and melted the lubricants from the outside fittings. The commanding general of Marine Aircraft Group-12 concluded that one still could not measure the exact effectiveness of napalm on tanks. Yet, he did deem the use of napalm worthwhile in impeding tank movements, especially since five hundred pound bombs and rockets proved relatively

⁶⁸U.S. Marine Corps, First Marine Air Wing, Quarterly Supplement to First Marine Air Wing History, Period Covered 1 October to 31 December 1948, RG 127, National Archives II.

⁶⁹U.S. Marine Corps, First Marine Air Wing, Headquarters, Air Support Operations by MAG-12 in Operation Demon II, RG 127, National Archives II.

⁷⁰Ibid.

ineffective in destroying tanks. The five hundred pound bombs with four to five second delay fuses often ricocheted off the tanks and the rockets simply could not penetrate the heavily-armored targets. Thus, Marine Aircraft Group-12 practiced and learned that napalm proved more effective against tanks than other ordnance.⁷¹

Keith Barr McCutcheon became an important advocate for cohesiveness between air and ground communication elements. His air-ground liaison developments during World War II laid groundwork for future CAS and the tactical control parties in Korea. In 1944, while in the Philippines, McCutcheon, operations officer for Marine Aircraft Group-24, educated his aviators in CAS doctrine. After researching previous Marine Corps CAS operations, McCutcheon pinpointed inadequate air-ground coordination as a primary threat to effective close support operations.⁷² McCutcheon promoted the idea that CAS constituted an additional, not alternative, weapon for the infantry. Ultimately, McCutcheon formed a class with thirty-seven lectures, teaching communications, geography, map reading, and the ability to distinguish between friendly and enemy forces. At the end of McCutcheon's training program, Marine pilots assaulted a previously taken Japanese pillbox in the Philippines. McCutcheon's innovative program provided a basis for which the Marines would implement CAS in Korea.⁷³

Training for Marine aviators continued into the Korean War. Onboard ships en route to Korea, squadrons participated in training programs that stressed ordnance capacity and capability. While traveling to Japan for action in Korea, Marine Aircraft Group-33 received lectures focused on CAS doctrine, including detailed analysis of the air-ground control team.

⁷¹Ibid.

⁷² James Anthony Ginther, Jr. "Keith Barr McCutcheon: Integrating Aviation into the United States Marine Corps, 1937-1971" (Ph.D. diss., Texas Tech University, 1999), 43.

⁷³ Ibid., 6.

In preparation for all possible aerial encounters, the pilots continued to learn about offensive and defensive fighter tactics. Lectures and slide shows presented Marine pilots with visual characteristics and capabilities of Russian built fighters. Presentations on terrain and weather in Korea further prepared the pilots for the possibility of conducting a CAS strike under diverse conditions, including mountainous topography and below-freezing temperatures. For background, lecturers offered a history of Korea since 1900, including religion, transportation facilities, and government.⁷⁴

The training syllabus for Marine Air Control Group (MACG)-2 consisted of a four-phase process: indoctrination, individual training, section training, and squadron training. The control group spent the majority of its time learning the various sections of a Marine control group, including Air Defense, Air Support, Close Support Radar, and Airborne Early Warning. The Air Support and Close Support Radar sections both allocated 50 hours for working with actual aircraft in bombing and strafing runs. One control group would endure 537 hours of training before participating in wartime missions. Throughout the Korean War, Marine Air Control Groups continued to train the respective personnel in mock air defense and air support problems.⁷⁵

Indeed, the experiences and training Marine pilots faced during and after World War II prepared them for CAS in Korea. In 1950, during the defense of the Pusan Perimeter, the landing at Inchon and the subsequent takeover of Seoul, and the Chosin Reservoir campaign, Marine air-ground teams played a critical role in employing CAS to the infantry. The

⁷⁴U.S. Marine Corps, Marine Aircraft Group – 33, Special Action Report, 7 September to 9 October 1950, Marine Corps History and Museums Division, Quantico, VA. After hearing dreadful tales of frostbite from the conflict in Korea, the Marine Corps set up cold-weather training camps throughout California at Big Bear, San Jacinto, and Bridgeport.

⁷⁵U.S. Marine Corps, Marine Air Control Group – 2, Historical Report, July to December 1950, Marine Corps History and Museums Division, Quantico, VA. A Marine Air Control Group provides personnel and facilities for direction and coordination of a Marine Air Wing in support of the Fleet Marine Force.

Korean War saw Marine air-ground teams working as Tactical Air Control Parties, which proved a substantial improvement from the already accomplished CAS concept developed in World War II.

THE KOREAN WAR

On 15 August 1945 as the Pacific War approached an end, the United States and the Soviet Union agreed to divide Korea, the former Japanese colony, at the 38th parallel. To the north, the Soviet Union, which declared war on Japan on 8 August, would accept the surrender of Japanese forces, and the United States would do the same south of the 38th parallel. As both countries established themselves in their respective regions of Korea, the United States advocated a democratic government and the Soviet Union pushed for a communist satellite authority, two volatile and unstable coexisting ideals. In 1946, the Soviets placed Kim Il Sung at the head of the communist North Korean government. Concerned over the future of Korea, President Truman referred the matter to the United Nations. Subsequently, the United Nations maintained that the United Nations Temporary Commission on Korea (UNTCOK) would run all elections in Korea. The Soviets refused this offer, but the United States adhered to the United Nation's wishes, resulting in the election of Syngman Rhee as the president of the Republic of Korea (ROK) in May 1948. During the next two years, tension between the two factions gradually increased in which Kim Il Sung, with Soviet assistance, sought to "liberate" South Korea and eliminate American influence.⁷⁶ Although Kim's North Korean forces crossed the 38th parallel on 25 June 1950, generally known as the beginning of the Korean War, skirmishes between the two belligerents began well before the supposed start of the conflict.

Two months after Rhee ascended as ROK president in 1948, one South Korean Army regiment revolted against their superiors that had ordered the troops to suppress the

⁷⁶ Sandler, *The Korean War*, 28.

communist rebellion on the island of Cheju-do. Working with the communists, the South Korean rebels killed 900 people while retreating to the city of Suncheon. Subsequently, ROK forces loyal to Rhee beheaded one of the rebel leaders and displayed the decapitated head in Cheju City.

For the next two years until 25 June 1950, both North and South Koreans resorted to guerrilla tactics in hopes of crushing the other region's political and military influence. In 1949, 3,000 North Koreans crossed the 38th parallel but met formidable South Korean resistance that thwarted the communist insurgence. Later that same year, Rhee organized a counter-offensive to eliminate supposed communist strongholds in South Korea. This process lasted for two years and culminated when Rhee's forces captured Lee Chu Ha and Kim San Yong, two leading North Korean communist leaders, in March 1950.⁷⁷

Indeed, a civil war existed in Korea prior to North Korea's attack on the ROK in June 1950. This conflict between the governments of North and South Korea, backed by two global superpowers at odds with each other, originated when the United States and the Soviet Union split the nation of Korea in half at the 38th parallel. Both Kim Il Sung and Syngman Rhee sought to eradicate the other's influence by use of force, using guerrilla tactics and sometimes committing atrocities such as the events that surrounded the ROK's suppression of South Korean rebels in 1948. Thus, reports of a possible North Korean attack on South Korea in 1950 should have come as no surprise to U.S. military and political officials. As North Korea posed a threat to the ROK in the late 1940s, the United States military underwent drastic changes under President Truman.

Prior to the outbreak of the Korean War in June 1950, the establishment of the United States Air Force forced military planners to question the role of the Marine Corps. As the

⁷⁷ Sandler, *The Korean War*, 37-41.

Cold War with the Soviet Union escalated, the Truman administration favored a military strategy in which Air Force intercontinental bombers could threaten nuclear attacks on the Soviet Union, thus shifting focus from tactical to strategic air support. The need for the conventional Marine amphibious assaults of World War II decreased as military planners envisioned future warfare centered on the employment of strategic nuclear weapons. Moreover, nuclear tests in the United States after World War II reassured the Marine Corps that future amphibious operations would differ greatly from those in the Pacific Theater.⁷⁸ Thus, the Marine Corps faced not only the fate of its air arm, but the existence of the entire branch. A military strategy focused on strategic nuclear air attacks led the Truman administration to question the necessity of a Fleet Marine Force capable of amphibious assaults.

By 1948, the Truman administration's nuclear strategy threatened to hand Marine aviation over to the Air Force. In 1949, the Marine air arm dodged complete disintegration, as Truman decreased the Corps's air squadrons instead of eliminating them. The President reduced the First Marine Division at Camp Pendleton to one regiment and the 1st MAW to just three squadrons.⁷⁹ Indeed, the role of the Marine Corps had diminished after the successful amphibious assaults of World War II. As Marine aviation and the Fleet Marine Force faced a formidable challenger to its existence in the Truman administration, Kim Il Sung ordered the North Korean People's Army to attack South Korea, providing the United States Marine Corps an opportunity to justify its continuance as a substantial fighting force.

On 25 June 1950, the North Korean People's Army crossed the 38th parallel, eliciting action from South Korea and the United States. The next day Syngman Rhee and his South

⁷⁸ Millett, *Semper Fidelis*, 453.

⁷⁹ *Ibid*, 466.

Korean government retreated from its capital city of Seoul en route south to Taejon. Immediately, Air Force planes landed at Kimpo Airfield, near Seoul, to evacuate the remaining American personnel from the capital. By 28 June, while UN forces had begun to retreat to the southeastern port of Pusan, two North Korean divisions had occupied Seoul. On 30 June, President Harry Truman approved the mobilization of American troops to Korea and authorized a naval blockade of North Korea. Marine Corps Commandant Clifton B. Cates had urged Forrest Sherman, Chief of Naval Operations, to inform General Douglas MacArthur that the Marines could offer one infantry regiment to Korea. Yet Sherman did not inform MacArthur of Cates' commitment until 1 July, one day after Truman's decision.⁸⁰ After learning of the request on 3 July, MacArthur contacted the Joint Chiefs of Staff and requested the approval of Cates' offer of one regiment. The Joint Chiefs of Staff approved and on 7 July the First Marine Division readied the First Provisional Marine Brigade, totaling 6,534 men, for shipment to Korea.⁸¹ The First Provisional Marine Brigade, a part of Eighth Army's Task Force Kean at Pusan, consisted of the 5th Marine regiment, the 1st Battalion of the 11th Marine artillery regiment, and Marine Aircraft Group-33.⁸² On 4 August, the First Marine Brigade landed at Pusan and three days later began the attack against North Koreans – the eighth anniversary of the initial Marine assault on Guadalcanal. Brigadier General Edward A. Craig commanded the brigade, with Brigadier General Thomas J. Cushman, a Marine aviator, as his deputy commander. With Cushman, also the commanding officer of Marine Aircraft Group-33, assigned as deputy commander, the First Provisional Marine

⁸⁰ Allan R. Millett, *Semper Fidelis*, 478.

⁸¹ John C. Chapin, *Fire Brigade: U.S. Marines in the Pusan Perimeter*, Marines in the Korean War Commemorative Series (Washington D.C.: Marine Corps Historical Center, 2000), 3.

⁸² MAG-33 was comprised of five squadrons at Pusan: Marine Observation Squadron (VMO) -6, MTACS-2, VMF(N)-513, VMF-214, and VMF-323.

Brigade represented the cohesiveness between air and ground elements that the Marine Corps advocated.⁸³

Going into the Korean War, the United States Marine Corps once more had to prove its worth to military planners. Marine aircraft needed to reveal the advantages of CAS to help keep the military branch in existence. Indeed, during the first year in Korea, Marine aircraft and air-ground teams revealed the necessity of CAS.

The Marine method of CAS stressed rapid response in an effort to support ground troops within the bomblines, often within 2,000 yards of the frontline in Korea. From 3 August to 14 December 1950, the First Marine Air Wing flew 7,690 sorties of which 76 percent comprised CAS, compared to the Air Force's 30 percent. Marine CAS requests, under the direction of forward air controllers did not involve approval from any bureaucratic headquarters such as the Air Force Joint Operations Center (JOC).⁸⁴

In Korea, the Marines featured Tactical Air Control Parties, an alteration of the air liaison parties used in World War II. The Marines assigned a Tactical Air Control Party (thirteen in Korea) to each infantry battalion (9), regiment (3), and division (1). Each party consisted of two Marine aviators and eight enlisted communicators, all of whom possessed the ability to request CAS. Along with the ground controller, the tactical control party included a Tactical Air Controller (TAC) located in an observation aircraft over the frontlines. In the event that the Forward Air Controller could not sufficiently identify a target, he diverted CAS control to the airborne controller. VHF radios connected all three communication elements of the CAS strike: ground and airborne controllers, and strike aircraft. The Tactical Air Control Center (TACC), located in close proximity to infantry

⁸³ Allison, "The Black Sheep Squadron: A Case Study in U.S. Marine Corps' Innovations in Close Air Support," 391-392.

⁸⁴ CincPacFleet Evaluation Report, No.II, Volume2, 604, U.S. Naval Historical Center, Washington D.C.

headquarters, possessed overall control of support aircraft. The Air Support Section of the tactical control center maintained the equipment and personnel needed for CAS, and controlled all aircraft assigned for close support. The Tactical Air Control Center, either afloat or ashore, received air requests from Tactical Air Control Parties and immediately employed available aircraft to the requested target area. The time from the tactical control party's request until the actual strike usually took less than fifteen minutes.⁸⁵

Marines deemed the Forward Air Controller the most significant factor in the success of CAS operations.⁸⁶ More than ninety percent of Marine CAS strikes in Korea involved the forward controller, who constituted a vital element of the tactical control party.⁸⁷ The Navy and Marine Corps believed the ground controller had a significant advantage over airborne controllers, due to the Forward Air Controller's vast knowledge of the overall tactical situation. The ground controller proved more capable, compared to the airborne controller, of designating proper targets due to his knowledge of the tactical situation and his closer proximity to the infantry. The integration of the ground controller and the strike aircraft produced a highly effective procedure for a CAS strike.

Mostly from the battalion level, the forward controller requested CAS through the Tactical Air Request radio net, linked directly to the Tactical Air Control Center. Meanwhile, the battalion's corresponding regiment and division headquarters monitored the request in case the CAS request might endanger troops in their respective areas. Silence from the regiment and division levels constituted approval for the strike. After approval from these units, the tactical control center designated specific aircraft for the mission, and briefed the aviators on the target, including location and description, the specific Tactical Air

⁸⁵ William T. Porter, interview by Nolan J. Beat, Close Air Support in Korea.

⁸⁶ CincPacFleet Evaluation Report, No. I, Volume 4, 558, U.S. Naval Historical Center, Washington D.C.

⁸⁷ CincPacFleet Evaluation Report, No. II, Volume 2, 606.

Control Party to contact, and the frequency on which the forward controller would control the strike. Once in the designated target area, the striking aircraft reached the ground controller on radio, receiving any additional information the flight leader might need to complete the mission. For example, the forward controller might solicit mortar or artillery fire to help identify the target. Once the Forward Air Controller felt comfortable with the ground situation, he directed the aircraft to attack. Upon expending all their ordnance, the forward controller often instructed the aircraft to remain “on station,” primarily to offer additional CAS and also to observe and relay any helpful tactical information to the tactical control center for future strikes. In addition to offering immediate CAS, “on station” Marine aircraft also prevented the enemy from attempting any major attack, which stemmed from the inability of North Korean aircraft to counter United Nations’ air forces that had established air superiority early in the war. If the “on station” aircraft had leftover ammunition, the pilot waited for commands from the air-ground team for another possible strike. In the event that the infantry needed close support at night, the ground troops threw illumination hand grenades that marked the frontlines and assisted the incoming aircraft in distinguishing friendly troops from the enemy. The night support aircraft, with the “grunt” mentality, knew the ground situation and the shape of the terrain. Again, indoctrination in ground warfare helped the Marine aviators assess and adjust to the situation.⁸⁸

Upon receiving the CAS request from the ground controller, a four plane flight team with one airborne controller embarked towards the target. The aircraft attacked in 30 to 45 second intervals, allowing the Forward Air Controller, or sometimes the airborne controller,

⁸⁸ Elton Mueller, interview, Organization and Function of a Marine Tactical Air Control Squadron, Marine Corps History and Museums Division, December 13, 1950 ; Orlo C Paciulli, interview, Yudam-ni to Hungnam, Marine Corps History and Museums Division, February 13, 1951.

to adjust each plane from the previous aircraft's hit. The Tactical Air Controller observed the direction of the smoke from impact and could correct the succeeding aircraft's ordnance employment. In bombing attacks, Marine aircraft flew at a 45 to 60 degree angle, coming in at least 6,000 feet above the ground, and pulling out anywhere from 500 to 1000 feet. For rockets, the aircraft made runs at 35 to 60 degree angles, and at least 4,000 feet, pulling out at 300 feet. In a typical napalm attack, the pilots selected an aiming point about one half mile short of the desired target. The aircraft then proceeded to enter the dive at 3,000 feet, using a 30 to 50 degree angle. The pilot released the napalm immediately after the target passed the nose of the plane, from the aviator's viewpoint in the cockpit. Marine aircraft fired rockets either singly, or in pairs for better accuracy. For strafing runs, aircraft approached the target at a 30 to 40 degree angle, with entry at 4,000 feet. Strafing began when the aircraft came within 1,500 yards of the target, flying at the recommended minimum altitude of 500 feet.⁸⁹ After the aircraft released its ordnance, the tactical control party often kept the pilots "on station" to prepare for another possible attack.⁹⁰

In Korea, the Marine Corps employed the F4U-Corsair as their CAS workhorse. The Corsair debuted in the Solomons during World War II and saw consistent action in the Pacific Theater and ultimately the Korean War. The normal ordnance load for the Corsair consisted of one 500-pound bomb, and eight rockets.⁹¹ At full capacity, the Corsairs carried 1,000 pounds of bombs and 1,160 pounds of rockets.⁹² The major difference in armament came from the machine guns types on the different Corsair types: the F4U-4 carried six .50

⁸⁹ U.S. Marine Corps, Marine Fighter Squadron-323, Report of Operations During the Korean Campaign Between the Periods of 5 July to 3 October 1950, Marine Corps History and Museums Division, Quantico, VA. The recommended altitude of 500 feet did not necessarily mean that all aircraft adhered to that suggestion.

⁹⁰Ibid.

⁹¹ CincPacFleet Evaluation Report, No. I, Volume 3, 491, U.S. Naval Historical Center, Washington D.C.

⁹² CincPacFleet Evaluation Report, No. II, Volume 2, 952.

caliber machine guns and the F4U-4B mounted four .20 calibers. The endurance of the propeller driven aircraft allowed the F4Us to remain “on station” for more than an hour in Korea, contrasted with thirty minutes for the average Air Force aircraft.⁹³ When one F4U conducted a napalm run, the three remaining Corsairs in the strike squadron followed the attack with strafing runs on the target in thirty to forty-five second intervals.⁹⁴

Despite various apparent assets aboard the F4U, Corsairs also had disadvantages. F4U pilots constantly complained about the lack of visibility resulting from the long length of the nose and the bright glow from the engine.⁹⁵ Some airmen complained that the plane’s nose obstruction sometimes forced the pilot to look out the side panel of the cockpit when observing the target.⁹⁶ Yet overall, in the Corsair the Marines found a dependable CAS aircraft.

As for jets in the Korean War, the Marine Corps offered the F9F-Panther, which Marine Fighter Squadron-311 popularized with its landing during the latter part of the Chosin Reservoir campaign. Due to various setbacks with the F9F, the Corsair remained the best CAS aircraft for the Marine Corps. Panthers possessed four .20 millimeter machine guns mounted in the nose, contrasted with the wing-mounted machine guns on the Corsairs. The Marine Corps made two rockets the maximum load on the Panther, due to its already substantial weight. Although the Panther could carry up to six rockets, any more than the normal load of two hindered the jet’s takeoff and landing capability. Due to its low weight-carrying capacity, the F9F did not possess the CAS effectiveness of the Corsair. Moreover,

⁹³ Ibid, 611.

⁹⁴ U.S. Marine Corps, Marine Fighter Squadron 323, Special Action Report, 3 August – 6 September 1950, Marine Corps History and Museums Division, Quantico, VA.

⁹⁵ U.S. Marine Corps, Marine Aircraft Group-12, Special Action Report, 7 September to 9 October 1950, Marine Corps History and Museums Division, Quantico, VA.

⁹⁶ Marine Aircraft Group-33, Special Action Report, 7 September to 9 October 1950.

the Panther could only stay “on station” from thirty to forty minutes. F9F pilots also found it difficult to maneuver the plane in the hilly, mountainous Korean terrain. Thus, Marine and Navy air commanders deemed the F9F more suitable for air defense missions, not CAS.⁹⁷

Within two months after the North Korean assault into South Korea, Marine aircraft and personnel arrived in South Korea and began defending the port city of Pusan. For the duration of 1950, Marine air-ground teams helped infantry units reach their geographic and tactical objectives with incomparable CAS.

At Pusan, Marine aircraft directly supported the First Marine Brigade. Pusan lay in the southeast corner of Korea, with the U.N. perimeter surrounded by the Sea of Japan to the east, the Korean Strait to the south, the Naktong River to the west, and mountainous terrain to the north. The perimeter formed a rectangular area 60 by 90 miles around Pusan. By 3 August, Marine Fighter Squadrons 214 and 323 departed Japan en route to Korean waters. By 1638 that same day, eight Corsairs from Squadron 214 conducted the first Marine air strikes against North Korean forces in Chinju. From 7 to 12 August both squadrons, which had rendezvoused in the Korean Straits, flew 272 sorties in support of the First Provisional Marine Brigade. On 15 August, after a brief period of replenishment, the squadrons jumped back into action flying 310 sorties. Marine Corsairs menaced North Koreans attempting to cross the Naktong River.⁹⁸ By this point of the fighting at Pusan, the Marine fighter squadrons initiated a system whereby one unit remained on station while the other replenished ordnance and fuel aboard the respective carrier.⁹⁹

⁹⁷ CincPacFleet Evaluation Report, No. I, Volume III, 489.

⁹⁸ U.S. Marine Corps, Marine Aircraft Group-33, Summary of Operations, 5 July to 6 September 1950, Marine Corps History and Museums Division, Quantico, VA.

⁹⁹ Andrew Geer, *The New Breed: The Story of U.S. Marines in Korea* (New York: Harper and Brothers, 1952), 94.

By 5 August, the *U.S.S. Sicily* and *U.S.S. Badoeng Strait* had established a direct line of communication with air support personnel.¹⁰⁰ General MacArthur, commander of United Nations forces, believed that Marine pilots proved most efficient if used in conjunction with their ground counterparts.¹⁰¹ Thus, the Air Force Joint Operations Center retained minimal control of Marine aircraft, adhering to the concept that Marine air forces should primarily support Marine infantry.¹⁰² Marine aircraft operated in three major campaigns around Pusan: the drive toward Sachon in early August, the first battle of the Naktong in mid-August, and the second battle near the Naktong in early September. During these engagements, Marine squadrons 214 and 323, aboard the *U.S.S. Sicily* and *U.S.S. Badoeng Strait* respectively, flew from the Tsushima Straits in support of three Marine rifle battalions during daylight hours. The carrier borne aircraft could arrive at the frontlines within minutes and remain on station for four hours.¹⁰³ Just before sunset, any remaining aircraft landed on their respective carrier. The carriers then steamed away from the Korean coast and returned to a predetermined launching point just before first light.¹⁰⁴ If one of the carriers needed replenishing, the other would remain on call, or ready to offer CAS, while the undersupplied ship restocked and reloaded.

On 12 August, the First Marine Brigade disengaged from fighting near Sachon and moved toward the Naktong River, a portion of the perimeter threatened by North Korean

¹⁰⁰ James A. Field, *History of United States Naval Operations: Korea* (Washington D.C.: Department of the Navy, 1962), 130.

¹⁰¹ Richard C. Knott, *Attack from the Sky: Naval Air Operations in the Korean War* (Washington D.C.: Naval Historical Center, 2004), 16-17.

¹⁰² Allan R. Millett, "Korea, 1950-1953," in *Case Studies in the Development of Close Air Support*, ed. Benjamin Franklin Cooling (Washington D.C.: Office of Air Force History, 1990), 367.

¹⁰³ *Ibid.*, 367.

¹⁰⁴ CincPacFleet Evaluation Report, No. I, Volume 13, R5, U.S. Navy Historical Center, Washington D.C.

troops. During the Battle of the Naktong, Marine Night Fighter Squadron - 513 provided night CAS and helped prevent the North Koreans from advancing.¹⁰⁵

Throughout August 1950, the Air Section of the First Provisional Marine Brigade directed Marine CAS aircraft at Pusan. The Air Support Section of the 1st MAW, although not connected to the Air Section, provided the communications link between the air and ground elements of CAS strikes. These two agencies provided a variety of communication lines to implement a CAS strike. The Tactical Air Request net provided communications between the Air Support Section and all tactical control parties. Basically, the Tactical Air Request net organized CAS requests, mission approval, and tactical and administrative information for the Air Support Section and the Tactical Air Control Parties. Marine personnel utilized the Tactical Air Direction net to assign and control CAS aircraft. The Marine air-ground teams used the Tactical Air Direction net to communicate directly with the attacking aircraft. The First Provisional Marine Brigade controlled the Tactical Air Observation net, which maintained liaison between the Air Support Section and the observation aircraft. An administrative net operated by the Air Support Section linked the carriers with 1st Marine Air Wing headquarters in Japan. This net managed requests for specific aircraft armament, air support schedules, and traffic between the Air Support Section and squadron headquarters. These communication elements of a CAS strike proved a vital companion for Marine aircraft.

On 16 August, the Air Section received orders to prepare for an attack the next day. By 2000, the Air Section had established a new command post just west of Yongsan. Meanwhile, the Air Support Section proceeded from Chinahe to Yongsan and instantly set up operations for the attack. Both communication elements set up a direct wire line between the

¹⁰⁵ Charles L. Dockery, "Marine Air Over Korea," *Marine Corps Gazette*, December 1985, 40.

Air Section and the Control Section, three miles behind the command post. By 2200, the Air Section had checked all radio nets and confirmed their readiness.¹⁰⁶ During the attack on 17 August, Marine Corsairs used the radio nets to communicate with ground controllers in the area, knocking out enemy troops and equipment.¹⁰⁷

Battle conditions at Pusan favored Forward Air Controllers alone requesting the CAS strike. In combat at Pusan, attack formations often constituted battalions in column leaving the forward battalion to request CAS as quickly as possible. Thus, battalions could possibly attack in two different directions, leaving the Forward Air Controller on the ground with the best vantage point to request and direct a strike.¹⁰⁸ Due to his close proximity to the battle, the forward controller possessed knowledge of the volatile ground situation that an airborne observer did not.

The primary use of the ground controller for CAS did not paralyze the usefulness of airborne observers. Since the arrival of the First Provisional Marine Brigade to Pusan on 7 August, Tactical Air Controllers remained airborne over the forward elements of the infantry during the entire day, providing reconnaissance to the grunts and assistance to artillery spotters.¹⁰⁹ During their furthest reconnaissance work, airborne observers operated as far as fifteen miles ahead of the forward elements of the First Provisional Marine Brigade, preparing the Marines for what lay ahead.¹¹⁰

On 10 August, due to mountainous terrain the Marine advance from Paedun-ni to Kosong witnessed poor communications between the incoming aircraft and tactical control

¹⁰⁶U.S. Marine Corps, First Provisional Marine Brigade, Air Section, 2 August to 6 September 1950, Marine Corps History and Museums Division, Quantico, VA.

¹⁰⁷ Ibid.

¹⁰⁸ Ibid.

¹⁰⁹ Ibid.

¹¹⁰ Ibid.

parties. The Air Support Section directed aircraft to ground controllers, who then utilized a “squirrel cage advance” - the forward controller of the leading battalion placed himself near the front of the column and kept two Marine aircraft on station, ready to strike at the first sight of enemy activity. Meanwhile, two more aircraft remained nearby to continue the on station support when the initial strike planes had expended all their ordnance. This “squirrel cage advance” helped alleviate the possibility of an enemy ambush.¹¹¹

From 7 August to 6 September, Marine Night Fighter Squadron-513, the third remaining fighter squadron of Marine Aircraft Group-33, flew from Itzauke Air Base, Fukuoka, Kysushu, Japan, in support of the First Marine Brigade at Pusan. During the fighting at Pusan, VMF(N)-513 operated under Fifth Air Force control. For night operations, aircraft flew from 1900 to 0700, each flight consisting of two planes that remained on station for two hours. A typical night sortie involved two planes taking off from Itazuke after intelligence officers from the 49th Bomber Group, Fifth Air Force, briefed the pilots on the ensuing flight – location, ordnance, expected enemy resistance. When arriving within forty miles of Pusan, the two planes contacted the Air Force communications center, which confirmed the ordnance loads of the aircraft. The pilots then proceeded to the designated target area and remained on station for two hours. On station at night, the two aircraft remained together according to a predetermined altitude and distance. Attack altitudes varied according to the terrain and available moonlight. If the lead plane used a flare in an attack, the second aircraft stayed behind the flight leader and immediately struck the target, while the initial strike pilot circled around for another possible run. Upon exhausting the two hours, the aircraft returned to Itazuke. Most VMF(N)-513 pilots that flew during the day did so to familiarize themselves with the terrain. As the pilots of VMF(N)-513 became more

¹¹¹ Ibid.

experienced with night sorties at Pusan, they began to identify enemy artillery flashes and destroy the gun emplacements without the help of Forward Air Controllers.¹¹² Moreover, upon expending their ordnance, night fighter pilots would swoop down near enemy positions, simulating a bombing or strafing run, causing the North Koreans to cease fire.¹¹³ Under Air Force control, VMF(N)-513 also conducted various strategic bombing missions. From 1 to 6 September, VMF(N)-513 conducted 57 sorties, including interdiction and strategic missions far behind enemy lines.¹¹⁴

During its four weeks supporting the UN ground elements near Pusan, Marine Aircraft Group-33 flew a total of 995 CAS sorties, 662 in support of Marine forces, and 333 for Army and South Korean units.¹¹⁵ At Pusan, the Marines upheld the air to ground cohesiveness that they had preached and practiced in the Pacific Theater prior to the Korean War. Marine grunts and aviators continued to build the mutual respect and confidence that the two groups established during their training. Although the Marine Corps maintained its air to ground support system, the Navy - which also advocated Marine-style CAS - had trouble implementing its style of close support when working with Air Force personnel at Pusan. The trouble between the armed services - which arose before the Korean War - in employing air support stemmed from their differing views on the priority of CAS.

¹¹² Geer, *The New Breed*, 96.

¹¹³ *Ibid*, 96.

¹¹⁴ Marine Aircraft Group-33, Summary of Operations, 5 July to 6 September 1950.

¹¹⁵ Allan C. Bevilacqua, "Marine Corps Aviation in the Korean War, the First Year," *Leatherneck*, May 2001, 38.

CONTRASTING CONCEPTS OF CLOSE AIR SUPPORT AT PUSAN

The National Security Act of 1947 established the United States Air Force as a separate armed service, which two years later came under the control of the Department of Defense. The emergence of this new military branch generated an air strategy focused on strategic bombing. The United States Navy held a contrasting view of how to utilize aircraft, believing that carrier-based naval aircraft should primarily provide CAS - “air attacks against hostile targets which are in close proximity to friendly forces and which require detailed integration of each air mission with the fire and movement of those forces.”¹¹⁶ These differing concepts of how to utilize aircraft in war comprised part of the reason for the “revolt of the admirals.”

On 28 March 1949, Louis A. Johnson succeeded James V. Forrestal as Secretary of Defense. A strong advocate of bolstering the Army Air Corps in World War II, Johnson entered the newly formed office with partiality towards the Air Force. In May, Cedric R. Worth, special assistant to the Under Secretary of the Navy, delivered a then anonymous document to Congress contending that Johnson reaped financial benefits from the “serious improprieties” in the Air Force’s construction of the B-36 bomber.¹¹⁷ During the subsequent House Armed Services Committee hearings, a group of naval officers, specifically Admiral Arthur W. Radford, asserted that Johnson proved too partial in improving the Air Force’s strategic bombing capabilities, thus reducing the importance of naval aviation. This “revolt

¹¹⁶ Benjamin Franklin Cooling, *Case Studies in the Development of Close Air Support* (Washington D.C.: Office of Air Force History, 1990), 1.

¹¹⁷ Jeffrey G. Barlow, *Revolt of the Admirals: The Fight for Naval Aviation, 1945-1950* (Washington: Brassey’s, 1998), 1.

of the admirals” set the stage for the interservice air war during the first year of the Korean War.¹¹⁸

The Air Force preferred interdiction and armed reconnaissance bombing – destroying enemy supply lines – over CAS.¹¹⁹ On 3 July, General Hoyt S. Vandenberg, the Air Force Chief of Staff, informed Lieutenant General George E. Stratemeyer, Commander of the Fifth Air Force, that “it is axiomatic that tactical operations on the battlefield cannot be fully effective unless there is a simultaneous interdiction and destruction of sources behind the battlefield.”¹²⁰ From 25 June 1950 to 31 January 1951, the Air Force conducted 117,149 sorties of which 31,735 constituted CAS missions inside the bomblines, or within artillery range.¹²¹ The Air Force collaborated with the Army as the ground element for tactical air support. Once an Army Forward Air Controller requested a CAS strike, the Joint Operations Center– the Air Force’s communications center - directed the designated strike squadron toward the target. Instead of contacting the Army ground controller, the strike aircraft communicated directly with the airborne controllers called Mosquitos – T-6 observation aircraft. Army-Air Force doctrine viewed artillery as the primary weapon for attacking enemy positions within the bomblines. Under the Air Force system, Mosquitos controlled most CAS aircraft. The Air Force possessed Army forward controllers, but the ground controllers did not play the integral role they did in the Navy-Marine system. The Army-Air Force method only initiated integrated fire support – both ground and air strikes –when

¹¹⁸ Ibid., 1-2

¹¹⁹ William T. Porter, interview by Nolan J. Beat, *Close Air Support in Korea*; Michael Lewis, “Lt Gen Ned Almond, USA: A Ground Commander’s Conflicting View with Airmen over CAS Doctrine and Employment” (Master’s Thesis, Maxwell Air Force Base, AL, 1997), 33.

¹²⁰ Futrell, *The United States Air Force in Korea*, 45.

¹²¹ CincPacFleet Evaluation Report, No.II, Volume 2, 603-604. These numbers average out to 29.2% (144 total) of Air Force sorties constituted CAS.

ground elements had clearly marked targets and guaranteed safety from artillery.¹²² CAS requests from Air Force Tactical Air Control Parties went directly to the Joint Operations Center, a joint agency consisting of an Air Force combat operations section and an Army air-ground operations section. The Air Force employed one Tactical Air Control Party – an Army Forward Air Controller and Mosquito Tactical Air Controller – per infantry regiment, contrasted with the Navy-Marine system of one per battalion.¹²³ As such, the Air Force sacrificed personal liaison between air and ground elements.

Overall, the Air Force procedure for requesting and receiving CAS involved various Air Force agencies. Initially, either the Mosquito or the ground controller requested a CAS strike from the Joint Operations Center. The senior air officer of the JOC transferred requests for CAS from the combat operations section to the Air Force Tactical Air Control Center. The Air Force control center operated closely with the JOC, and similar to the Navy-Marine facility, became the main hub for aircraft control. In describing the Joint Operations Center, Major Wade W. Larkin, officer of the Marine Air Support Section in Korea, concluded that “it is readily seen how serious delays can and do develop through the use of this system.”¹²⁴

The Navy deemed the Joint Operations Center too high in the chain of command to carry out effective CAS duties for the naval aircraft.¹²⁵ The JOC, under the administrative control of the Fifth Air Force, contained twelve air officers from the Air Force, Army, and

¹²² Michael Lewis, “Lt Gen Ned Almond USA: A Ground Commander’s Conflicting View with Airmen over CAS Doctrine and Employment” (Master’s thesis, Maxwell Air Force Base, AL, School of Advanced Airpower Studies, 1997), 38.

¹²³ CincPacFleet Evaluation Report, No. I, Volume 3, 229.

¹²⁴ Wade W. Larkin, interviewed by Nolan J. Beat, Close Air Support Control in Korea, Marine Corps History and Museums Division, June 29, 1951.

¹²⁵ CincPacFleet Evaluation Report, No. I, Volume 13, R319.

Navy, all in the same room.¹²⁶ Upon approval from the air officers, the JOC assigned the aircraft and ordnance load for the requested CAS strike. The flight leader then checked in with the Air Liaison Office from the division-level tactical control party who then relayed the selected radio frequency for the strike to the aircraft. Simultaneously, the Air Liaison Office instructed the flight to a specific Tactical Air Control Party member near the target area. The flight then contacted the designated Mosquito Aircraft, which had responsibility for controlling the strike.¹²⁷ The average Air Force strike took place three to four miles from friendly troops, deemed “deep support” by the Navy and Marines who averaged 1,600 yards.¹²⁸ Upon completion of the mission, the flight leader reported results to the Joint Operations Center. Under the Air Force CAS system, the time from the request until the actual strike took forty-five to ninety minutes, which surely frustrated infantry units needing immediate air assistance.¹²⁹ In addition, the Joint Operations Center prioritized air requests, approving CAS strikes they deemed the most important. This resulted in one day delays for the requests at the bottom of the priority list.¹³⁰ Compared to the Navy-Marine method of

¹²⁶ CinPacFleet Evaluation Report, No. II, Volume 2, 509-510. At Desk One sits the Director of Combat Operations Section, representing the Fifth Air Force, receiving all dispatches for Fifth Air Force air operations. This officer supervises the employment of Fifth Air Force aircraft. The senior representative of the air-ground section of the Eighth Army occupies the second desk. This officer plans the received air strike through his G-2 and G-3 representatives. The Naval representative sits at the third desk and organizes the planning, operations, and administrative aspects. This senior Naval officer organizes the entire Naval air effort in Korea in hopes of improving communications between carrier based Navy aircraft and the JOC. Another Navy officer occupies desk four, and possesses a chart that shows the location of all Naval air units in Korea. From this desk, the Naval officer communicates directly with a Tactical Air Command net that links the carrier commanders with the amphibious and eventual ground commander. At desks five and six sits two G-3 duty officers, who receive requests from ground commanders for any needed additional aircraft. A-3 duty officers man desks seven and eight. They had the duty of arranging the employment of the requested additional aircraft and diverting flights from original to secondary targets. The last four desks documented the damage from flights.

¹²⁷ Ibid, 606. more than 95% of AF CAS sorties were controlled by air controllers.

¹²⁸ Ibid, 606.

¹²⁹ Ibid, 606.

¹³⁰ Wade W. Larkin, interviewed by Nolan J. Beat, Close Air Support Control in Korea; Dan C. Holland, John G. Theros, and Herschel G. Connell, interview, Coronado, California to Hungnam, Marine Corps History and Museums Division, January 8, 1954.

CAS, the Joint Operations Center proved inefficient for the prompt response needed by ground troops.¹³¹

Unlike the Navy and Marines, Air Force pilots did not receive proper training for CAS missions. Prior to the outbreak of the Korean War, the Air Force's budget limited flight training exercises.¹³² This resulted in various problems that hindered Air Force strike capabilities in Korea. During their initial air strikes in Korea, Air Force pilots found the trajectory of High Velocity Air Rockets (HVARs) completely different than the projectiles with which they practiced prior to the Korean War. Moreover, the lack of HVAR training before 1950 meant that Air Force pilots received most of their rocket training in actual combat. The minimal training sessions that the Air Force conducted, focused on "interception exercises and counterair missions."¹³³ The aircraft employed by the Air Force also magnified the differences between the two concepts of CAS.

The Air Force emphasized jet aircraft in the Korean War, specifically the F 80 Shooting Star, the oldest operational jet in the Air Force. Designed as an interceptor aircraft, the F-80 carried eight .50-caliber machine guns and mid-wing rocket slots, allowing the jet to hold sixteen HVARs.¹³⁴ The F-80's small fuel capacity constituted one of the jet's problems when utilized as a CAS aircraft. Shooting Stars, with internal fuel, had an operational radius of 100 miles. In addition to the internal fuel, the Air Force could equip the F-80s with two 165-gallon tip tanks on each wing, increasing its range to 225 miles. Upon the necessity for larger quantities of ordnance, two 1,000-pound bombs could replace the wing tip tanks,

¹³¹ Lewis, "Lt Gen Ned Almond USA: A Ground Commander's Conflicting View with Airmen over CAS Doctrine and Employment," 37.

¹³² Futrell, *U.S. Air Force in Korea*, 58.

¹³³ *Ibid.*, 58.

¹³⁴ William T. Y'Blood, *Down in the Weeds: Close Air Support in Korea* (Washington D.C.: Air Force History and Museums Program, 2002), 2.

decreasing the F-80's operational radius to 100miles.¹³⁵ Although the Air Force introduced 265-gallon fuel tanks, increasing its radius to 350 miles, inadequate Korean airfields forced F-80s to launch from Japan.¹³⁶ Yet the Air Force constructed the F-80 as a short-range strike aircraft. Thus, the distance from Japan to Korea and minimal fuel capacity provided the Shooting Stars only ten minutes to conduct the actual strike.¹³⁷ Thus, Air Force Tactical Air Control Parties could not make any adjustments that would possibly reduce the F-80's ten minutes of "on station" time. Moreover, the minimal fuel capacity on the F-80 often resulted in the aircraft's inability to return to its base in Japan.¹³⁸

The F-80 proved most effective at altitudes above 15,000 feet. Thus, flight time under 15,000 feet – most suitable for CAS - further decreased the F-80's fuel capacity. In Korea, low cloud coverage of 1,000 feet forced F-80s to attack targets under the Shooting Star's desired attack level of 15,000 feet.¹³⁹ Ultimately, F-80 pilots effectively employed HVARs by firing at a 30-degree angle at 1,500 feet.¹⁴⁰ HVARs constituted the most effective CAS weapon for Shooting Stars, yet the weapon further reduced the aircraft's range, forcing pilots to abort missions due to lack of fuel.¹⁴¹ Deficiencies in other Air Force aircraft also appeared in the Korean War.

In early July, the Air Force ordered B-29s and F-51s to perform CAS missions. Operating from 10,000 feet, the B-29s often bombed wrong targets, resulting in friendly fire casualties.¹⁴² The F-51 Mustang comprised another option for Air Force CAS. In 1949, Stratemeyer replaced six F-80 squadrons with the F-51. On 23 July 1950, 145 Mustangs

¹³⁵ Futrell, *U.S. Air Force in Korea*, 57.

¹³⁶ Y'Blood, *Down in the Weeds*, 2.

¹³⁷ *Ibid.*, 14.

¹³⁸ Richard C. Knott, *Attack from the Sky*, 12.

¹³⁹ Futrell, *U.S. Air Force in Korea*, 57.

¹⁴⁰ *Ibid.*, 84.

¹⁴¹ Y'Blood, *Down in the Weeds*, 9.

¹⁴² *Ibid.*, 12.

arrived in Japan and immediately began CAS operations. In late June, the increasing need for CAS resulted in expended fuel and napalm tanks – the most effective weapon for CAS in Korea.¹⁴³ Thus, Far East Air Force headquarters in Japan quickly ordered the construction of these needed supplies, resulting in inadequate production including napalm tank openings too large for the fuses. To remedy the situation, Mustang ordnance personnel capped the front holes of the tank where the main fuse existed. The mechanics did not tighten the cap, allowing napalm to filter out and cover the nose of the tank. To employ the ordnance, Air Force pilots had to fire their machine guns in hopes that the resulting flame would ignite the napalm tanks. Yet the speed of the plane often extinguished the flames from the machine guns, resulting in dud napalm strikes. In the case that a napalm tank did not explode upon impact, F-51 pilots would then attempt the daunting task of hitting the grounded weapon with airborne machine gun fire. Overall, the thought of having a napalm tank near flames on the aircraft's wings did not appeal with Mustang pilots.¹⁴⁴

On 8 July, Stratemeyer gave the Fifth Air Force operational control of naval aircraft near Pusan.¹⁴⁵ Ten days later General Douglas MacArthur acknowledged that the Fifth Air Force retained responsibility for supporting the Eighth United States Army in Korea. Stratemeyer responded, ordering that all air strikes would go directly from General Walton Walker, commander of the Eighth Army, to the commanding general of the Fifth Air Force. Yet this command failed to solidify support from the carrier-based naval aircraft of Task Force 77.¹⁴⁶ On 23 July, Stratemeyer supported the idea from Eighth Army headquarters favoring naval CAS in southwestern Korea, where difficulties had increased on the ground.

¹⁴³Wade W. Larkin, interviewed by Nolan J. Beat, Close Air Support Control in Korea.

¹⁴⁴Y'Blood, 10-11.

¹⁴⁵James A. Field, Jr., *History of United States Naval Operations: Korea*, 111.

¹⁴⁶Futrell, *U.S. Air Force in Korea*, 107-108.

Two days later, Air Force officers from the Joint Operations Center at Taegu (Pusan) provided naval officers with call signs and CAS procedures for supporting the Eighth Army's frontlines. On 3 August, after several successful Air Force-Navy integrated support strikes for Walker's forces in southwest Korea, representatives from the two services agreed that naval aircraft would provide CAS under the direction of the Joint Operations Center.¹⁴⁷ Despite the initial successes of CAS strikes in southwest Korea, Air Force coordination of Navy sorties at Pusan proved less than successful.

During the defense of Pusan, navy aircraft worked inefficiently under Air Force control. Problems resulted from the contrasting views of air support, encompassing everything from communications to the employment of adequate CAS aircraft. On 1 September, the JOC requested support from Task Force 77, en route to the Pusan area after flying interdiction strikes near Seoul. The same day, the Joint Operations Center requested immediate CAS for the Second Infantry Division near the Naktong River. The carrier-based naval aircraft, still en route from the Yellow Sea, ran strikes 250 miles from the desired target area. Thus, the swarm of Naval aircraft, already with little fuel from the trek, overwhelmed the Joint Operation Center's communication channels.¹⁴⁸ During a mission in late July, Harvey Lanham, Commander Air Group-5, reported that "with my eight jets were four F-51s, seven Navy ADs, two F-80s, one Air Force AT-6, and eight Navy Corsairs. All of them were yapping for targets from the control plane."¹⁴⁹ Army-Air Force air-ground teams frequently opted for Air Force aircraft to execute CAS missions. Due to the F-80's minimal fuel capacity and time "on station," Air Force controllers directed their own incoming jets to

¹⁴⁷ Ibid., 110.

¹⁴⁸ CincPacFleet Evaluation Report, No. I, Volume 13, R34.

¹⁴⁹ Malcolm W. Cagle, Walter Karig, and Frank A. Manson, *Battle Report: The Korean War* (New York: Rinehart and Company, Inc., 1952), 106.

perform the CAS strikes, diverting the destructive power of the ADs and F4Us to secondary targets.¹⁵⁰ One of the explanations for the Air Force's preference for jets comes from the Naval representative in the Joint Operations Center who claimed that the Fifth Air Force used operational control in an attempt to show the F-80's potential for CAS.¹⁵¹ On 12 August, the Commander of Carrier Division One estimated that the Joint Operations Center utilized only thirty percent of the total CAS capability of Naval aircraft.¹⁵² As the requests increased, so did the amount of aircraft sent to the target area, thus cluttering and overwhelming the Joint Operations Center and Mosquito controllers.¹⁵³

During joint Navy-Air Force strikes, naval aircraft often could not contact the Mosquitos, in which case naval aircraft searched for any operational air controller to attack secondary targets.¹⁵⁴ Yet the Joint Operations Center did not assign secondary targets.¹⁵⁵ On 7 August, eight F4Us and nine ADs from the U.S.S. Philippine Sea set out to strike two enemy tanks. Upon arrival, the Air Force coordinator diverted the navy aircraft from the tanks, opting for F-80s to complete the mission.¹⁵⁶ Three days later, two Corsairs and two AD-Skyraiders, on a CAS mission under Air Force control, did not establish any communications with the designated air controller, forcing the Navy aircraft to strike targets outside the bomblines.¹⁵⁷ From 26 July to 3 September, the Air Force controlled 231 of 480 sorties outside the bomblines, thus contradicting the Navy-Marine method of attacking within artillery range.¹⁵⁸ On 16 August, only one of three naval flights designated for CAS from

¹⁵⁰ CincPacFleet Evaluation Report, No. I, Volume 3, 235.

¹⁵¹ CincPacFleet Evaluation Report, No. I, Volume 13, R268.

¹⁵² Ibid, R135.

¹⁵³ Ibid, R34.

¹⁵⁴ Ibid, R136.

¹⁵⁵ Ibid, R198.

¹⁵⁶ Ibid, R200 ; Field, 141.

¹⁵⁷ Ibid, R201.

¹⁵⁸ CincPacFleet Evaluation Report, No. I, Volume 3, 231.

carrier group-11 actually accomplished its CAS mission. Failure in the two remaining flights stemmed from lack of communication with Mosquitos.¹⁵⁹ On 1 September, three Corsairs from VF (Navy Fighter Squadron) -111 could not contact Mellow Control (the Air Force's Tactical Air Direction Center). After two failed attempts to contact secondary controllers, the flight leader finally established liaison with a Mosquito aircraft in the area. Yet, "Mosquito Mastiff" had already given four Air Force aircraft priority for the strike.¹⁶⁰ Although contact between Navy pilots and Air Force tactical control parties improved during the remainder of August and into September, lackluster communication surely frustrated naval CAS flights. On 1 September, in accordance with the mounting frustration from Air Force control, the commander of Task Force 77 ordered all naval pilots with CAS missions to spend no more than five minutes trying to contact Mosquito controllers.¹⁶¹ On 2 and 3 September, after reaching the five minutes allotted to contact the Mosquitos, Naval aircraft proceeded to attack pre-briefed targets outside the bomblines.¹⁶²

The Navy recognized communication problems with Air Force controllers in late July, but had to adhere to the Fifth Air Force's direct control of naval aircraft. On 5 August, Navy aircraft from the U.S.S. *Valley Forge* arrived at Taegu to perform CAS for the Eighth Army. During these strikes, naval aircraft accompanied Air Force Mosquito controllers in directing CAS strikes, in hopes of relieving the congestion that had mounted during previous JOC-controlled sorties.¹⁶³ Subsequently, both Navy controllers and the attacking aircraft reported improved results from having a naval airborne controller – trained in the Navy-

¹⁵⁹ CincPacFleet Evaluation Report, No. I, Volume 13, R201.

¹⁶⁰ Ibid, R298.

¹⁶¹ Ibid, R32.

¹⁶² Ibid, R32.

¹⁶³ Ibid, R181.

Marine method— helping to coordinate CAS strikes.¹⁶⁴ Despite this improvement, Air Force controllers still chose F-80s over the propeller driven naval aircraft. Mosquito controllers ordered naval aircraft to “stand by” or “stand clear” until the incoming Air Force jets completed the strike.¹⁶⁵ The Navy reported that insufficient communications between the Joint Operations Center and the assigned Carrier Task Force produced ineffective missions.¹⁶⁶

The limited radius of three miles for Joint Operation Center’s radio equipment – first at Taegu and then Pusan – meant that Navy aircraft had to fly within that range to retrieve satisfactory communication. This restricted range forced naval aircraft to lose time “on station,” constantly reporting back to the Joint Operations Center for subsequent CAS assignments. Moreover, the Joint Operations Center had a four-channel VHF radio that proved suitable for Air Force operations, but not for joint Navy-Air Force strikes. The channels became overcrowded, forcing communications to breakdown instantly.¹⁶⁷ On 17 September, four ADs and 3 Corsairs from Carrier Division Two had no contact with their designated Air Force Tactical Air Controller. The tactical control center, which could not view the physical target, directed the strike, forcing the Navy aircraft to rely on latitude and longitude maps and landmarks.¹⁶⁸ Indeed, the nonexistent TACP hindered the Navy’s ability to perform CAS strikes.

The Navy continued to advocate the use of its carrier-based aircraft instead of Japan-based F-80s, believing that Task Force 77’s closer proximity to the battlefield brought more effective CAS. Moreover, the Air Force’s Joint Operations Center hindered the ability of the

¹⁶⁴ Ibid, R185.

¹⁶⁵ Ibid, R185.

¹⁶⁶ Ibid, R192.

¹⁶⁷ Ibid, R192.

¹⁶⁸ Ibid, R187.

Navy to conduct its style of CAS. The commander of the Navy's Seventh Fleet concluded that "no naval officer of sufficient rank and experience was placed at the operations center to evaluate the current requirements for support aircraft and to advise Army and Air Force personnel concerning the capabilities and limitations of the carriers and their aircraft."¹⁶⁹

The bureaucratic JOC at Pusan complicated joint Navy-Air Force CAS missions in Korea. Yet during the same operation, the Marines, without any sizeable Air Force impediment, conducted the Navy-Marine CAS system in a highly effective manner. For the duration of 1950, the Navy conducted most CAS missions with the Marines. Joint Navy-Marine CAS missions resulted in successful operations throughout 1950, specifically during the Inchon-Seoul and Chosin Reservoir campaigns.

¹⁶⁹Carrier Air Group-5, Report of Operations from period 16-31 July 1950, <http://www.history.navy.mil/branches/cvg-5.htm>, R185.

THE INCHON-SEOUL CAMPAIGN

From the onset of the Korean War MacArthur sought a climactic engagement – and a turning point in the war - to recapture the South Korean capital of Seoul, which the North Korean Army had occupied since its June invasion.¹⁷⁰ MacArthur chose Inchon, the port city for Seoul on South Korea’s west coast, as the location for this turning point. A successful landing at Inchon and the recapture of Seoul would eliminate a vital North Korean logistical link to the south. MacArthur hoped that while Marines landed at Inchon, U.N. forces from the Pusan Perimeter could drive north and destroy the North Korean Army with the ultimate goal of linking with the rest of the troops at Seoul. This plan, according to MacArthur, would force the North Korean Army to surrender thus leading to overall victory in Korea. Despite MacArthur’s elaborate and hopeful strategy, U.N. military planners showed some reluctance in the assault due to the volatile tides of Inchon, the upcoming Korean monsoon season, and the possibility of Chinese or Russian intervention. Ultimately, MacArthur convinced the military planners that an assault on Inchon would succeed, and on 8 September President Truman and his advisers accepted the commander’s plan.

Prior to the amphibious landing on 15 September, the Marines assaulted Wolmi-Do, an island linked to Inchon by a 600-yard-long causeway. The island obstructed the invasion force, thus making the capture of Wolmi-Do essential. Inchon planners predicted that 500 North Koreans occupied Wolmi-Do in early September.¹⁷¹ During the five days prior to the landing on Wolmi-Do, Marine carrier aircraft bombed the island, softening the landing for

¹⁷⁰ Millett, *Semper Fidelis*. 485.

¹⁷¹ Edwin H. Simmons, *Over the Seawall: U.S. Marines at Inchon*, Marines in the Korean War Commemorative Series (Washington D.C.: Marine Corps Historical Center, 2000), 19.

the incoming Fleet Marine Force. Marine Fighter Squadron-323 dropped forty-two napalm tanks on the island, leading to the dismantling of key North Korean installations.¹⁷² Marine Corsairs made the last sweep over the island fifteen minutes before the Third Battalion, Fifth Marines, landed on Wolmi-Do at 0633.¹⁷³ Within forty-five minutes, the Marines secured the island and prepared for the Inchon assault.

MacArthur assigned X Corps, composed of the First Marine Division, the Army's Seventh Infantry Division, two South Korean regiments, and the Tactical Air Command under Marine Brigadier General Thomas Cushman, to lead the assault. Major General Edward "Ned" Almond, an advocate of Marine Corps CAS, held overall command of the 71,339 soldiers of X Corps.¹⁷⁴ Almond, a former student at the Army Air Corps Tactical School, assigned CAS priority over interdiction strikes. Thus, upon entering the Inchon operation, Marine aircraft operated under a commanding general who supported cohesive air to ground communication for CAS. After witnessing the performance of aircraft during the Inchon-Seoul campaign, Almond continued to advocate Marine-style CAS into the Chosin Reservoir withdrawal.¹⁷⁵ Indeed, the presence of Almond as X Corps commander helped the Marines employ their style of CAS without any considerable inter-service interference.

Under the command of Major General Field Harris, the 1st Marine Air Wing provided CAS for X Corps through Brigadier General Cushman, the Tactical Air Commander. During Inchon-Seoul operations, Cushman controlled and managed all Marine aircraft. 1st Marine Air Wing Headquarters remained at Itami and offered administrative and logistical help to

¹⁷² U.S. Marine Corps, Marine Fighter Squadron-214, Special Action Report, 7 September to 9 October 1950, Marine Corps History and Museums Division, Quantico, VA.

¹⁷³ Curtis A. Utz, *Assault from the Sea: The Amphibious Landing at Inchon* (Washington D.C.: Naval Historical Center, 2000), 29.

¹⁷⁴ Joseph H. Alexander, *Fleet Operations in a Mobile War*, (Washington D.C.: Naval Historical Center, 2001), 11.

¹⁷⁵ Millett, "Korea, 1950-1953," in *Case Studies in the Development of Close Air Support*, 370.

United Nations forces. Throughout the Inchon-Seoul campaign, intelligence officers described the frontline situations to X Corps Headquarters, allowing flight leaders to accurately locate and differentiate friendly and enemy forces.¹⁷⁶

On D-Day at Inchon, Cushman and the Tactical Air Control Center personnel established themselves as a mobile communications hub onboard the *U.S.S. George Clymer*. These communication elements, while not exercising direct control over aircraft during the assault phase, monitored the nets and stayed cognizant of the developing air situation. Once ashore, the tactical control center, based at Kimpo, received requests and in turn designated specific planes and ordnance amounts to the Tactical Air Direction Center, established by Marine Tactical Air Control Squadron-2. The Tactical Air Direction Center, with ten available radio channels, then directed the orbiting aircraft to report to the designated tactical control party, in which the forward controller usually controlled the strike. In all, the First Marine Division offered twenty Tactical Air Control Parties for the Inchon-Seoul campaign, which translates to at least one Forward Air Controller for each infantry battalion. Nine tactical control parties, both Air Force and Marine, accompanied the Seventh Infantry Division ashore.¹⁷⁷

Shortly after landing at Inchon, Marine Captain Edward P. Stamford, a FAC attached to the Seventh Infantry Division, requested his first CAS strike on a North Korean Observation Post. The ensuing attack by Marine aircraft easily annihilated the North Korean position with rocket and machine gun fire. The Army troops in Stamford's unit (1st Battalion, 32nd Infantry Regiment) had never witnessed Marine-style CAS. Throughout his tenure as a Forward Air Controller attached to an Army unit, the constant "on station"

¹⁷⁶ Marine Aircraft Group-33, Special Action Report, 7 September to 9 October 1950.

¹⁷⁷ Millett, "Korea, 1950-1953," in *Case Studies in the Development of Close Air Support*, 370.

availability of Marine aircraft and the direct communication between the air and ground elements compelled Stamford's troops to watch the strikes in amazement.¹⁷⁸ In fifty-seven days, Marine aircraft flew 1,024 sorties in support of the respective Army division. The Army unit reported zero casualties from Marine CAS, which sometimes came within 200 yards of the frontline troops.¹⁷⁹

Once all Tactical Air Control Parties landed ashore by 18 September, they immediately began controlling CAS sorties.¹⁸⁰ Two days after the Inchon landing, Captain Jack Kelley of Marine Fighter Squadron-323 contacted "Cedarbird 14," call sign for a Marine Forward Air Controller, constituting the first CAS strike of the campaign under the direction of a tactical control party.

On 18 September, the Tactical Air Commander debarked from the *U.S.S. George Clymer* to perform reconnaissance on Kimpo Air Base, the main airstrip seven miles west of Seoul and a strategic location for land-based aircraft to reach the capital. Over the next three days, the Marines captured Kimpo and Cushman had received control of all aircraft. By this point, Marine Fighter Squadrons 312 and 212 along with Night Squadron-542 would fly from Kimpo, and squadrons 214 and 323 continued to operate from their offshore carriers. Until the Fifth Air Force took control of Kimpo aircraft on 8 October, Cushman would direct 3,182 sorties of which 1,103 constituted CAS.¹⁸¹

Once Cushman received a CAS request from a forward controller, he contacted one of the Marine air groups and told the respective commander the exact number of aircraft and

¹⁷⁸Edward P. Stamford, interview, Seoul-Chosin Reservoir.

¹⁷⁹ Joseph H. Alexander, *Battle of the Barricades: U.S. Marines in the Recapture of Seoul*, Marines in the Korean War Commemorative Series, (Washington D.C.: Marine Corps Historical Center, 2000), 17.

¹⁸⁰ Marine Fighter Squadron-323, Special Action Report, 7 September to 9 October 1950.

¹⁸¹ U.S. Marine Corps, First Marine Air Wing, Special Action Report, 8 September to 9 October 1950, Marine Corps History and Museums Division, Quantico, VA. 805 deep air support sorties make up the second most sorties after CAS.

ordnance load for the upcoming strike. Upon receiving a CAS assignment, the air group's headquarters briefed the Marine pilots on the location of friendly and enemy frontlines, the location of the bomblines, weather, and communication instructions such as the call sign of the assigned Forward Air Controller.¹⁸² Once airborne, the flight leader contacted the Tactical Air Direction Center, which connected the aircraft with the air-ground team. From this point, the ground controller held direct control of the attacking aircraft.

As the First Marine Division roared ashore on 15 September, shell casings from Corsair strafing runs littered the troops in the approaching LCVPs (Landing Craft, Vehicle, and Personnel).¹⁸³ Marine aircraft made constant strafing runs in front of the landing force, diminishing NKPA resistance. After struggles on Red Beach, the Fleet Marine Force had accomplished a successful amphibious landing, seizing Inchon by nightfall and establishing the opening phases of recapturing Seoul.

During the entire Inchon-Seoul campaign, Marine aircraft constituted the main source of CAS for the infantry. As X Corps made its way to Seoul, Marine Corsairs from Marine Fighter Squadron-214 destroyed North Korean T-34 tanks – from the Soviet Union – preparing to dissect the advancing First and Fifth Marine columns. The aircraft dropped six five-hundred pound bombs and two napalm tanks. One North Korean tank engulfed in flames. Another had its treads blown off, and the third suffered a bad fluid leak, making it immobile. After the first flight expended all its ordnance, eight Corsairs reinforced the original striking aircraft and remained “on station” until their rockets and napalm destroyed

¹⁸² Marine Aircraft Group-33, Special Action Report, 7 September to 9 October 1950.

¹⁸³ Utz, *Assault from the Sea*, 33.

the remaining tanks.¹⁸⁴ The Marine strikes allowed the two Marine regiments to advance just east of Inchon, closer to the objective of Seoul.¹⁸⁵

One of the battalion forward controllers with the Seventh Marines requested Corsairs with napalm, .20 millimeter machine guns, and rockets to take out approaching NKPA tanks. Upon receiving approval of the strike, the Tactical Air Direction Center had four Corsairs report to the Forward Air Controller. In communication with the flight leader, the forward controller provided the coordinates of the tanks. Due to high winds and dusty roads, the Corsairs could not accurately spot the targets. Yet the ability of Corsairs to remain “on station” allowed the Marine pilots to strafe other North Korean vehicles – secondary CAS targets - attempting to cross the Han River. Although the Corsairs did not attack the initial target, their “on station” capability allowed the aircraft to strike other enemy vehicles, further supporting American ground troops.¹⁸⁶

On 19 September, when X Corps approached the outskirts of Seoul, the Fifth Marines had just crossed the Han River, north of the capital. The First Marines, which had engaged the NKPA at Yongdungpo, threatened from the south. In support of Colonel Lewis “Chesty” Puller’s First Marines, squadrons 212 and 542 arrived overhead for CAS. On 22 September, the Marines assaulted Seoul and ultimately recaptured the capital in six days.¹⁸⁷ Within those six days, the First Marines engaged in house-to-house fighting in the southwest corner of the city, and the Seventh Marines covered the north to prevent enemy reinforcements. During this time, Marine Fighter Squadron-214 offered five Corsairs “on station” every two hours.¹⁸⁸

¹⁸⁴ Andrew Geer, *The New Breed*, 128. ; KW #12, Marine Fighter Squadron-214, Special Action Report, 7 September to 9 October 1950.

¹⁸⁵ Utz, *Assault from the Sea*, 43.

¹⁸⁶ Dan C. Holland, John G. Theros, and Herschel G. Connell, interview, Coronado, California to Hungnam.

¹⁸⁷ Utz, *Assault from the Sea*, 46.

¹⁸⁸ Field, *U.S. Naval Operations: Korea*, 215.

On 24 September, Marine Aircraft Group-33 conducted 46 CAS sorties, all controlled by Forward Air Controllers.¹⁸⁹ Flying from Kimpo Airfield, Marine squadron 312 furnished CAS through the direction of three different forward controllers. Tactical observers accompanied the squadron's flights, assisting the ground controller in spotting enemy targets.¹⁹⁰

D Company, Seventh Marines, experienced highly effective CAS strikes from Marine aircraft in their drive to Seoul. On one afternoon, the Marine company engaged in a firefight with a North Korean of equivalent size, positioned atop a 400-foot hill. Initially, Dog Company requested artillery to knock off the North Koreans, but upon learning that the enemy began retreating from the hill, the Forward Air Controller requested air support. Before the initial request for artillery, the forward controller had ordered four Corsairs from Marine Fighter Squadron-323 to remain airborne about two miles north of the hill in preparation for a surprise attack. Upon receiving the request, the Corsairs immediately engaged the retreating North Koreans, allowing D Company to seize the hill.¹⁹¹

Still under the control of the 49th Bomber Group of the Fifth Air Force, Marine Night Fighter Squadron-513 continued to fly from Itazuke, Japan during the Inchon-Seoul campaign. Thus, the Marine aircraft reported to ground control Mellow, the Air Force's communications center at Pusan. Mellow then directed the night aircraft to contact an Air Force Mosquito, which often passed control to FACs.¹⁹² VMF(N)-513 aircraft provided most

¹⁸⁹ Marine Aircraft Group-33, Special Action Report, 7 September to 9 October 1950.

¹⁹⁰ U.S. Marine Corps, Marine Fighter Squadron-312, Semi-Annual Historical Report, September 1950, Marine Corps History and Museums Division, Quantico, VA.

¹⁹¹ Dan C. Holland, John G. Theros, and Herschel G. Connell, interview, Coronado, California to Hungnam.

¹⁹² Marine Fighter Squadron-513, Special Action Report, 7 September to 9 October 1950.

of the air support during the day, as the latest CAS strike during the campaign came at 1815.¹⁹³ Specifically, the squadron compiled 572.7 night hours and 668.9 during the day.¹⁹⁴

Naval aircraft also participated in CAS for the X Corps invasion of Seoul. On 20 September, aircraft from the U.S.S. *Valley Forge* contacted a Marine Forward Air Controller that had requested CAS. The Corsairs from Navy Squadron-54 dropped 500-pound bombs on enemy troops that the ground controller failed to spot. After expending all bombs, the Corsairs dumped their remaining rockets and 100-pound bombs, completely demolishing the village that harbored the enemy troops.¹⁹⁵ Morgan Brainard, a Marine in X Corps, witnessed an extraordinary CAS mission flown by a Navy Corsair. According to Brainard, the Corsair approached the target at tree level, close enough to where the infantry could vividly see the pilots. The F4Us fired several rockets and .20 millimeter machine guns at the North Koreans. After the “thump” from 500-pound bombs, the Marines, mesmerized by the striking capability of the aircraft, emerged from their foxholes to get a better view. The strafing run by the Corsairs forced the North Koreans to leave and allowed the Marines to move forward.¹⁹⁶

In analyzing Marine operations in September and early October, the 1st Marine Air Wing acknowledged that Marine aircraft “as a weapon is not a hit or miss proposition and its coordination with the infantry through the ground controller is lethal. Many targets were so situated that air strikes presented the only method of attack.”¹⁹⁷ The success of the amphibious operation at Inchon and the ensuing recapture of Seoul reemphasized the need

¹⁹³ Ibid.

¹⁹⁴ Ibid.

¹⁹⁵ Malcolm W. Cagle, Walter Karig, and Frank A. Manson, *Battle Report*, 264-265.

¹⁹⁶ Morgan Brainard, *Men in Low Cut Shoes: A Marine Rifle Company in Korea, 1950-1951*, (Great Neck, NY: Todd & Honeywell, Inc., 1986), 52-53.

¹⁹⁷ First Marine Air Wing, Special Action Report, 7 September to 9 October 1950.

for the Fleet Marine Force and tactical air support, a strategy that the Truman administration held in doubt before the Korean War. Yet the Marine Corps still added to its already established and successful tactical air support strategy during the Chosin Reservoir campaign. The X Corps evacuation from the Chosin Reservoir in November and December would culminate into a CAS spectacle unequalled at this respective point in Marine Corps history.

THE CHOSIN RESERVOIR

After securing Seoul, MacArthur commanded X Corps to venture north of the 38th parallel. On 25 October, the First Marine Division landed at Wonsan, on the west coast of North Korea about eighty miles north of the 38th parallel. Realizing the importance of CAS, the Marine Corps added a Forward Air Controller to each Tactical Air Control Party prior to the landing at Wonsan, a plan that remained for the Chosin Reservoir campaign.¹⁹⁸

Meanwhile, Marine Aircraft Group-12 made its way from Kimpo airfield to an airstrip near Wonsan. MacArthur had hoped that X Corps could drive across North Korea, rendezvous with the Eighth Army at the North Korean capital of Pyongyang, and ultimately proceed towards the Yalu River (the border of North Korea and China). Units of the First Marine Division soon spread out west and north of Wonsan, while South Korean divisions moved to make contact with the Eighth Army near Pyongyang.

In early November, Almond ordered the Seventh Marines to relieve South Korean units near Hungnam and Hamhung, on the northeast coast of North Korea. After reaching Hungnam, the Seventh Marines advanced 78 miles northwest to the Chosin Reservoir.¹⁹⁹ On 2 November, en route to the Chosin Reservoir, the Marines bumped into the 124th Division of the People's Liberation Army (PLA) of China at Sudong. The PLA units eventually fled the battle after five days, but not before Almond decided to transport the rest of the First Marine Division to Hamhung. As Marine personnel began arriving at the North Korean port cities, Almond ordered X Corps troops to push north towards the Yalu.

¹⁹⁸ Keith Kopets, "Withdrawal from the Chosin Reservoir," *Marine Corps Gazette*, November 2000, 79.

¹⁹⁹ Millett, *Semper Fidelis*, 491.

By 26 November, the Fifth, Seventh, and Eleventh Marine regiments occupied the west side of the reservoir at Yudam-ni, with the Army's Seventh Infantry Division to the east. Chesty Puller's First Marines occupied Hagaru-ri, fourteen miles south of Yudam-ni, along the Main Supply Route (MSR) to Hungnam. On the night of 27 November, ten Chinese divisions from the PLA's Ninth Army Group attacked X Corps units from the north, west, and south of the Chosin Reservoir.²⁰⁰ Just prior to the Chinese offensive, Major General Field Harris, Commanding Officer of the 1st Marine Air Wing, had ordered Marine aircraft to operate from Yonpo Airfield just south of Hamhung. This provided an enormous advantage for X Corps units, placing Marine aircraft closer to the infantry near the Chosin Reservoir. Similar to the capture of Henderson Field on Guadalcanal, the acquisition of Yonpo placed CAS aircraft closer to the battlefield than the carriers offshore. As of late November, Marine Fighter Squadron-323, flying from the U.S.S. *Badoeng Strait*, constituted the only Marine squadron operating from a carrier.

On 28 November, MacArthur gave the 1st Marine Air Wing the sole mission of supporting X Corps' drive south, with Navy aircraft from Task Force 77 offering additional support.²⁰¹ More than 200 Marine and Navy aircraft per day, in average flights of four, provided relentless support for X Corps' seventy-eight mile retreat south from the Chosin Reservoir, which began on 1 December.²⁰² During the withdrawal from the Chosin Reservoir, Marine and Navy aircraft constantly appeared over the entire X Corps column, "on station" and ready to provide CAS when needed.²⁰³ On 29 November alone, the 1st

²⁰⁰ Ibid., 493. Millett estimates that 100,000 Chinese constituted the ten PLA divisions.

²⁰¹ John P. Condon, *The Marine Air-Ground Team at the Chosin Reservoir*, Joint Force Quarterly, Spring-Summer 2001.

²⁰² CincPacFleet Evaluation Report, No. II, Volume 2, 469.

²⁰³ Cagle, Karig, and Manson, *Battle Report*, 420.

Marine Air Wing conducted 132 CAS sorties for X Corps ground troops.²⁰⁴ General Oliver P. Smith spoke with Major General Field Harris, requesting that Marine aircraft maintain complete CAS control during the withdrawal south.²⁰⁵ “The only thing we don’t want,” Smith urged, “is the Air Force mixed up in this; we don’t want to get involved with them because they don’t have our control system.”²⁰⁶ Indeed, without Air Force interference, Marine CAS in the Chosin Reservoir campaign reached “its highest effectiveness, a degree of air-ground co-operation which will stand as a classic.”²⁰⁷

Upon learning that X Corps planned to retreat down the Main Supply Route, south to the port of Hungnam, Forward Air Controllers quickly constructed an innovative and valuable air-ground coordination system for CAS. Along with the forward controllers from the Seventh Marines at the front, the Fifth Marines positioned ground controllers behind the main column - which ultimately extended six miles - to utilize aircraft for rearguard delaying action.²⁰⁸ Moving south, one company of the Seventh Marines engaged Chinese troops on a hill alongside the main route. After tossing grenades with unsuccessful results, a Forward Air Controller called for assistance from Corsairs. F4Us instantly attacked the Chinese with napalm, rockets, and .20 millimeter machine guns, keeping the enemy from advancing over the hill - typical terrain along the MSR. Ultimately, the Chinese retreated north, a testament to the devastating CAS from the Corsairs. Four miles south of Yudam-ni, three Chinese regiments overwhelmed the Marine column, constantly swarming over the hilly terrain. A Marine ground controller called in four Navy AD-Skyraiders and eight F4Us which remained

²⁰⁴ U.S. Marine Corps, First Marine Air Wing, Historical Diary, November 1950, Marine Corps History and Museums Division, Quantico, VA.

²⁰⁵ Interview with General Oliver P. Smith, Interview by Benis M. Frank, U.S. Marine Corps Historical Division, 9 and 11-12 June 1969.

²⁰⁶ Ibid.

²⁰⁷ CincPacFleet Evaluation Report, No. II, Volume 2, 469.

²⁰⁸ Cagle, Karig, and Manson, *Battle Report*, 423

“on station” for forty-five minutes, thwarting the three Chinese regiments with napalm and machine gun fire. As the Third Battalion, Fifth Marines approached a group of Chinese, Marine Corsairs “on station” flew directly in front of the unit, dropping napalm on the entrenched enemy. The Marine unit moved so closely with the air strike that the leading elements of the battalion bayoneted Chinese in foxholes, in the process of finding cover from the threat of the “on station” aircraft.²⁰⁹

As the Marines moved south, the Forward Air Controllers established a bomblines 2,000 yards from the base of the road. Forward controllers directed any strike within the designated 2,000 yards, making targets outside the bomblines “free game” for “on station” aircraft. Forward Air Controllers directly controlled the designated aircraft, giving the respective unit’s position and the general target location in relation to the infantry. For example, the ground controller might say “12:00 o’clock to my position, 150 yards, is the general target area.” The Forward Air Controller then informed the pilot of the preferred dive angle at which the aircraft should attack the designated target.²¹⁰ During the Marines’ stay at Hagaru-ri until 6 December, the 1st Marine Air Wing provided 100 sorties per day from Yonpo, while the seaborne Corsairs of VMF-323 offered an additional 30.²¹¹

In spite of the limited use of Tactical Air Controllers during the Chosin Reservoir campaign, the Marines still used the airborne observers to their advantage.²¹² The mountainous terrain around the Main Supply Route often obstructed the view of ground controllers, forcing the Marines to employ airborne controllers on both sides of the

²⁰⁹Dan C. Holland, John G. Theros, and Herschel G. Connell, interview, Coronado, California to Hungnam. The interviewees did not offer a specific squadron for the Corsair attacks.

²¹⁰ Ibid

²¹¹ Allison, “The Black Sheep Squadron: A Case Study in U.S. Marine Corps’ Innovations in Close Air Support,” 591.

²¹² U.S. Marine Corps, Marine Aircraft Group-12, Special Action Report, 10 October to 15 December 1950, Marine Corps History and Museums Division, Quantico, VA.

corridor.²¹³ Moreover, the existence of constant “on station” aircraft exhausted Forward Air Controllers’ radio nets. Air controllers would relieve the busy ground controllers and coordinate CAS strikes. Tactical Air Controllers did hold an advantage over their ground counterparts - with an aerial view of the battlefield, the airborne controllers could simultaneously direct three attacks of as many as thirty-two aircraft.²¹⁴ The Tactical Air Controllers directed CAS aircraft on targets that their ground counterparts could not adequately locate.

Specifically during the eleven mile trek from Hagaru-ri to Koto-ri, the TACs assisted the retreating Marine column. After moving 2,000 yards, the column encountered Chinese automatic weapons fire from the left flank. The Forward Air Controller from Second Battalion, Fifth Marines, at the head of the column, gave an airborne controller coordinates for a CAS strike. The Tactical Air Controller relayed the information to three groups of eight Corsairs. The flights, coming in from 8,000, 9,000, and 10,000 feet, all communicated directly with the airborne controller who then directed the Corsairs to strike. Subsequently, the aircraft destroyed targets 75 to 100 yards from the main road. Navy and Marine aircraft continued to use the Marine method of CAS, as the column moved toward Koto-ri and ultimately Hungnam. During the retreat south, Marine aircraft also assisted the Army element of X Corps – the Seventh Infantry Division.²¹⁵

In late November, Captain Edward P. Stamford, Forward Air Controller for the Seventh Infantry Division on the east side of the reservoir, requested CAS for a group of 400 Chinese troops. Twenty minutes later, four Corsairs strafed the enemy with “devastating

²¹³ Cagle and Manson, *The Sea War in Korea*, Chapter 6: “The Breakout Begins.”

²¹⁴ Marine Aircraft Group-12, Special Action Report, 10 October to 15 December 1950.

²¹⁵ Ibid.

results.”²¹⁶ One day later during the withdrawal to Hagaru-ri, Marine aircraft “on station” prevented the enemy from approaching the retreating Seventh Infantry Division. Marine aircraft often used napalm to destroy Chinese gun emplacements within 500 yards of the Seventh Division on its way to Hagaru-ri.²¹⁷ Members of the Army Division commented that they had never witnessed such effective close support and would “kiss the first Marine aviator that they saw after they got out of there.”²¹⁸ Brigadier General Homer W. Kiefer, Seventh Infantry Division, praised Marine aircraft for supplying CAS within 200 yards of the column without inflicting friendly casualties.²¹⁹ Kiefer contributes successful Marine CAS “to the fact that adequate control was available with front line units.”²²⁰ Kiefer also alluded that “the Marine system of control, in my estimation, approaches the ideal and I firmly believe that a similar system should be adopted as standard for Army Divisions.”²²¹

As of 1 December, the Air Support Section at Hagaru-ri controlled all aircraft flying CAS for the First Marine Division. On 5 December, the Air Support Section of Marine Tactical Air Control Squadron-2 reported difficulty in controlling the copious amounts of CAS requests. To alleviate the control problem, the Air Support Section developed a plan to employ an Airborne Air Support Control Center aboard an R5D.²²²

While airborne over the frontlines, the R5D aircraft had the capability to operate four radio nets: the Tactical Air Command net, the Tactical Air Request net, the Reporting In and Out net, and the Tactical Air Direction net.²²³ In addition, the airborne control center also

²¹⁶ Edward P. Stamford, interview, Seoul-Chosin Reservoir.

²¹⁷ Ibid.

²¹⁸ Ibid

²¹⁹ CincPacFleet Evaluation Report, No. II, Volume 2, 470

²²⁰ Ibid, 470

²²¹ Ibid, 470

²²² U.S. Marine Corps, Marine Tactical Air Control Squadron-2, Historical Report, 1 July to 31 December 1950, Marine Corps History and Museums Division, Quantico, VA. An R5D is also known as a C-54.

²²³ Ibid.

carried one intelligence officer, two senior air controllers, four air support controllers, two air defense controllers, and one electronics officer.²²⁴ In short, this conglomeration of various radio nets and communication personnel brought vital elements of the Marine air-ground team to one airborne location, rather than scattered around the battlefield.

From 6 to 11 December, the R5D remained “on station” from dawn to dusk, controlling all CAS aircraft in support of the retreating Marines.²²⁵ At night, Marine aircraft communicated with the Air Support Section – which acted as a Tactical Air Control Party - located jeeps with the First Marine Division convoy. The first day of the R5D’s existence, it managed 10 CAS missions requested from tactical control parties of the Fifth and Seventh Marines.²²⁶ Five days after its implementation, the airborne control center’s tenure ended when the Air Support Section arrived at Yonpo, and the Air Defense Section took control of all CAS aircraft. The Air Defense Section continued to control CAS aircraft until 15 December, one day before the X Corps evacuation from Hungnam. Although the Marines utilized the airborne control center for just six days, the R5D proved a tremendous asset for both Marine air and ground units.²²⁷ During its six day tenure, the R5D controlled 869 aircraft on 211 missions.²²⁸

Although the Navy performed fewer CAS missions than the 1st Marine Air Wing, naval aircraft contributed significantly to the X Corps drive south. The bulk of naval CAS came on 3 December during the passage of Toktong Pass when Task Force 77 provided 80 aircraft for CAS from a total of 197.²²⁹ On 4 December, naval aircraft from U.S.S. *Leyte*

²²⁴ Ibid. The Airborne Control Center acted as a Tactical Air Direction Center.

²²⁵ Ibid.

²²⁶ Marine Aircraft Group-12, Special Action Report, 10 October to 15 December.

²²⁷ Marine Tactical Air Control Squadron-2, Historical Report, 1 July to 31 December 1950.

²²⁸ Ibid.

²²⁹ Field, *U.S. Naval Operations: Korea*, 278

decimated an estimated one thousand Chinese troops towards the rear of X Corps near the reservoir.²³⁰ One day earlier, after performing interdiction strikes with the Air Force in North Korea, General Partridge ordered Task Force 77 to fly primarily CAS in the X Corps area of operations. On 4 December, Task Force 77 flew 125 sorties, more than half of the day's total of 216, with all naval aircraft communicating with Marine ground controllers.²³¹ "During the long reaches of the night and in the snow storms," General O.P. Smith contended, "many a Marine prayed for the coming of the day or clearing weather when he knew he would again hear the welcome roar of your planes as they dealt out destruction to the enemy."²³²

Until X Corps' departure from Hungnam, the 1st Marine Air Wing provided constant CAS. From the landing at Wonsan until the end of the Chosin withdrawal, Marine Tactical Air Control Parties helped to control 3,703 sorties of which 599 constituted CAS. 468 CAS sorties supported the First Marine Division, and 56 to the Seventh Infantry Division.²³³ On 17 December, the 1st Marine Air Wing close operations on Yonpo, whereupon the Marine air-ground teams took a one month break from duty in Itami, Japan. Marine squadrons 212, 214, 323, boarded their respective carriers, and the newly arrived 311, a unit made of F9F-Panthers. By mid-January, the 1st Marine Air Wing, under Air Force control, began conducting air interdiction missions, specifically during Operation Killer, when Marine aircraft targeted Chinese transport lines.²³⁴ Marine aircraft would provide CAS to U.N.

²³⁰ Ibid, 279

²³¹ Ibid, 282

²³² Marine Air Group-12, Special Action Report, 10 October to 15 December 1950

²³³ John P. Condon, *Corsairs to Panthers: U.S. Marine Aviation in Korea*, Marines in the Korean War Commemorative Series (Washington D.C.: Marine Corps Historical Center, 2002), 34.

²³⁴ Montross and Canzona, *U.S. Marine Operations in Korea, 1950-1953*. vol. 5, *Operations in West Korea* (Washington D.C.: USMC Historical Branch, 1957), 489.

forces as well, just not to the extent that appeared in the preceding battles, specifically the Chosin Reservoir campaign.

Although Marine aircraft employed CAS after Chosin, missions under Fifth Air Force control, and thus the Joint Operations Center, strayed from the close support concept that had progressed during the operations of 1950.²³⁵ Using the Mosquito system instead of Tactical Air Control Parties, Marine aircraft offered CAS three to four miles from frontlines.²³⁶ The Marine Corps urged military planners to keep the 1st Marine Air Wing as close as possible to the ground situation to reduce the time from request to strike.²³⁷ Yet under Air Force control, response times ranged from several hours to no strike at all.²³⁸ By 1952, the Fifth Air Force had comprised the main source of air support for U.N. forces in Korea, mostly the Eighth Army.²³⁹

²³⁵ CincPacFleet Evaluation Report, No. 2, Volume 1, 228, U.S. Naval Historical Center, Washington D.C.

²³⁶ Allison, "The Black Sheep Squadron: A Case Study in U.S. Marine Corps' Innovations in Close Air Support." 615.

²³⁷ Condon, *Corsairs to Panthers*, 35.

²³⁸ *Ibid.*, 35.

²³⁹ *Ibid.*, 37.

CONCLUSION

This analysis of the development of Marine CAS from World War II to Korea reveals the critical role that it played for ground troops. Moreover, it shows the vital necessity the air liaison and tactical control parties provided in those two conflicts, as the Marine Corps deemed effective air-ground control central to CAS. World War II supplied all elements of Marine CAS with the necessary practice for operations in Korea. Then, the rigorous post-war training schedule helped the Marine Corps establish itself as the forerunners of CAS in Korea. Despite the Navy's problems with the Air Force at Pusan, the Marine Corps operated its CAS system with little interference. Establishing itself at Pusan, the Marine air-ground team managed and operated air support for the two remaining major campaigns of 1950, gradually improving their CAS system that culminated during the withdrawal from the Chosin Reservoir.

Indeed, Marine Corps pilots offered effective CAS and played a crucial role as the First Marine Division proceeded towards Hungnam. A detailed analysis of the air-ground team in Korea, specifically at the Chosin Reservoir, reveals one of the primary reasons that Marine aircraft performed so brilliantly. The inner-workings of the Marine air ground team, an underemphasized aspect of the Korean War historiography, consistently offered new ways to manage and operate efficient CAS during 1950. Despite their relegation to interdiction and strategic strikes after 1950, the tactical control parties at Pusan, Inchon-Seoul, and the Chosin Reservoir established themselves as a staple for future CAS, proving their usefulness, and making the air-ground team an indispensable element of the United States Marine Corps.

More important for the Marine Corps, CAS in Korea with the air-ground teams at the helm helped to solidify the institution's existence as a military institution.

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ABSTRACT

THE ULTIMATE COHESION: THE MARINE AIR-GROUND TEAM IN KOREA, 1950

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During the first year of the Korean War, United States Marine Corps aircraft employed effective Close Air Support (CAS) for infantry near the frontlines. This thesis examines the Marine air-ground team, a vital communication element between the striking aircraft and forward controllers on the ground. The air-ground teams improved their CAS system with each major battle of 1950, culminating during the Chosin Reservoir campaign. Despite the Air Force's focus on strategic bombing, thus hindering Navy CAS sorties, Marine air-ground teams continued to provide the critical and effective link between aircraft and infantry units.

Before detailing the Korean War, this thesis describes the development of the Marine air-ground teams in World War II, and the subsequent training of aviators between the two conflicts. From inter-war training, both Marine air and infantry units gained a mutual respect for each other, as aviators became riflemen, or "grunts," first. This camaraderie between air and ground elements carried into the Korean War and helped to solidify the effectiveness of Marine CAS in 1950.

